

# The Green Book

## Volume 28

### **A Work of Reference**

Your Guide to Environmental Best Practice by companies, countries, councils and communities

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[www.thegreenorganisation.info](http://www.thegreenorganisation.info)

### **Including CSR World Leaders**

Volume 28

A selection of International CSR Excellence Award-winning papers, demonstrating corporate social responsibility programmes at their best.

[www.csrawards.co.uk](http://www.csrawards.co.uk)



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**Helping the Environment since 1994**

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## Setting the standard...

The Green Book is the world's only annual international work of reference on environmental best practice.

It is published by The Green Organisation in tribute to the environmental endeavours and generosity of our Green World Ambassadors.

These are the companies, councils and communities who have won Green Apple Awards for their environmental efforts, and who have taken their commitment to the next level by helping others to help the environment.

They are assisting us in publishing their award-winning papers in The Green Book, and we distribute this valuable work of reference free of charge to environment professionals all over the world.

By helping others to follow their environmental lead and learn from their experiences and successes, they fully deserve the title of Green World Ambassadors.

Not only do they allow us to publish their case histories, but they welcome any followup inquiries. Each Green World Ambassador has a contact name and number shown in the Index, and any of them will do all they can to help others help the environment.



### Editor's Note

In the interests of accuracy, these Green Apple Award-winning papers are published here in their original form – basically as provided by the entrants.

As many of the papers are of a technical or specialist nature, it was decided that the experience and expert knowledge of the contenders should not be compromised by the grammatical priorities and

consistency of style that usually dominate the editing process.

Our priority is to communicate the aims, methods and achievements of our winners as they wish them to be presented. To this end, the contents have been only lightly edited and we ask for your tolerance of any grammatical shortcomings that might result.

# INDEX

## A

### **ADDLESHAW GODDARD**

**Increasing Urban Biodiversity (Partnership with Canal & River Trust)**

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The organisation's mission was to engage businesses in urban biodiversity enhancement. They transformed 3 miles of urban canals in London, Leeds, and Manchester. Their efforts involved planting flowers, creating wildlife habitats and managing vegetation. They also participated in the canal and river trust's plastics challenge and conducted litter picking activities to safeguard the environment.

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### **ADVANTE LTD**

**Vision Solar**

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Vision Solar pioneers self-contained, solar-hybrid toilet blocks for off-grid construction sites. These units use solar arrays for 98.7% carbon-free power, aligning with Net Zero goals. Advanté's telemetry system enhances efficiency and water management while reducing emissions, contributing to a sustainable construction industry.

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A

**ATLASEDGE**

**Sustainable Future for Data Centres**

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AtlasEdge aims to lead in European Edge computing, making sustainability a cornerstone. They focus on reducing data centres' environmental impact through reviews, energy reduction, and fostering innovation. Their commitment includes ISO14001 certification, partnering with academia, and striving for net-zero by 2030 to support a sustainable digital society.

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**B**

**BANTAM MATERIALS**

**Prevented Ocean Plastic**

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Bantam Materials pioneers a transformative recycling model, Prevented Ocean Plastic, creating a positive, transparent circular economy. The initiative prevents over a billion bottles from entering oceans, saves 62,500 kgs of CO2 per million bottles, and supports local economies. Expanding to Africa, it aims to halt 5,000 tons of plastic annually, contributing to a global effort to stop one billion bottles in 18 months. Bantam's scalable model exemplifies sustainable practices, influencing industry standards worldwide.

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**BBVS**

**Old Oak Common**

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Old Oak Common, the UK's largest new railway station with 14 platforms, is set to be a major transport hub. It will link to London, Heathrow, the Midlands, Scotland, and the North - driving significant regeneration in the regions. Construction involves an 850 metre station box and extensive infrastructure support.

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**BIDVEST NOONAN & GO AHEAD  
LONDON BUS (previously Chela Ltd)**

**100% Plant Based Cleaning Detergents....Go  
Ahead London Bus (Via Bidvest)**

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Bidvest Noonan and Go-Ahead London aimed to eliminate petroleum-based cleaning products at the Merton bus depot by employing 100% plant-based detergents for bus, interior, and depot cleaning. This pioneering use of the Pure Range sets a green industry standard while also promoting packaging recycling.

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**BIN DASMAL ENGINEERING  
TECHNOLOGIES AND MANAGEMENT**

**EKTHAAR**

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Ekthaar aligns with the UN's "zero hunger" goal, aiming to end malnutrition, double agricultural productivity, and promote sustainable food production by 2030. Their innovative farming systems reduce soil and water usage to just 5% whilst also utilising waste materials for construction of their site.

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**BIO TECH AFRICA**

**Biopolymer Plant**

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Bio Tech Africa champion a Circular Economy model, replacing plastic with biodegradable alternatives across Africa to combat pollution. Vinesh Sukhari's role in the Compostable Plastics Council and South African Bureau of Standards underscores his commitment to environmental preservation, forging innovative solutions for the future.

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**B**

**BLU-3**

**Duct Recycling Initiative**

**Page 77**

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As a leading infrastructure provider, blu-3 addresses resource waste's environmental impact. Collaborating with Plaspipes, they pioneered a circular economy approach for PVC ducting offcuts. Successful trials reduced emissions by 5.6TCO<sub>2</sub>e, saved £14,400, and sparked widespread interest in adopting this innovative practice across projects.

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**BNP PARIBAS REAL ESTATE**

**Plant a Tree for the Planet**

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The Bagacay, Philippines project focused on planting 100 new fruit-bearing trees to enhance community resilience against natural disasters. Generous donations covered the costs. The initiative aimed to educate students on climate change and biodiversity, providing long-term benefits like shelter, soil retention, and diverse fruit offerings.

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**B**

**BYBOX & GO4GREENER**

**Significant Improvement on being sustainable  
and environmentally friendly**

**Page 85**

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In collaboration with Go4Greener, Bybox aimed to minimise general waste and promote recycling, successfully diverting waste from landfills. Over 98% of designated general waste is now recycled, leading to fewer vehicle movements and local recycling.

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C

**CBRE – HOLBORN BARS**

**Holborn Bars**

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Holborn Bars, built in 1879 on the site of Furnivals Inn, London, has a rich history. The estate features gothic and Art Deco architecture, blending traditional and contemporary elements. It now serves as office and event space, capturing the imagination of visitors with its grandeur.

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**CBRE – THE LONDON FRUIT & WOOL EXCHANGE**

**The London Fruit & Wool Exchange**

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Since its construction in 1929, LFWE has been a significant building in Spitalfields. The principal facade, while incorporating new brick and stone, harmonises with the surrounding industrial architecture. The removal of a 1960s car park enhances the area's character, and a contemporary glass design seamlessly integrates the old and new elements.

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**CBRE-TOWER PLACE**

**CBRE Tower Place**

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CBRE has focussed on establishing a circular economy within Tower Place. Partnering with Bywaters with the goal to enhance sustainability by improving recycling rates. The introduction of AI allowed for greater accuracy and an increase in recycling.

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**CHAMBERLAINE CLEANING SERVICES**

**Cleaning for a Greener Tomorrow**

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Chamberlaine's expertise in eco-friendly cleaning led to a groundbreaking partnership with Nordic Chem. Together, they introduced Nordic Chem 2.0 Water-Based Nano-Tech, a game-changer in surface protection. This innovation significantly reduces resource consumption, cuts cleaning time in half, and lowers CO2 emissions - helping the environment and their clients.

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D

**DEWA**

**Solar Innovation centre**

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The Solar Innovation Centre in Dubai, an iconic 88-meter-high building, is a global leader in clean energy innovation. Exceeding LEED platinum standards, it achieved a remarkable 101 out of 110 points, showcasing water and energy efficiency, innovative design, and sustainability. The centre covers 100% of its annual energy consumption through on-site renewables, including BIPV, and reduces water use by 54%. With a focus on public engagement, it hosts interactive exhibitions, embracing futuristic technologies like drones and holograms, while its design draws inspiration from Islamic art, blending aesthetics with functionality.

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**DING TAI CO., LTD**

**JW Eco-Technology: Sustainable Water  
Management Solution Achieving On-site Water  
Circulation**

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JW Eco-Technology presents an innovative urban development solution with load-bearing, permeable roads that harmonise civilisation and nature. Utilised by Ding Tai, their on-site water circulation system ensures water sustainability, resolving excess and scarcity issues. This technology transforms Li-Ming High School, preventing floods and ensuring a sustainable water source even during droughts, and also contributing to the green economy.

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D

**DIRFT III MANAGEMENT COMPANY**

**DIRFT 111**

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In 2014, DIRFT III expansion was approved, highlighted by the 173-acre Lilbourne Meadows nature reserve. This reserve boosts local biodiversity and serving the community with walking trails. The project features extensive on-site planting and landscaping, creating diverse habitats to support wildlife.

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**EDEN COMMERCIAL LTD.**

**Eden Shopping Centre (Collaborative effort  
between Savills & ABM) Sustainability Initiatives.**

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Eden Shopping Centre in High Wycombe embarked on an ESG enhancement initiative, focusing on Waste, Energy, and Social Value. Their goal was to achieve zero waste to landfill, increase recycling rates, implement a Waste Management Plan, and launch a waste and environmental tenant engagement program. Energy monitoring was revamped to align with sustainability objectives, aiming to reduce energy consumption through internal system reviews.

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**EDGBASTON STADIUM**

**Edgbaston 4 Sustainability**

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Edgbaston Stadium's "Edgbaston 4 Sustainability" initiative aims to become the UK's most sustainable cricket venue. Notable accomplishments include energy-efficient lighting, enhanced waste disposal, and reduced single-use plastics. These efforts align with their goal to lead in UK sports sustainability while supporting the planet, people, and the community.

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**ENVIRONMENTAL CROP  
MANAGEMENT Ltd.**

**Salt Polluted Land Remediation - Making Fields  
Fit for Farming and Conservation**

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The project transformed salt-contaminated industrial land into a productive farm with a nature reserve. Overcoming salt toxicity and soil degradation, it revitalized 30 acres by introducing salt-tolerant species and innovative plant bio stimulants, exemplifying ECM's 30-year commitment to environmentally friendly land regeneration.

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**ESSITY UK Ltd**

**Tork PaperCircle®**

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Tork partnered with Recorra to create Tork PaperCircle®, increasing paper towel recycling to 98%. Essity's sustainability mission drives this program, which has recycled 65.76 tons of towels since 2022, addressing the 1% UK recycling rate caused by wet strength agents.

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F

**FLANNERY PLANT HIRE**

**Digital Machine Solutions and Telematics**

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Flannery Plant Hire collaborates with MachineMax on digital solutions, offering real-time data on fleet emissions and fuel consumption to reduce emissions and boost productivity. The reporting tool empowers users to make strategic decisions, potentially saving 250,000 litres of fuel and 720,000 kgs of CO2 emissions annually for a fleet of 100 machines.

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**FROG ENVIRONMENTAL**

**UK's First Innovative Bubble Curtain Achieves 99% Reduction in Underwater Noise Pollution to Save Atlantic Salmon**

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Frog Environmental introduced groundbreaking bubble curtain technology in the UK, surpassing national regulations. It yielded a 99% reduction in underwater noise emissions during piling operations. The project's success influenced other UK contractors, fostering enhanced environmental protection for aquatic and marine life.

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## **GREEN MOTION**

**Green Heart Foundation**

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Green Motion prioritises achieving a zero-emission fleet, with 35% of vehicles being hybrid or electric. They are committed to various sustainability initiatives, allowing customers to offset CO2 emissions. This initiative has led to tree planting and ecological support, with 52% of customers actively participating.

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## **GRUPO AMBIPAR - BRAZIL**

**Sustainable Biocapsules – Transforming Waste into Trees**

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Developed to achieve zero landfill objectives, this project creates biocapsules from organic waste and drug capsules for reforestation. These biocapsules are dispersed by autonomous drones for the recovery and preservation of riparian forests, springs, and other areas. The project also contributes to companies' sustainability indices and generates personalized projects for clients while creating partnerships with indigenous communities and traditional seed cultivation cooperatives. The project has been widely reported in the media, elevating its environmental marketing profile.

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J

## **JOONGANGILBO**

### **Realistic 360-degree VR Energy Museum**

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The “Realistic Energy Museum” is a digital, 360-degree immersive energy museum focused on carbon neutrality and energy transition. It features intuitive graphs and numerical icons to make specialised data easier to understand for readers of all ages. The webpage also allows visitors to directly participate by leaving comments or clicking the “like” button. It has received over 1,300,000 likes and is being prepared for publication as an educational book. Plans are in place to work with the Science Museum to provide hands-on learning opportunities starting in 2023.

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## **JSW CEMENT Ltd**

### **JSW Cement - The Greenest Cement Company with Lowest Co2 Emission Intensity in the World**

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JSW Cement, part of the \$23 billion JSW Group, is a leading global eco-friendly building materials company. They prioritise sustainability, producing low-carbon cement through innovative technology and energy-efficient practices. Their efforts help combat the cement industry’s significant carbon footprint and contribute to a greener future.

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## **LAKESIDE SHOPPING CENTRE**

### **The Sustainable Allotment**

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As a retail and community hub, Lakeside lead by example, encouraging others to embrace eco-conscious practices, including growing food and recycling. Lakeside collaborates with local schools and community groups to promote allotments and act as dedicated ambassadors for sustainable initiatives.

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## **LAMBWOOD HEIGHTS CARE HOME**

### **Driving Sustainable Change into Care Homes and Inspiring Change in the Wider Sector**

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Oakland Care has focused on reducing its environmental impact and promoting sustainability in the social care sector. It has implemented an end-to-end approach across the organization and achieved the highest accreditations in the UK social care sector. Its sustainability practices contribute to UN SD Goals 12 and 13. Oakland Care has monitored, minimized, and offset its carbon footprint and implemented waste reduction strategies. It has also improved awareness and education on sustainable practices for stakeholders, created a culture of change, and invested in technology and development. Oakland Care has achieved all this in the last three years, dedicating significant time and investment to sustainability.

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**LANDASAN LUMAYAN Sdn Bhd**

**Selangor Maritime Gateway- A Malaysian River  
Transformative Project by Landasan Lumayan  
Sdn Bhd**

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The Sustainable Master Plan for the Klang River, Malaysia, aims to revive and transform 56 km of river and surrounding land into a sustainable economic generator, while retaining environmental integrity. The project aims to improve employment and income opportunities for the state and citizens, create sustainable and affordable living for future communities, and reduce plastic outflows into the sea. The initiative includes an integrated river management solution for cleaning and mitigating floods, protection of biodiversity and landmass, and urban regeneration. The project has attracted the attention of investors, collaborators, and global environmental activists, including The Ocean Cleanup.

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# M

## **McALEER & RUSHE**

### **Brentford Lock Phase 3**

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The Brentford Lock West Phase 3 site, nestled alongside the Grand Union Canal and Robin Grove Recreational Park, is undergoing Bus Depot construction and Site Enabling Works. Despite environmental challenges like contaminated land and invasive species, the team prioritises sustainability, enhancing soil quality, reducing waste, curbing pollution, and saving on carbon emissions.

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## **OCTOPUS ENERGY**

### **Zero Bills, Zero Worries: Making 'Zero Bills' Homes the New Normal**

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Octopus Energy launched 'Zero Bills' with a mission to reduce carbon emissions: later introducing energy-efficient housing solutions to eliminate emissions. The initiative has gained momentum, aiming to complete 10,000 'Zero Bills' homes by 2025, signalling a significant step towards a carbon-neutral future.

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## **ORANO MINING FRANCE**

### **Irhazer Project**

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In the North of Niger, the Irhazer project, funded by Orano Mining, has developed 750 hectares of sustainable farming practices to increase economic, social and environmental impact. The project promotes local agro-pastoral products and uses sustainable energy through solar pumping systems. It has created hundreds of jobs, helped reduce water chores for children, improved access to education, and increased income for producers. The project also includes livestock hydraulics through six solar-powered livestock pumping stations and the vaccination of more than 45,000 animals annually.

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**PEARTREE CLEANING SERVICES Ltd**

**Peartree, People, Planet**

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Peartree Cleaning Services, prioritise sustainability. Their project focuses on reducing pollution, collaborating with experts, and decreasing carbon emissions by 32.1%. They're working towards carbon neutrality by 2050 through initiatives like electrifying their fleet and adopting eco-friendly cleaning solutions.

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**PT PERTAMINA GAS OPERATION WEST  
JAVA AREA**

**Perisai Bumi (Earth Shield), Collaboration to  
Protect Costal Area From Costal Erosion**

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PT Pertamina Gas Operations' goal with the Perisai Bumi program is to combat coastal erosion, particularly in Juntinyuat village. Employing geotextiles, it protects gas pipelines and agriculture. Aligning with Sustainable Development Goals, this initiative significantly reduces coastal degradation.

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**PT TIMAH Tbk**

**Thalia Island**

**Page 196**

Setunak Island, Indonesia, is experiencing climate change impacts such as high waves and a decline in ecosystems, particularly mangrove forests and coral reefs. The “Climateproof Island” project aims to increase the island’s capacity to mitigate and adapt to climate change. By empowering fishermen in the Setunak Bersatu POKDAKAN group to cultivate crabs and conserve mangroves, and the Setunak Jaya Women Farmers Group to manage hydroponic gardens, the project seeks to provide alternative livelihoods, increase food security, and reduce waste. The project has provided economic, social, and environmental benefits, including reducing greenhouse gas emissions.

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**PTT EXPLORATION & PRODUCTION**

**PTTEP’s Reforestation Project**

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PTT’s Reforestation Project, born from a 2008 employee initiative, restores Thailand’s forests, reduces emissions by 446,500 tons, and creates local jobs, benefiting 9,450 households. Training sessions promote green values and enhance cooperation among government and communities for sustainable environmental preservation.

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**PUBLIC WORKS AUTHORITY (Ashghal)**

**Public Works Authority Environmental Initiatives  
and Improvements in Management System**

**Page 208**

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Ashghal, Qatar's Public Works Authority, prioritizes sustainable infrastructure, earning ISO 14001-2015 certification. The Quality and Safety Department raised 623 non-conformity reports in 2021, enhancing environmental performance. The Environmental Management Performance Monitoring System and the Ashghal Green Awards further promote sustainability. Plans include linking EPMS to GIS and creating a list of qualified environmental service providers.

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## **QATAR MUSEUMS**

**National Museum of Qatar- First Ever Green Key  
Certified Sustainable Museum in Middle East**

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The National Museum of Qatar, operated and owned by Qatar Museums, stands as a regional sustainability leader. Recognised with international sustainability accolades, including Green Key certification, GSAS 4-Star rating, and LEED Gold certificate, it sets a global standard for sustainable museum operations.

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R

**REGULAR CLEANING**

**Office Building Refurbishment**

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Dedicated to a people and planet-centric approach, the business prioritizes sustainability through a four-pillar strategy. The project successfully enhanced energy efficiency, contributing to the NetZeroBy30 goal, and created a healthier, more satisfying work environment. Certified by Planet Mark, the office achieved a 5-tonne CO2 reduction and transformed into a functional, aesthetically pleasing space, reflected in a 78% 5-star satisfaction rating from colleagues.

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**RINGWAY INFRASTRUCTURE  
SERVICES MILTON KEYNES**

**Workplace in Bloom, Milton Keynes Depot**

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The Workplace in Bloom' competition aimed to create green spaces at workplaces, fostering biodiversity and relaxation for employees. It encouraged innovation and teamwork and the project improved mental health while showcasing various environmental and well-being benefits.

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S

**SARGON EMPIRE Ltd**

4 Drayton Road

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Restoring a crumbling 19th-century Victorian townhouse at 4 Drayton Road proved that preserving history and reducing the carbon footprint could go hand in hand. The project carefully restored the red-brick façade, used recovered bricks, and traditional craftsmanship to recreate original features. Sustainability was prioritized, with insulation, waterproofing, and energy-efficient windows, while preserving the home's architectural heritage. The result stands proudly as a testament to historical preservation and eco-conscious restoration.

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**SAUDI ARAMCO**

Abu Ali Fish Hatchery and Mangroves Lagoon

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Saudi Aramco Oil Company is building a sustainable Fish Hatchery that will serve as a Research & Development Center for genetics, fish health programs, and nutrition studies. It will replicate the natural fish life cycle under controlled conditions, and its objectives include enhancing the population of native fish stocks, preserving Arabian Gulf biodiversity, and supporting local fisheries. The project also involves a 200,000 Mangrove plantation in a constructed lagoon to achieve complementing benefits to the environment, including enhancing native fisheries and conserving mangrove plants.

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**SAUDI ARAMCO**

Manifa Producing Department's Environmental Efforts

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Manifa region is rich in biodiversity with various ecosystems, animals, and plant species. Manifa Producing Department (MPD) has implemented environmental initiatives to reduce greenhouse gas emissions and protect the ecosystem. The initiatives include decarbonization, biodiversity protection, and artificial coral reefs. MPD has introduced several innovative solutions such as a zero-flaring initiative, Flare Gas Recovery System, steam system optimization model, and Advanced Process Control to minimize energy and maximize production. MPD has also deployed solar panels to operate the offshore water injection platform and planted mangroves and native trees to offset emissions from MPD's facilities.

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**SEOCHU-GU DISTRICT OFFICE**

Restoration of Yangjaecheon Stream to Achieve Peaceful Coexistence with Nature

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Yangjaecheon Stream now thrives in harmony with nature, thanks to collaborative conservation with locals. Water quality has improved by planting water-purifying flora, thus benefiting fish and bird species. They have boosted conservation awareness and reduced flood risk through restoration, consequently minimising artificial intervention costs.

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**SIEMENS MOBILITY**

**Northern City Line**

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The East Coast Digital Programme set ambitious Biodiversity Net Gain targets for each project, achieving a 16% total increase across all projects. In recent efforts at Gillespie Park nature reserve, the Northern City Line (NCL) project restored a dried-up reed bed and wildflower meadows, benefiting both wildlife and urban communities.

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**SOBHA REALTY**

**Driving Sustainability and Climate Action in the Built Environment through a highly efficient backward Integrated Model**

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Sobha Group, founded in 1976 by PNC Menon, is a luxury property developer that has grown to have developments and investments in the UAE, Oman, Bahrain, Brunei, and India. Sobha's objective is to be the most trusted and respected real estate organization both regionally and globally, in terms of quality, craftsmanship, delivery, and sustainability. With a commitment to sustainable communities, Sobha has succeeded in developing portfolios that excel in sustainability, incorporating energy efficiency, water savings, circularity principles, nature-based solutions, and resource consumption.

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S

**SWAN CENTRE**

**Reducing Energy Consumption**

**Page 245**

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Swan Centre is dedicated to saving energy and achieved 29.7% reduction in energy consumption. They reduced electricity use by 17.1%, saving 201,563 kilowatt hours; and they slashed gas use by 43.3%, saving 476,505 kilowatt hours.

**DANIEL KITCHEN**

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T

## **TCI Co., Ltd**

**Establish Sustainability DNA from the Inside Out**

**Page 248**

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TCI creates a “green operating system” through R&D for green products, green manufacturing, green marketing, and green governance. This includes developing products such as Clean Beauty Product and Double Nutri Encapsulation Technology to reduce climate impact, installing solar panels to reach 50% green power usage by 2025, investing in digital printing to reduce carbon footprint, and convening ESG committee meetings quarterly for comprehensive risk management.

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## **TRUSTGREEN**

**Building Communities Rooted in Nature**

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The introduction of the Community Champion role aimed to enhance connections between communities for improved social coordination. The Community Champion based in Warwickshire, fosters community well-being through collaborative activities. The work centres around building a nature-rooted, thriving community with a strong emphasis on green spaces and connection.

### **SIONED OWEN**

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T

## **TUSKER**

### **Green Car Benefit Scheme**

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Tusker, a UK-based leasing company, has become a net-positive contributor to the environment by offsetting more than 10% additional emissions than it is responsible for. The company has reduced its fleet's CO2 emissions to 32 grams per kilometre by focusing on electric vehicles, and is supporting a tree planting and protection scheme to offset its impact on the environment.

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U

**UDC QATAR**

Pearl Island

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UDC's achievements reflect their commitment to environmental and sustainability standards. Initiatives like Grand Park renovation, sustainable parking, beach clean-ups, recycling, e-scooters, and electric vehicle chargers enhance eco-friendly practices. Actively contributing to Qatar's environmental strategy by reducing energy-related emissions.

**CHRISTIAN GALICIA**

Christian Galicia

**UNIPER UK (previously NOVATI)**

Empower Energy Evolution

Page 268

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Uniper's annual use of 40,000 single-use air filters in UK power stations has been transformed by a sustainable initiative. Trials at Cottam Power Station successfully refurbished 1,152 filters twice. This approach not only cuts disposal costs by around £3,000 but also saves £6,000.

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V

**VIRIDOR**

**Revolutionising Plastic Recycling**

**Page 273**

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Viridor plays a vital role in plastics recycling. They have invested in advanced processing facilities, converting plastic waste into reusable feedstock, significantly reducing greenhouse gas emissions and landfill waste. Their commitment to innovation and circularity aims to create a sustainable future.

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# W

## **WASTE TO WONDER WORLDWIDE**

**Challenging the Perception of Waste**

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When Waste To Wonder started more than 20 years ago, their first major ethical clearance supported a university professor who wanted to help young women who were missing out on education in Morocco. They were able to send enough furniture and equipment to supply 17 Morocco schools and help him to realise his dream. Since then they have supported 1,300 schools in 30 countries by redistributing 97% of the goods they collect; recycling the other 3% - and sending zero to landfill.

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## **WATERPLUS**

**Actions for a Cleaner Climate – Water Plus builds partnerships to boost water efficiency and reduce carbon emissions in the UK**

**Page 283**

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Green World Ambassadors and 9 times Green Apple Environment Award winners Water Plus outline how water can power progress towards lower carbon futures - and sustainability goals - at organisations. Water-saving cuts carbon emissions linked to businesses and can save energy, where less hot water is used, or less water is moved. Water Plus, the UK's largest business water retailer is helping organisations tap into more opportunities with water, alongside highlighting the carbon and energy linked to water use at sites.

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W

**WINVIC**

**The application of environmental noise monitoring and artificial intelligence to Winvic Construction Limited (WCL) sites to mitigate environmental noise impacts**

**Page 288**

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Winvic introduced this project to reduce construction-related noise disturbances to neighbours. This industry-first approach, deployed across five WCL sites, significantly reduced complaints and operational time, setting a UK construction sector precedent.

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**WJ GROUP**

**The WJ Driver Behaviour Scheme**

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The WJ Driver Behaviour Scheme aims to enhance safety and sustainability in highway operations. Using telematics, the program monitors safe driving practices, resulting in a 7.75% reduction in emissions; a 12% increase in Miles Per Gallon and a 44.87% reduction in accident costs.

**ROB ELSBY**

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## ADDLESHAW GODDARD

### INCREASING URBAN BIODIVERSITY (PARTNERSHIP WITH CANAL & RIVER TRUST)

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#### INTRODUCTION

Our aim was to show that anyone (especially businesses that do not have direct access to any green spaces) can make a positive impact on their local biodiversity and improve local habitats so that they can be enjoyed by the local community and support urban nature.

We supported 3 miles of canal in central locations in London, Leeds and Manchester to help create spaces by the water where people can be happier & healthier and Nature can recover. Encouraged over 60 employees who volunteered 260 hours of their time to take part in this project with more to come. Planted flowers ready for the spring and helped create wildlife habitats.

Carried out vegetation management on the towpaths to allow people to access and enjoy the area. Painted, greased and helped maintain 2 locks.

Cleared weeds from the waterways to improve water quality for aquatic wildlife and water flow Took part in the canal & river trust plastics challenge, carried out land litter picking activities to protect the local environment and nature.

#### IN DETAIL

City centre canals in London, Leeds and Manchester have been given a great green biodiversity



and wellbeing boost, due to a nature project implemented by law firm, Addleshaw Goddard (AG) in partnership with the Canal and River Trust (CRT) to green and clear up city canal corridors. Most urban canal areas lack of greenery means that wildlife cannot exist and thrive. Visitors to the canals can now enjoy more wild flowers, shrubs and hedgerows as well as litter free paths and refreshed lock sides.

This project shows that even if you do not have green space of your own you can influence the areas around you for the better. More than 8 million people live within 1km of a waterway in England and they pass through some of the most deprived urban areas, often lacking green and blue space.

By restoring nature, we not only help address the dramatic decline in biodiversity, but also provide enhanced spaces along the towpath for people to access to help improve their health and wellbeing.

The UK's wildlife is in alarming decline. Scientific evidence tells us that the global climate is changing at an unprecedented rate. A State of Nature report found that of 3,000 UK species identified, 44% have decreased significantly over the last 10 years, with many species endangered and at risk of extinction.

Whilst reviewing suitable biodiversity projects, we realised the importance of maintaining these essential urban nature corridors for wildlife to try and limit this alarming decline in biodiversity. Research was carried out by the CRT and it established that the urban canal areas identified didn't have much flora or fauna.

The areas looked very grey and industrial and were not an attractive area for wildlife or visitors. This project was implemented by Addleshaw Goddard with advice and guidance from the CRT. After adopting mile stretches of canal in London, Leeds and Manchester we then offered employees the chance to volunteer to participate in activities designed to increase biodiversity. We realise that although our main focus is improving biodiversity in these spaces, that there are also benefits related to physical and mental health by improving access to these areas. As we were keen to support the CRT in their work, we compensated the CRT for their time to organise and host the days.



The cost is dependant on how many days/volunteers you have.

### PROJECT ACHIEVEMENTS:

- Supported 3 miles of canal in central locations in London, Leeds and Manchester to help create spaces by the water where people can be happier & healthier and Nature can recover.
- Encouraged over 60 employees who volunteered 260 hours of their time to take part in this project with more to come.
- Planted flowers ready for the spring and helped create wildlife habitats.
- Carried out vegetation management on the towpaths to allow people to access and enjoy the area.
- Painted, greased and helped maintain 2 locks.
- Cleared weeds from the waterways to improve water quality for aquatic wildlife and water flow.



- Took part in the canal & river trust plastics challenge, carried out land litter picking activities to protect the local environment and nature.

Canals play an important role in benefitting nature and biodiversity as they provide vital wildlife habitat, mitigate the impacts of climate change, and are unique places where people can connect with nature. We are still in the first year of the project and will track the benefits as the project develops, however we can immediately see the visible difference to the canal areas from the work our volunteers have already completed.

Working with the CRT, we aim to enhance the conservation value of our waterways, improve nature connectedness and create a step-change in biodiversity recovery and climate resilience. Reversing the decline in biodiversity, taking decisive climate action, and providing opportunities for people from all walks of life to access, enjoy and benefit from green and blue spaces will help provide a more sustainable future.

Our canals and rivers provide an incredibly important natural corridor for nature. Our canals, rivers and reservoirs are some of the most bio-diverse spaces in the country. They are rich in insect and plant life. Large parts of our network of canals have been

officially recognised for their environmental value for wildlife, including over 60 'Sites of Special Scientific Interest'.

Changing weather patterns threaten these habitats and the hundreds of diverse species living in them. In conjunction with the CRT, the work done by Addleshaw Goddard volunteers will aim to protect and improve these environments and help the wildlife thrive; create new habitats, fix up the canals therefore improving water quality.

This ensures local communities can then begin to utilise this space for recreational and relaxation activities. This is still very early days for this project but already we are seeing positive benefits such as local community involvement and increased footfall. The CRT continues to champion for the spaces related to the canals to be available to all. We believe that everyone should have access to natural spaces within a close proximity to their home.

Within Addleshaw Goddard this project has raised awareness of global biodiversity concerns but also to the issues occurring right in our 'back yards'. Being able to directly contribute to our direct local communities and increase biodiversity in these urban areas is important.

We hope to show that you do not need large green areas of your own to be able to make a difference. Our waterways can not only encourage biodiversity by continuing to provide a home for hundreds of species of plants and wildlife, they also offer low carbon alternatives for both holidays and transporting goods, and play a vital role in wellbeing.

Our biodiversity project supports the CRT's broader mission and future aspirations as a waterways and wellbeing charity with access to all. By encouraging and supporting local communities, including disadvantaged communities and businesses onto the waterways, it encourages a wide range of people to visit their local canal, whilst making a positive impact for their local community.



## ADVANTE LTD

### VISION SOLAR

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#### INTRODUCTION

Vision Solar aims to revolutionise toilets for construction sites without access to mains power/ services, with self-contained, solar-hybrid powered toilet blocks, as part of the Oasis Welfare range.

Advanté is a specialist supplier of instant start welfare units, offering high-quality, sustainable welfare to reduce emissions and noise on site. Equipped with Oasis Solar hybrid technology, Vision Solar units use a large solar array and intelligent telemetry to generate renewable energy, silently powering all electrical loads.

This innovative approach enhances workforce wellbeing, benefits local community, and aligns with the industry's demand for health, safety & environmental performance. The primary objective is to support our clients, including leading construction firms and Tier 1 Contractors, in achieving their individual Net Zero and ESG Sustainability goals.

By removing the need for traditional diesel/HVO generators and utilising renewable energy, Vision Solar reduces emissions, supporting the UK Government's 2050 Net Zero target and aligning with the Royal Society of Engineers' call for urgent decarbonisation, targeting emission reductions of 68% by 2030 and 78% by 2035.

The Vision Solar range also aims to promote diversity. Advanté launched the Vision Solar Access unit in June, offering inclusive toilet facilities and wheelchair accessible ramp that meet Equality Act (DDA) requirements. Since its launch in May 2023, the Vision Solar project has achieved remarkable success in its pursuit of reducing carbon emissions and providing sustainable, instant-start welfare for construction sites.



The Vision Solar fleet has demonstrated a substantial reduction in carbon emissions, with an impressive 98.7% carbon-free power usage, by harnessing and storing renewable solar energy and the minimal reliance on a hybrid LPG generator. The implementation of intelligent telemetry allows the Advanté Service Team to remotely access and manage the units, ensuring trouble-free welfare, increased energy efficiency, and reliable facilities with minimal user intervention.

This intelligent monitoring also facilitates better water and effluent management, enhancing operational efficiencies, reducing service visits, and running costs. The Vision Solar range now includes a Vision Solar Access unit, which offers accessible self-contained toilet facilities (the first of its kind). This unit addresses inclusivity and meets disability equality guidance.

This commitment to inclusivity demonstrates Advanté's dedication to meeting diverse welfare needs and opens the possibility of incorporating accessible features into other Oasis Welfare ranges. Overall, the Vision Solar project has exceeded



expectations in providing low-emission, sustainable welfare solutions, reducing the construction industry's carbon footprint, and positively impacting the wellbeing of workers and the surrounding community.

### IN DETAIL

The Project: The Vision Solar project involved the development and implementation of a range of self-contained, solar-powered toilet blocks designed to provide toilet facilities for busy construction sites without access to mains power or services.

Advanté developed a new Vision Solar toilet block:

- Fully self-contained, 2+1 toilet block
- Large solar array fitted to roof
- NEW Solar hybrid power system with backup LPG generator
- Surplus energy storage
- Smart telemetry system
- Improved insulation

The Vision Solar Access toilet block was then developed, based on the above features, but applied to a larger unit that includes:

- Accessible Toilet that meet disability equality guidance
- Compliant access ramp and handrails
- Automatic door opening with sensors
- Changing table Design and Development:

This included integrating a large solar array with Oasis Solar hybrid technology and intelligent telemetry to maximise renewable energy generation and energy efficiency year-round.

### TESTING AND VALIDATION:

Prior to the official launch, extensive testing and validation of the Vision Solar units were conducted to ensure their reliability, performance, and compliance with industry standards.





### WHY:

The primary motivation behind the Vision Solar project was to address several pressing challenges faced by the construction industry, including the need for low-emission, sustainable site welfare and our clients' commitment to achieving Net Zero and ESG Sustainability goals.

"The built environment, of which the construction sector is a crucial component, currently contributes some 40% of the UK's carbon emissions and it is estimated that the construction sector contributes up to 11% of global carbon emissions." - Royal Academy of Engineering.

The project aims to support the UK Government's 2050 Net Zero target and the Royal Academy of Engineering's call for urgent decarbonisation, targeting emission reductions of 68% by 2030 and 78% by 2035.

Advanté recognised the urgency to decarbonise its Oasis Welfare range even further to support the industry in meeting these targets. The demand for increased health, safety, wellbeing, and environmental performance across various sectors, including construction, housebuilding, infrastructure, and utilities, has encouraged the development of high-quality, sustainable toilet facilities, like Vision Solar.

### WHAT THE PROJECT ACHIEVED:

In terms of sustainable development, Vision Solar has achieved significant progress. The introduction of solar-powered, self-contained toilet blocks addressed the need for low-emission toilet facilities in the construction industry.

**vision solar** 4.5m x 2.75m

**Unit specification**

Unit Size	6.00m x 2.75m (20' x 9')
Weight	2.0m (20')
Weight when empty	810kg
Operational Area Required	7.0m x 3.0m (23' x 10')
No. of Windows	0
No. of Doors	0
No. of Lights	0
Generator	4.0 kW (P10 Labeled) (0.8 power factor)
Effluent Tank	2000 litres (550 gallons)
Water Tank	1000 litres
Drain	0

**Useful points to remember**

- General Notes**
  - Full Terms & Conditions of use apply to all units and components - no other terms will be accepted without prior written agreement from Advanté.
  - The Vision Solar is a mechanical unit.
- Site Checks**
  - The client is responsible for the required site checks on the unit. This is a pre-requisite for any mechanical work.
  - Any damage arising from failure to comply with the checks will be charged to the client.
- Installation**
  - The unit will be loaded upon delivery, and the client is responsible for maintaining the unit in a level position at all times. Failure to do so could result in engine damage.
  - Only normal waste must be put in the toilet. Any contamination of the waste could result in excessive charges for the client.
  - Full instructions on how to get the most from your unit and its operation can be found in the unit.

**Assessment Capacity**

	Single toilet, single compartment section	2 toilets, 2 compartments, 2 washbasin section
Max. 100%	15	25
Max. 50%	0	0

Notes: Must be installed for max 100% capacity only. Therefore the capacity for your application must be calculated taking this into account. Approximate per hour max. capacity and max. number of users at any one time.

**Advanté**

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By removing the need for traditional diesel/HVO generators, the Vision Solar units contribute to sustainable development by lowering carbon emissions and noise, enhancing community impact and staff wellbeing.

Economically, Vision Solar units have resulted in fuel cost savings for construction sites. The reduced reliance on the hybrid LPG generator has lowered running costs, making the units more financially viable over the hire period.

Environmentally, the project is making substantial strides in reducing carbon emissions. Vision Solar units have achieved up to 98.7% carbon-free electrical power usage, positively impacting the environment by significantly lowering sites' carbon footprint.

The integration of Oasis Solar hybrid technology and intelligent telemetry allows for increased renewable energy input and efficient energy management. In terms of equity, the Vision Solar Access unit's development demonstrates Advanté's commitment to equality, diversity, and inclusion.

By offering wheelchair-accessible toilet facilities in a self-contained welfare unit, the project addresses



the needs of a diverse workforce. This inclusive approach contributes to enhancing the welfare and wellbeing of all construction site workers.

### WHO/WHAT BENEFITS?

The following have benefited from the Vision Solar project:

**Construction Workers:** The availability of high-quality, sustainable instant start toilet facilities, including wheelchair-accessible facilities, positively impact the wellbeing and morale of construction workers. The mainly silent-running and low-emission nature of Vision Solar units enhance the welfare/working environment and increase productivity.

**Construction Companies:** Advanté's clients, including leading construction and housebuilding firms, benefit from the low-carbon, low-noise facilities offered by Vision Solar units, which support their Net Zero and ESG Sustainability goals. The reduced reliance on traditional generators has led to substantial carbon and cost savings, and a more positive environmental and community impact with Vision Solar units harnessing daylight to achieve 98.7% average carbon-free electrical power on site.

**Environment:** Vision Solar significantly reduces carbon emissions, contributing to environmental preservation and supporting the UK Government's Net Zero Strategy and other emission reduction targets.

**Local Community:** The mainly silent-running toilet facilities in Vision Solar units minimise disturbance to residents and businesses near construction sites,

fostering better community relations.

**Long Term Benefits:** The longer-term benefits of the Vision Solar range are likely to be substantial: Sustainable Construction Practices: The successful integration of solar-powered, self-contained welfare units may encourage the construction industry to adopt more sustainable practices, reducing its overall carbon footprint.

**Energy Efficiency:** The intelligent telemetry system in Vision Solar units provides valuable data for optimising energy efficiency, which can inform future Oasis welfare unit designs.



**Market Leadership:** Advanté's innovative Vision Solar range positions the company as a market leader in sustainable 'instant start' welfare and toilet solutions, attracting clients and partners who prioritise environmental responsibility.

**Industry-wide Impact:** The project's success may inspire other organisations and communities within the construction sector to explore and implement similar sustainable solutions, promoting wider industry change.

**Diversity Equality:** The Vision Solar provides separate toilet facilities for a large, diverse workforce. The Vision Solar Access unit is the first self-contained toilet block with disabled access. Once we understand the demand for this accessible and inclusive unit, its features can be added to other Oasis Welfare ranges.

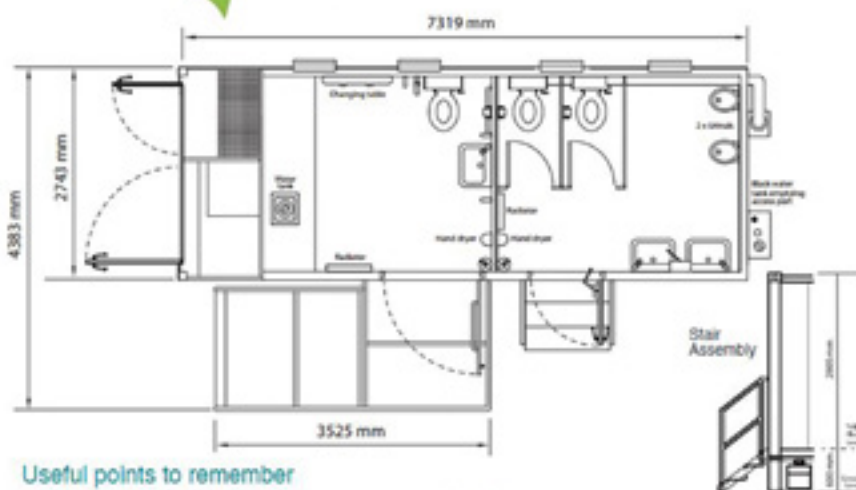
**Project Innovation:** Vision Solar demonstrates several innovative elements: Solar Hybrid Technology: The integration of Oasis Solar hybrid technology in welfare units enables the generation of renewable energy from large solar arrays, reducing the reliance on the hybrid LPG generator and lowering carbon emissions.

**Intelligent Telemetry:** The use of intelligent telemetry in Vision Solar units allows for remote monitoring and management, providing valuable data on energy performance, water, and effluent

levels. This technology-driven approach optimises energy efficiency and reduces the need for service calls and visits.

**Inclusivity:** The development of Vision Solar Access as the first self-contained welfare unit with wheelchair-accessible facilities demonstrated Advanté's commitment to diversity and disability equality in the construction industry.

The success of the Vision Solar project serves as a model for other organisations.



### Useful points to remember

#### Terms of hire

- Full Terms & Conditions of hire available at [www.advante.co.uk/terms-and-conditions](http://www.advante.co.uk/terms-and-conditions) - No other terms will be accepted without prior written agreement from Advanté.
- The Vision Solar Access is mechanical plant.

#### Daily checks

- The client is responsible for the required daily checks on the unit. This is normal practice with any mechanical plant.
- Any damage arising from failure to carry out the checks will be charged.

#### Damage

- Damage and shortages will be charged to the client.

#### Leveling

- The unit will be levelled upon delivery, and the client is responsible for maintaining the unit in a level position at all times. Failure to do so could result in engine damage.

#### Waste

- Only normal toilet waste must be put in the toilet. Any contamination of the waste could result in additional disposal charges for the client.

#### Instruction Manual

- Full instructions on how to get the best from your unit and its operation can be found in the unit.



### Unit specification

Unit Size	7.6m x 2.7m (25ft x 9ft)
Height	2.8m (9ft)
Weight (effluent emptied)	7000kg
Operational Area Required	8.9m x 4.5m (29ft x 14.8ft)
No of Windows	4
No of Radiators	2
Hand Dryers	2
No of Lights	3
Generator	5.5 kW LPG (back-up)
Effluent Tank*	2500liters / 570gallons
Water Tank	1000liters
Doors	2
Pump	1
Pump weight	350kg

Personal Capacity	Single toilet, single washbasin section	2 toilets, 2 urinals, 2 washbasin section
Men (max)	15	45
Mixed or Women (max)	5	25

Areas must be reserved for men & women only. Therefore the capacity for your application must be calculated taking this into account. Figures quoted are for max. capacity and were correct at time of going to press.

\* The effluent pipe can be redirected to main drainage by the client.



## Delivering Sustainability



- Vision Solar units are completely self-contained static toilet blocks for the construction industry.
- Our instant start toilet blocks are powered by Solar/LPG hybrid technology that generates an impressive renewable electrical power supply all year round.
- Offering sites a reduction of their carbon footprint, operating mainly silent running, and improving air quality.
- Supporting clients' Net Zero targets, ESG and sustainability goals.



Industry



Construction



House Builders



Highways



Infrastructure



Utilities

## ATLASEDGE

### SUSTAINABLE FUTURE FOR DATA CENTRES

#### INTRODUCTION

AtlasEdge was founded with the ambitious goal of creating Europe's leading Edge platform and believes that Edge computing is part of the solution to ensure a sustainable digital society by enabling infrastructure where it is needed.

At the heart of this, AtlasEdge wants to play a leading role in sustainability for the industry; sustainability must be a cornerstone of our business and future. Data centres are seen as huge energy users and therefore responsible for contributing to the climate crisis, AtlasEdge want to ensure that it provides significant contributes to developing knowledge and technology which reduces the impact of data centres on the environment.

Our approach is to address the following  
Review & Report,  
Reduce,

Re-use,  
Recycle,  
Renewables then offset,  
Responsibility

AtlasEdge have been developing and building a Sustainability Program Strategy and Execution Plan to drive forward the Sustainable vision ensuring focus is on understanding the baseline and building reporting processes in 2023.

This management information has and will impact on the strategy moving forward, prioritisation of projects and enable AtlasEdge to address energy usage, on site combustion, water usage, refrigerant use and the impact on carbon emissions on the environment. This project keeps sustainability the core of business operations and incorporates it into long term goals.

AtlasEdge aim to become a trailblazer for sustainability whilst meeting the requirements of





legislative framework and industry guidance. The learning and innovation will be shared with other providers through networking, providing feedback to government bodies and sharing the knowledge through arenas such as TechUK and CNDP.

AtlasEdge are working alongside industry leaders, experts and specialists engaging with Lisbon university where a partnership is being developed with the university PHD students who can inform the sustainable design of a new data centre build.

AtlasEdge is a signatory of the Climate Neutral Data Centre Pact, self-committing to becoming net zero by 2030 and furthering the support of a truly sustainable digital society and ensuring data centres are an integral part of Europe's environmental future.

In June 2022 AtlasEdge were successful in securing ISO14001 certification demonstrating the commitment to and management of an Environmental Management System which is a core focus as we grow and develop as an organisation.

Part of this project includes analysing and redesigning the traditional data centre model to decrease the impact on the environment and aid community decarbonisation efforts. The aim is to capture the good practice across the data centre industry to design a data centre that is carbon neutral from the outset.

### IN DETAIL

#### Timeline of the project:

In January 2022 an Environmental Management System was set up for AtlasEdge to enable the organisation to reduce the environmental footprint and improve performance. The framework for identifying, managing, monitoring and controlling environmental issues was to become part of the AtlasEdge culture and workplan less than six months after the business was founded.

ISO14001 certification was awarded in June 2022 demonstrating the management of environmental impact, fulfilment of compliance obligations and addressing risks and opportunities. In September 2022, recognising the importance of developing a sound strategy for sustainable practices, sustainability requirements for AtlasEdge were drafted and agreed at Board level.

September 2022 “ We are committed to providing a governance structure ensuring sustainability is at the core of our business operations. We will organise, plan, and execute to deliver sustainable, repeatable good practices, whilst seeking the opportunity to continually improve operations and service delivery”.

In October 2022 the Sustainability Strategy was finalised with full Management Team buy-in. The commitment to long term sustainable impact has been demonstrated by the activities which have since taken place. In November a business case was drafted for a full sustainability budget which is enabling the replacement of plant items (such as chillers) for more efficient plant which is reducing the PUE of our sites.

Plant is also being retrofitted to reduce water consumption and reduce/ phase out GWP refrigerants. AtlasEdge has legacy sites which need a lot of upgrading to become more energy efficient and also projects for new build data centres. The projects for new builds are taking the sustainability requirements and net zero roadmap into account to ensure when they are at full capacity they are meeting all of the targets set across the sustainability portfolio.

To date AtlasEdge have spent nearly €2 million on sustainability across the organisation. In December 2022 AtlasEdge signed up to the Climate Neutral Data Centre Pact to ensure firm commitment was made by the company to drive forward sustainability practices.

Three members of the team sit on the CNDP Monitoring and Reporting Working Group supporting



Pact members to develop a strategy that enables signatories achieve the Pact targets and ensure they are set to a level that will limit future global temperature increases.

AtlasEdge reached out externally to other organisations who are also sustainability leaders in our industry.

In December 2022 a meeting with Scala took place to discuss good practice and share information about how best to reach the requirements set out across the various legislative and statutory requirements.

In April AtlasEdge announced financing of €725 million, part of the AtlasEdge financing includes sustainability-linked targets focused on efficiency and renewable energy usage

AtlasEdge announces milestone €725 million finance

facility - AtlasEdge).

AtlasEdge complete quarterly ESG reports which detail the commitment and work towards:

- Safe and well managed workspaces which do not result in injuries
- Sustainable employee growth and turnover
- Protection for employees and the ability to whistle blow
- Diversity of Board members, employees and women in management
- Investment in environmental initiative

### What we are doing now:

AtlasEdge are now report against the EU Data Centre Code of Conduct for Energy Efficiency and are developing the tools and processes to be able to implement Corporate Sustainability Reporting Directive (CSRD) compliance.

AtlasEdge is now working on the development of the AtlasEdge Net Zero Roadmap with external experts who have been contracted to support the work across AtlasEdge.

### **What we are planning to do:**

AtlasEdge is investing in systems so that it can meet the requirements of the Climate Neutral Data Centre Pact.

### **The targets are as follows:**

- Meet an annual PUE target of 1.3 (cool climates) and 1.4 (warm climates) in data centres operating at full IT load by 1st January 2030
- Data centre electricity demand will be matched by 75% renewable energy or hourly carbon free energy by 31st December 2025 and 100% by 31st December 2030
- Meet a WUE target of 1.4L/kWh in water stressed areas AtlasEdge will also explore possibilities to interconnect with district heating systems and explore circular economy improvements and % recycling targets.

### **AtlasEdge will ensure it meets the requirements of the sustainability linked loan, targets focused on efficiency and renewable energy usage which include:**

- Design PUE of less than 1.25 for all new build data centres
- Operational % PUE reduction year on year
- 100% renewable energy procurement by 2025 AtlasEdge will develop emissions reporting, we currently report on Scope 1 and 2 emissions and will develop reporting and monitoring practices to enable the measurement and reporting of Scope 3 emissions and renewable energy usage.

Our transparent and verifiable sustainability goals and performance will need to comply with EU Taxonomy and EU Corporate Sustainability Reporting Directive.

### **LONGER TERM BENEFITS**

AtlasEdge now have an understanding of how and where power, water and carbon usage can effectively be managed and reduced and will manage and monitor the completion of the work over the next seven years.

### **We will use our experiences to inform our choices as we:**

- replace meters
- exchange diesel for HVO
- install EV charging stations
- design green walls
- design rainwater catchment system to supply non-potable water sources
- assess where we can reuse heat from our sites including connecting to heat district networks
- review solar power generation
- review how we can capture and store energy to make us less reliant on energy providers

We will share our experience and ensure the process is replicated as we grow internally and externally.

We will continue to work with specialists and experts across the industry to feed into think tanks and present our successes so that other industry leaders can replicate the design and technology use.



# Shaping the future of Edge Infrastructure

Built Around You

Amsterdam (x2)  
Barcelona  
Berlin  
Brussels  
Copenhagen  
Düsseldorf  
Hamburg (x2)  
Leeds  
Leverkusen  
Lisbon  
London  
Madrid  
Manchester  
Milan  
Stuttgart (x2)  
Paris  
Zürich





## BANTAM MATERIALS Ltd

### PREVENTED OCEAN PLASTIC

#### INTRODUCTION

Bantam Materials is a global supplier of recycled plastics, aiming to solve the diverse issues facing the recycling industry.

Traceability, being mindful of pollution and good working conditions are still thought to be impossible without putting huge strains on the bottom line, but at Bantam Materials, we wanted to show that isn't the case; we are leading the transformation of the industry and building a positive, transparent circular economy where everyone is respected.

We created the Prevented Ocean Plastic Programme, which collects plastic from at risk coastal communities. We reduce waste and pollution by stopping plastic from entering the ocean and providing a recycled alternative to new plastic, while

protecting the environment and wildlife.

We also build infrastructure where needed, and create fairly paid work for people living locally. We create trust throughout the supply chain through elevated standards, traceability and a credible, research-based approach rooted in environmental and social equity.

This helps build demand for recycled plastic and raises its profile to help consumers make informed decisions. Three years since we started, we have a proven model that can be replicated in any at-risk coastal region to deliver impact at scale – without ever sacrificing quality.

Last month (October) we announced a major expansion of our programme into Africa. The expansion will save up to 5,000 tonnes of plastic



a year - or 220 million bottles - from entering the ocean and polluting the Swahili Coast and where the Nile meets the Mediterranean.

Using our proven model, underpinned with rigorous standards, the expansion of the programme means the globally we will accelerate our work to stop over a billion bottles - enough to fill one of the great pyramids - from entering the world's oceans in the next eighteen months.

### IN DETAIL

#### The Recycling Model that Works

The plastic recycling industry has traditionally been something of a 'wild west' when it comes to standards and practices. Traceability, being mindful of pollution and good working conditions are still thought to be impossible without putting huge strains on the bottom line.

At Bantam Materials, we wanted to create an industry we can be proud of, that gives back to people and planet. We are leading the transformation of the industry and building a positive, transparent circular economy where everyone is respected.

This means going above and beyond basic regulatory and industry standards – something we view as minimum requirements and not something to aspire towards. When we launched our Prevented Ocean Plastic programme, we wanted to show a recycling model which protects ocean and marine life, reduces CO2 emissions, and cuts the need for more virgin plastic is not just possible, but financially successful.

Prevented Ocean Plastic is high quality, traceable, goes beyond regulatory health and safety standards, and is trusted by supermarkets and brands globally. We reduce waste and pollution by collecting plastic before it enters the ocean and providing a recycled alternative to new plastic. This includes building

infrastructure where it's needed and creating fairly paid work for people in local communities.

We create trust throughout the supply chain to ensure to help build demand for recycled plastic and work to raise its profile to help consumers make informed decisions. Our Programme established its flagship collection centre in Bali, Indonesia in summer 2021. The benefits so far have been job creation, plastic collection at scale and elevated standards for the surrounding collection community.

#### A Billion Bottles and Counting - Prevented Ocean Plastic in Numbers -

The programme has already saved over a billion bottles from entering the ocean. Now we have gone one step further; together with the industry, we have created a new set of standards around traceability and working conditions – to elevate what is possible for the industry.

- We are currently stopping more than 1,000 tons of plastic entering the ocean each month and this will increase substantially with our programme's launch in Africa.
- Our Southeast Asia Programme will help prevent over 400,000 tonnes of plastic from entering the ocean in its first 10 years while also supporting nearly 1,000 direct jobs and supporting new income opportunities for thousands of bottle collectors.
- Our expansion into Africa will save up to 5,000 tonnes of plastic a year - or 220 million bottles - from entering the ocean and polluting in Africa, the Swahili Coast and where the Nile meets the Mediterranean.
- The expansion of the programme into Africa will mean the global programme will accelerate to stop over a billion bottles from entering the world's oceans in the next eighteen months.
- Through the effectiveness and scale of our model, we are currently stopping more than 1,000 tons of plastic entering the ocean each month and this will increase substantially with our Programme's launch in Africa.





### DRIVING LONG-TERM ENVIRONMENTAL SOLUTIONS

Cleaning up our environment and lifting up communities is our top priority and we have seen tangible benefits to both since launch. In fact, these issues are deeply interconnected. In order to drive long term environmental solutions we need financially viable and socially sustainable systems.

Building responsible, scalable infrastructure in at-risk regions is allowing us to do this. We also offer consumers a chance to make a positive environmental impact as choosing recycled plastic over virgin plastic can help individuals and businesses meet climate change targets by reducing their CO2 emissions.

This is because new plastic made from oil and petrochemicals generates five times the amount of CO2 emissions in its production and transport than recycled plastic. For every million plastic bottles collected and turned into Prevented Ocean Plastic,

62,500 kgs of CO2 emissions are saved: that's the equivalent of more than 5,000 tree saplings grown for 10 years.

Social advantages have included nearly 1,000 direct jobs and thousands of new income opportunities for bottle collectors in our Southeast Asia Programme. In other coastal communities in developing countries across the Mediterranean and in Central and South America, we have provided consistent and reliable income for thousands of people.

Additionally, all Prevented Ocean Plastic is produced following strict quality, social and environmental standards adhering to a zero-tolerance policy for child labour while supporting recycling efforts in coastal communities.

We became the first recycled plastic business to be accepted to join the Ethical Trading Initiative (ETI), a leading alliance of companies, trade unions and NGOs promoting respect for workers' rights globally.

Our new partnership with the U.S. Agency for International Development (USAID) highlights our centre's success as we work together to scale up collection and recycling infrastructure. We are very close to launching our first aggregation facility through this partnership which will process about 30 tons of material per day and provide new income for roughly 100 individuals.

### LEVELLING UP THE INDUSTRY

The key to the project's innovation has been uniting everyone. Each of the seven stages of the Prevented Ocean Plastic journey from shore to store is fully traceable so that we can confidently ensure sustainable processes, good labour practices and an optimised supply chain that helps improve recycling rates and supports a circular economy.

We also advocate for our people on the ground. By creating reliable income and employment opportunities for bottle collectors and people working in collection and recycling centres, we are helping to provide a level of income security. This is an ongoing 10-year project, in which we estimate will help prevent 400,000 tonnes of plastic from entering the ocean, which we consider very pioneering.

We are engaging with industry experts, researchers, social and environmental organisations in-country and globally including the Indonesia waste pickers union and First Mile to conduct social assessments of the informal waste economy. We also established the Data Centre in Bali, Indonesia, to collect data from across the growing Indonesia recycling network, to monitor and evaluate impact.

Furthermore, we are funding bottle collector demographics to collate information of the informal waste economy consistently. Bantam's purpose is to address issues in the recycling sector long-term. The programme shows what is possible for the industry helping to raise standards, particularly around traceability and worker conditions.

By being trailblazers in our field, we see a ripple effect in the wider recycling industry taking place which is promising for the future. We are committed to repeating the proven Prevented Ocean Plastic model across geographies, coordinated by our Prevented Ocean Plastic Research Centre in Richmond, UK.

The key areas of focus for our research centre include:

- Advocacy for the informal waste sector
- Evidencing ocean bound plastic food safety compliance
- Life Cycle Analysis from collection to final product
- Incorporating the collection of low value plastics into the Prevented Ocean Plastic model
- Thought leadership for education and credible communications with the consumer
- Standards Consultation, bringing together the voices of over 70 companies

We are confident the research will continue to inform change and be beneficial long-term to the industry.

### OUR REPEATABLE, SCALABLE MODEL

To support our oceans, we don't necessarily need enormous investments: relatively small-scale investment in recycling infrastructure, demand from consumers, action by business, and public support from leaders, can drive essential change.

For example, one of our Prevented Ocean Plastic collection facilities is what an investment of around \$100,000 looks like. This provides a recycling method to locations without any and helps jump start the local economy.

We have created a repeatable and scalable model that elevates plastic collection governance while supporting income for coastal communities outside existing collection hubs, and we hope that other organizations can learn from our hard work, so we

can level up the entire industry. Working with USAID, Circulate Capital and other progressive partners is testament to our model's effectiveness.

The partnerships are allowing us to scale up our impact, help clean up the environment and provide income opportunities to communities in need. We aim to proactively share our learnings with the industry to encourage a raising of standards everywhere. We also work with our partners to help them reach the above regulation and industry standards to become Prevented Ocean Plastic partners.

For example, Indonesian rural communities outside of Java Island are greatly in need of income opportunities, along with incentive models that will help mobilize informal waste collection to reduce plastic that goes into the ocean.

Through our Bali collection centre we have developed infrastructure, mobilising informal plastic collection in these logistically challenged regions for substantial impact by improving logistics and building more efficient transportation.

The project is fast becoming a blueprint for best-in-class recycling and circular economy infrastructure across the region, which we are continuing to scale through our partnership with USAID. The expansion of the award-winning Prevented Ocean Plastic programme to Africa has been an exciting development.

It will divert at least 5,000 tons of plastic in its first 18 months from entering the ocean, with the aim of scaling to stop 10,000 tons at its maturity. This will contribute to the global programme being able to stop one billion bottles in just 18 months, just half the time it took to stop its first billion.

That will be enough bottles, when piled up, to match the size of a great pyramid. It will also create work and boost local economies.

The programme will provide fairly paid work for collectors and employees in the recycling centres. Worker conditions and pay are monitored as part of the new standards.





# THE TIDES ARE CHANGING



... and we all have a part to play.



From water bottles to cleaning products to fish packaging, more and more brands are choosing **Prevented Ocean Plastic™**.

By supporting them you send a clear message for the planet.

LOOK OUT FOR  
THE LOGO



## YOUR BETTER PLASTIC CHOICE

### MULTI-AWARD WINNING RECYCLING PROGRAMME



[www.preventedoceanplastic.com](http://www.preventedoceanplastic.com)

#ChooseRecycled

## BBVS

### OLD OAK COMMON

#### INTRODUCTION

Old Oak Common is a new super-hub set to be the best-connected and largest new railway station ever built in the UK. The station will have 14 platforms, a mix of six high speed and eight conventional service platforms, with an 850m-long station box.

It is expected to be one of the busiest railway stations in the UK, with high-speed rail services to the Midlands, Scotland and the North, and access to central London and Heathrow via the Crossrail Elizabeth Line. The new high-speed station at Old Oak Common will help kick-start the UK's largest regeneration project, which aims to transform the former railway and industrial area into a new neighbourhood, supporting new jobs and new homes.

To the west of the station, above the HS2 platforms, there will be a new public park, a green space which will welcome visitors to Old Oak Common and provide a new focal point for the growing community.



#### IN DETAIL

##### What did the Project Involve Doing?

The project involves construction of the huge 850-metre-long station box that will accommodate the 450-metre platforms, installing a 1.8km-long diaphragm wall around the site, which will form the 20-metre-deep reinforced concrete station box. It has been split into three sections – west, central and east – for construction purposes. Within the box, a forest of 161 large diameter rotary bored plunge column piles is being installed. With diameters varying between 1.8–2.4 metres, these piles will support the base slab once the box is fully excavated.



Horizontal concrete beams 44–65 metres long will span the top of the box to support the walls, measuring 3 by 2.5 metres in section and set 13.5 metres apart. With the beams in place, the team will begin the excavation of the estimated 800,000 cubic metres of London Clay set to be removed to create the station void. In order to alleviate the potential impact of the massive excavation clearance





works on local roads, temporary works included the construction of a 1.7 mile-long conveyor which will move the excavated materials to a train terminal at Willesden.

### **Why did You do it?**

The Old Oak Common Station will be the best-connected and largest new railway station ever built in the UK. Additionally, it will help kick-start the UK's largest regeneration project, which aims to transform the former railway and industrial area into a new neighbourhood, supporting new jobs and new homes.

### **What did it Cost and Where did the Money Come From?**

The HS2 Old Oak Common Station will cost £1.3 Billion to build and is publicly funded.

### **Who and What Benefited?**

**Capacity** – By moving long-distance traffic from our current rail network onto HS2's new high-speed line, we will create the extra room needed to improve local, regional and freight services.

**Carbon** - HS2 trains will be powered by zero carbon energy from day one of operation, offering a cleaner alternative to long distance car journeys and domestic flights. This commitment will play a key part in supporting HS2 Ltd's aim to make the project net zero carbon from 2035, with targets of diesel free







construction sites and reducing the carbon content of steel and concrete.

Connectivity – HS2 will act as a catalyst for growth and help level-up the country, boosting growth in the Midlands and North.

Better connectivity opens-up new employment and leisure opportunity for millions of people

### **Was There Anything Innovative About the Project?**

Electric Crawler Cranes  
Rubber Modified Asphalt  
Batching Plant Silo Reuse  
Polymer Slurry Destruction  
Qflow

### **Can Other Organisations/ Communities Benefit From Implementing Your Methods?**

Yes, all lessons learnt, and innovations implemented on the project are routinely captured in case studies and good practice papers and shared with HS2 to ensure the benefits are publicised

and implemented on the other sites and with other organisations.

Additionally, case studies and good practice papers are also reviewed by the Considerate Constructors Scheme monitors during their regular site audits, this enables the benefits and knowledge from the project are shared more widely on the scheme's website with other organisations not currently working on HS2.



## BIDVEST NOONAN & GO AHEAD LONDON BUS

(previously Chela Ltd)

### 100% PLANT BASED CLEANING DETERGENTS....GO AHEAD LONDON BUS (VIA BIDVEST)

The main project objective is to eradicate petroleum-based cleaning detergents from all Go-Ahead London Bus Merton depot (vehicle and depot cleaning) – traditional cleaning chemicals start their life in petroleum form i.e. oil or gas. 100% Plant Based Cleaning detergents start their life as biomass. Fully sustainable and fully efficient.

Currently, there is no UK bus site who exclusive utilities 100% plant-based solutions across sits main cleaning applications which includes. Buswash, Interior cleaning and depot floor cleaning. The use of 100% plant-based biomass solutions ensures that petroleum based raw materials are not manufactured for this specific application. Chela's Pure Range is the first of its kind. A full range of products which are 100% plant based and safe for use across the Bus Industry

Becoming the first UK Bus site to exclusively Utilise 100% plant based cleaning solutions across his vehicle and depot cleaning applications. Our Pure Range is utilized at Go Ahead Merton depot by Bidvest who manage all cleaning applications. All

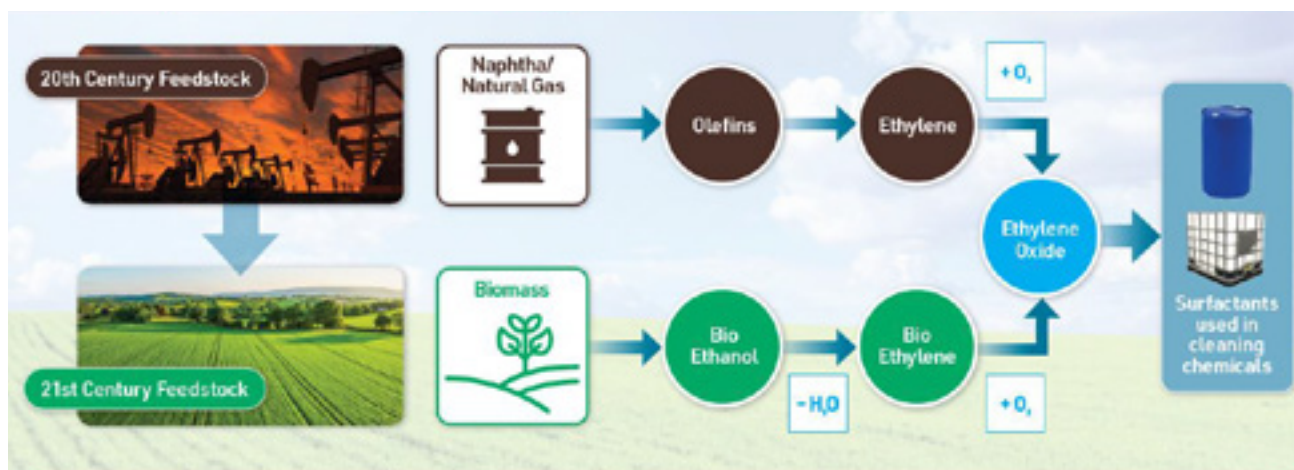
Pure Packaging is also removed from site, recycled and re-distributed back into the supply chain to avoid landfill incineration.

Chela Ltd has supplied Go Ahead Merton depot via Bidvest since 2017. Prior to the Pure Range being introduced, we have supplied traditional petroleum based cleaning chemicals which are derived from oil or gas. Plant based solutions are born in biomass form. Fully sustainable.

#### ABOUT GO-AHEAD LONDON

Go-Ahead London is the capital's largest bus company – running more than 2300 buses, employing over 8000 people and providing 26% of all London bus services. We have 17 garages across London and also have our own Commercial department.

Go-Ahead London is at the forefront of innovation, consistently adapting to meet the evolving needs of London's commuters. With our fleet of modern electric vehicles and a team of dedicated



professionals, we strive to make every journey safe, comfortable, and convenient for our passengers.

As the country's most experienced, and largest, Zero Emission (ZE) bus company, we are working with Transport for London (TfL) and supply chain partners to decarbonise our vehicles and premises.

We manage routes within the capital on behalf of Transport for London. As an operator, we are responsible for our own vehicles and garages. We work closely with TfL on which routes our buses are assigned to, though routes and service frequency are set by TfL, while the Mayor of London is responsible for setting fares.

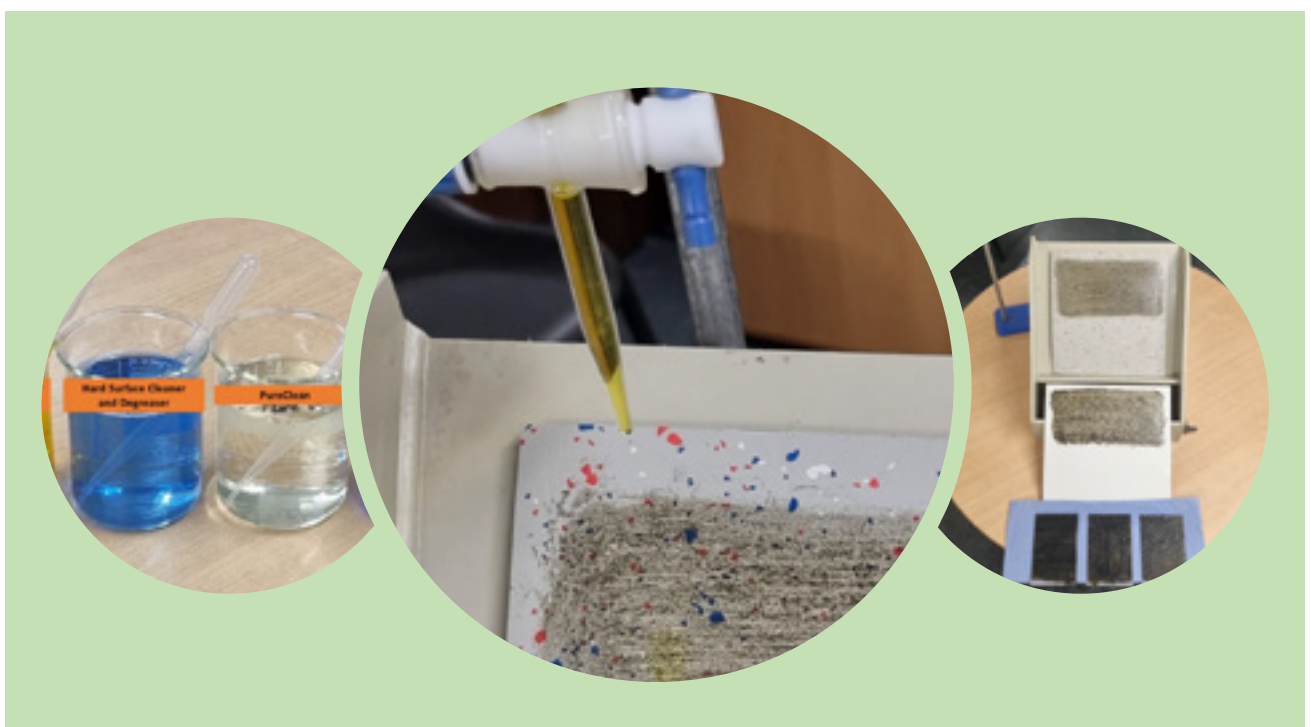
We are part of The Go-Ahead Group, which is an international transport group and one of the UK's leading public transport providers. We place great importance on partnership and adopting a collaborative approach with governments, local communities and strategic partners. We develop and operate services that create long term value for all of us.

### History:

London Central and London General bus companies were formed in 1989 in preparation for the privatisation of London Buses Limited.

Interestingly, both companies' origins can be traced back to one of the original pioneers of bus operations in the capital, the London General Omnibus Company Limited (LGOC). LGOC, or "General" as it was known, operated services throughout the capital and was absorbed into the new London Transport Executive in 1933. London Transport, famous for the red London bus, was split in 1985, becoming London Buses Ltd and London Underground Ltd.

Upon privatisation in 1994, London Central was purchased by the The Go Ahead Group, based in Newcastle, which itself was formed on the privatisation of Northern General Transport Ltd, previously part of the National Bus Company. London General joined The Go-Ahead Group in 1996.





More recently, in 2022, The Go-Ahead Group was acquired by Kinetic and Globalvia.

### ABOUT CHELA LTD

Part of the Fisher Darville Group of companies, Chela Ltd was established in 1988 and is a UK manufacturer of innovative specialised industrial chemicals and technical solutions. Serving the UK, Europe and the rest of the world, Chela Ltd specialises in industrial chemical and technical solutions for all mass transport industries such as bus, rail, tram and coach. Chela Ltd also provides specialised solutions for a number of other key industries.

- Industrial chemical manufacturer
- UK based company
- Worldwide distribution and manufacture
- Established in 1988, part of the Fisher Darville Group
- Specialist in mass transport industries
- ISO 9001/14001 accredited
- BICSc accredited
- Industry approved product ranges

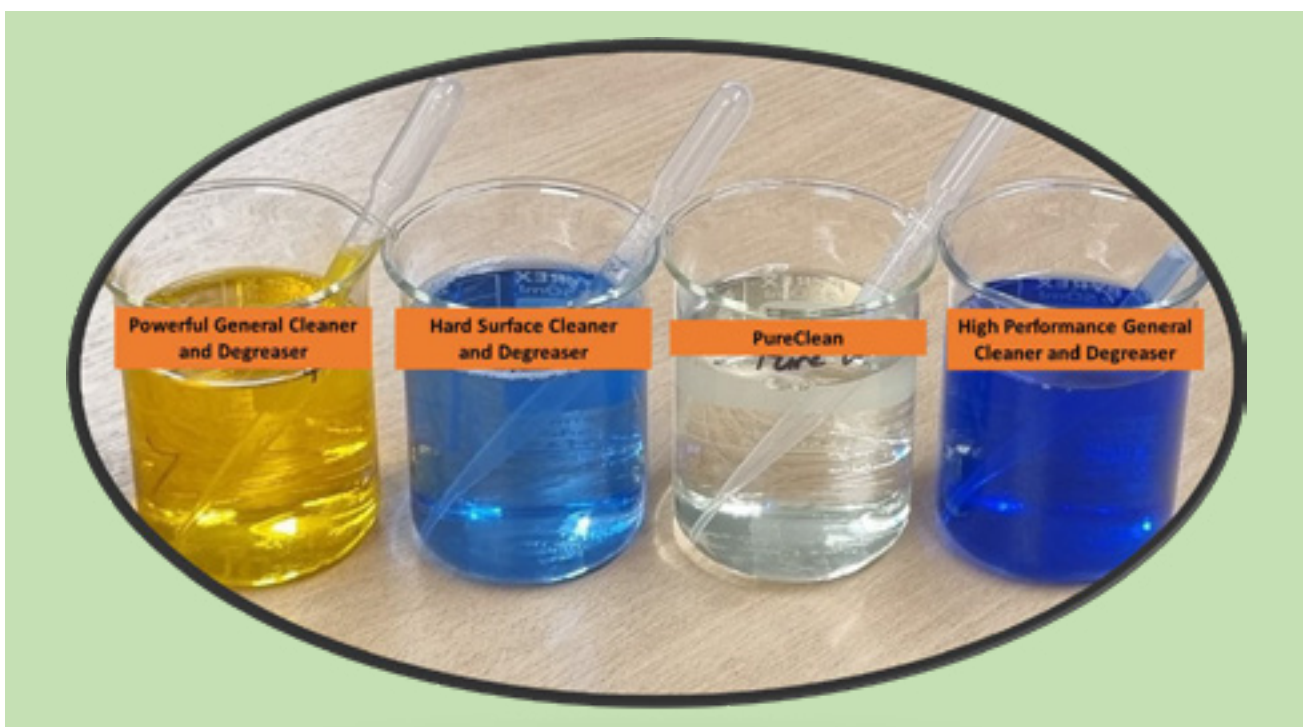
- Research and development facilities
- Green Apple award winners
- Operating with high scientific integrity

### Core Industries

- Bus
- Rail
- Fleet
- Silicone & Polymer Removal
- Food & Beverage Processing
- Builders & Plumbers Merchants
- Industrial & Institutional

### Technical Service & Laboratories

- Sound advice for your individual needs
- UK based laboratories
- Practical and technical expertise in cleaning
- Comprehensive laboratory with scientist team
- UK based laboratories
- Practical and technical expertise in cleaning
- Innovative product development
- Comprehensive material testing
- Structured cleaning schedules to increase staff effectiveness



- An after-sales service plan
- Training
- Informative website

We can provide a comprehensive range of specialised cleaning detergents for use across interiors, exteriors and depot environments. Chela also offers , specialised range of fleet presentation products to suit all fleet vehicles, including curtain siders, painted and livery type vehicles. Chela Ltd prides itself on providing specialist cleaning detergents which increase efficiency and presentations standards, whilst reducing spend.

### ABOUT BIDVEST NOONAN

Bidvest Noonan is a customer-focused services group. Our success has been achieved by designing and delivering solutions that provide exceptional quality and value for customers. Bidvest Noonan employs over 27,000 people across the UK & Ireland. We are the market leader for a wide range of outsourced services in Northern Ireland and the Republic of Ireland and a leading provider of cleaning and security services across Great Britain. We are proud to be a subsidiary of Bidvest.

### Emissions reduction targets

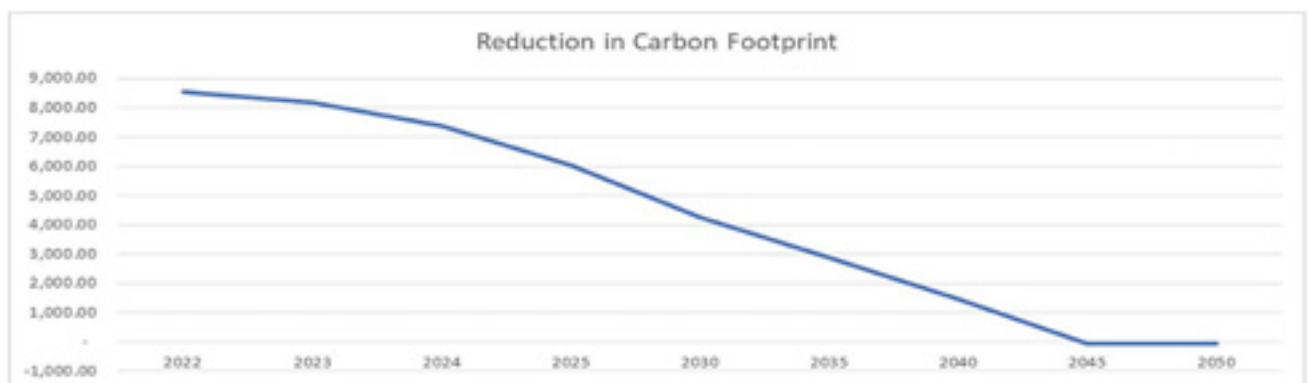
Our key target is to be Operational Net Zero (all Scope 1 and 2 emissions) by 2035 and to have reduced Scope 1, 2 & 3 emissions by 50% by 2030. In addition, we will continue to challenge ourselves and our supply chain partners to develop new ways of working to meet our Net Zero commitment (all Scope 1, 2 & 3 emissions) by 2045 and to have agreed initiatives, verified by SBTi.

We project that carbon emissions will decrease to 6,047 tCO<sub>2</sub>e by 2025, representing a reduction of c29% on our 2022 emissions. Trajectory of our Carbon Reduction Plan is detailed in the graph below:

### Our Environmental Performance

At Bidvest Noonan, we are embedding sustainability into every facet of our business and working with clients to maximise our environmental performance and protect the planet.

We are working hard with our colleagues and supply chain partners to reduce our impact on the environment, from removing single-use plastics and minimising the waste we generate to embracing technological change.



## BIN DASMAL ENGINEERING TECHNOLOGIES AND MANAGEMENT EKTHAAR

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### INTRODUCTION

ekthaar's primary objective is in line with UN's sustainable development goal "zero hunger" which aims to end hunger and all forms of malnutrition, double the agricultural productivity, ensure sustainable food production systems, and implement resilient agricultural practices that increase productivity and production that assures the maintenance of eco- systems and strengthen overall capacity for adapting to climate change by the year 2030.

The ekthaar sustainable farming solutions portfolio currently consists of three fully operational silos capable of producing fresh produce to its consumers. Harvests from the net farm include eggplant, corn, cucumber, okra and tomatoes while the indoor vertical farming unit is responsible for the production of microgreens, leafy vegetables and herbs.

The green house with its dutch bucket system in place produces kale, cherry tomatoes, and

jalapenos. "ekthaar" offers fresh produce all through the year by using only 5% of the actual soil and water while being able to save 25-30% of the total construction cost by reusing construction waste materials and as a result becoming a commercially viable solution for tackling the region's food security issues.

### IN DETAIL

#### Project Description:

The "ekthaar" initiative, developed by Bin Dasal Engineering and Technologies Management, entailed the creation of sustainable farming solutions by integrating the principles of reduce, reuse, and recycle. The project involved transforming unused spaces and construction waste materials into viable agricultural infrastructure.

This included a net farm, a polyhouse, and an indoor vertical farming unit. Project Rationale: Ekthaar was developed to address pressing regional issues, particularly food shortages and construction waste

management. The aim was to leverage the Group's access to MEP and Civil projects to promote sustainable agriculture while reducing waste, aligning with international green building standards and regulations.

#### Financials:

The project significantly reduced construction costs by 25-30% through the utilization of construction waste, resulting in a more commercially viable venture. Our funding came directly from





the Bin Dasmal Engineering and Technologies Management's internal resources, with strategic allocation towards sustainable farming infrastructure.

### **Project Impact and Beneficiaries:**

In terms of sustainable development, the ekthaar project has made considerable strides. Using only 5% of actual soil and water, the project has addressed food security issues effectively. Notably, three fully operational silos produce a wide range of fresh produce all year round, aiding the regional economy and food security.

The project has benefited both the environment and the local community by reducing construction waste and providing a steady supply of fresh produce. The Bin Dasmal Group, its customers, and the broader community have all benefited from the sustainable farming solutions and fresh produce.

We provided an array of fresh produce year-round, such as eggplant, corn, cucumber, okra, tomatoes, microgreens, leafy vegetables, and herbs, significantly aiding in food security. Notably, the harvested produce was distributed to blue-collar workers, improving their access to fresh and healthy food.

Additionally, the project created jobs and demonstrated a commitment to environmental sustainability. Long-Term Benefits: The long-term benefits of ekthaar include continual savings in construction costs, steady production of fresh produce, and a substantial reduction in construction waste.

This project sets a precedent for integrating sustainability into construction practices and contributes to the regional goal of food security. Innovation: The project was innovative in its approach to converting waste and unused spaces into productive agricultural infrastructure. It introduced Controlled Environment Agriculture (CEA) and net farming, combined with effective use of a polyhouse made from construction waste.

This comprehensive approach to sustainable farming distinguishes ekthaar. Potential for Replication: Ekthaar's methods are highly replicable, offering other organizations and communities a model to



Construction Of Green Polyhouse using site waste materials.



address food shortages, implement green practices, and manage construction waste.

### Lessons and Future Development:

The project has demonstrated the potential of sustainable practices to address major regional

issues. Future plans include expanding the project's scope to include more sites and a wider range of produce.

We will continue refining our techniques based on lessons learned.



Awareness to site project team to minimize wastage and Reduce, Reuse, Recycle effectively site waste material



### Accreditations and Awards:

Bin Dasmal Engineering and Technologies was honored as the organization with the 'Best Green Message' for the ekthaar initiative. Further to this the ekthaar project is currently undergoing the sustainable indoor farming certification from control union UK.

### Key Criteria:

**Environmental Benefit:** The project significantly reduces construction waste and optimizes resource use.

**Innovation:** The ekthaar project introduces innovative solutions for converting construction waste into agricultural infrastructure.

**Commitment:** The project reflects the commitment of staff and senior personnel involved.

**Social Benefit:** The project addresses regional food security issues, benefiting local communities.

**Economic Benefit:** Reusing construction waste saves 25-30% of the total construction cost.

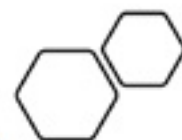
**Quantitative Impact:** The project has three fully operational silos providing fresh produce, demonstrating measurable improvement.

**Future Plans:** Expansion plans are in place to increase the project's scope and impact.

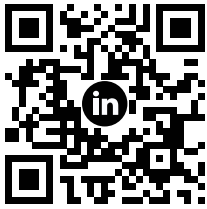
**Replicability:** The project's approach and techniques can be replicated by other organizations or communities.

Our project aligns well with the judging criteria, providing clear environmental benefits, innovation, demonstrated commitment, social and economic advantages, quantifiable impacts, and future development potential.

Additionally, it offers a blueprint for other organizations to replicate, and may deserve special recognition for its comprehensive approach to sustainable development and food security.



Awareness to site project team to minimize wastage and Reduce, Reuse, Recycle effectively site waste material



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## Civil & MEP Projects | MEP Retrofit | Interior Fit Out Facility Management | Energy Services



MEP PROJECTS



MEP RETROFIT PROJECTS



SMART METERING PROJECTS



OUTDOOR FLOOR COOLING PROJECTS



FACILITY MANAGEMENT



ENERGY SERVICES



SUSTAINABLE FARMING SOLUTIONS (IVF & CEA)



EDUCATIONAL INITIATIVES



INDUSTRIAL ZONES-SUSTAINABLE INITIATIVES (DIP & DIC)



UAE CLEAN UP DRIVE WITH EEG

**BIN DASMAL ENGINEERING TECHNOLOGIES & MANAGEMENT CO. LLC**

P.O. Box: 5389, Dubai, UAE. | Tel: +971 4 806 7676 | Fax: +971 4 806 7677

Email: [info@betam.ae](mailto:info@betam.ae) | Web: [www.betam.ae](http://www.betam.ae)



## BIO TECH AFRICA BIOPOLYMER PLANT

### INTRODUCTION

In a crisis -laden era, Bio Tech Africa's aim is to inspire and foster large scale human impact. To solve global challenges related to health, food, power, and inclusive equitable economic mobility by advancing new frontiers of science, data, policy, and innovation that promotes the well-being of humanity by driving the "Circular Economy "model as a reformative system changing plastic product usage to biodegradable and compostable products on the African Continent to totally eliminating landfills and gas emissions in the long term.

In Africa, waste management may seem inopportune given other economic priorities and yet Africa is leading the world in Plastic Bag Bans with 34 countries having banned the single use of plastic due to the massive pollution problem affecting the global environment.

To avoid the depletion of natural resources and maintain an ecological balance, is Mr Vinesh Sukhari at the helm of Bio Tech Africa, who is committed

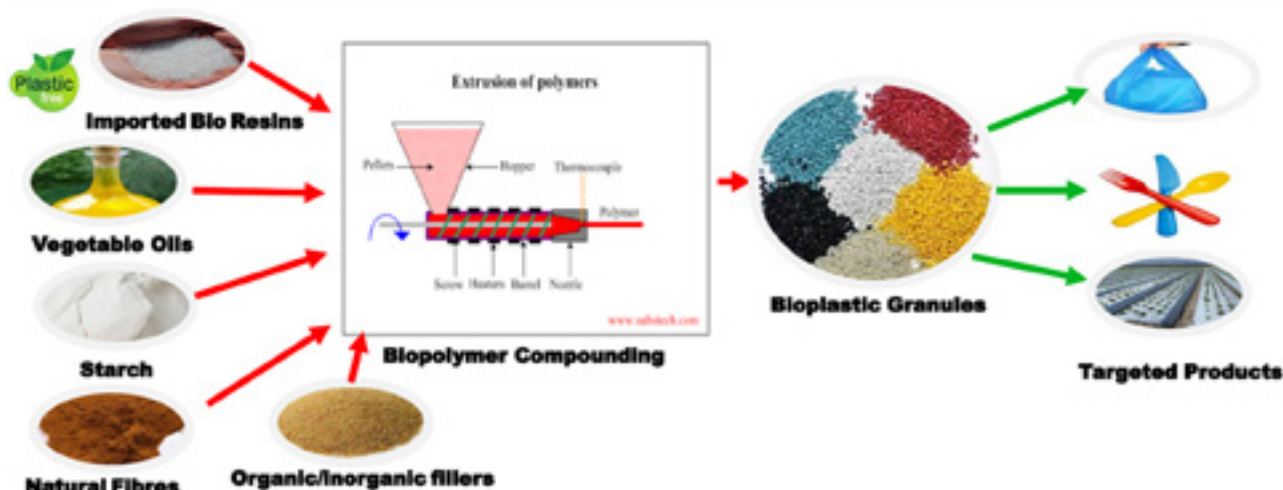
to its preservation to ensure that environmental resources will be protected and maintained for our future generations.

Despite Africa's complex landscape and challenges, Mr Sukhari is providing crucial innovative and sustainable solutions, with rapid growth and resilience at the forefront of its decisions adding value and creating numerous environmental, social, and economic opportunities.

Vinesh Sukhari is the Vice Chairman of the Compostable Plastics Council of South Africa whereby, we drive policy change to reduce the use of plastics and introduce Biodegradable and Compostable products.

He also serves on the Committee of the South African Bureau of Standards to write the standards that conform to the biodegradable and compostable product specifications in South Africa. We focus on providing solutions to the growing challenges that are posed by fossil - fuel based plastic waste on the environment.

## MANUFACTURING PROCESS



The SABS is therefore relevant given that the endorsement can only be approached from an environmental labelling claim perspective.

### IN DETAIL

Bio Tech Africa recognizes that business does not exist in isolation. We have a responsible attitude to our services, processes, and products. We are passionate about the environment and have worked hard at various impact and assessment studies of plastic pollution and waste management in Africa to create an exciting company that is at the forefront of waste management.

Bio Tech Africa will be offering biodegradable and compostable granules to enable the current Plastics industries in South Africa and on the African continent to utilize the granules to produce various biodegradable and compostable products in conformity with the prescribed international standards.

- **Identifiable clear Environmental Benefit**

In this modern world, to avoid the depletion of natural resources and maintain an ecological balance, we as individuals, and as a business, all have a commitment to help in its preservation to ensure environmental resources will be protected and maintained for our future generations.

Bio Tech Africa is proud to be carbon neutral in accordance with the global PAS 2060 standard with a vision to be net zero by 2030, and we are a B-BBEE level 1 contributor.

We create products which align with the biodegradable and compostable specifications, as per International Standards:

ASTM D6400; ASTM 5338; ASTM 5988; ISO 14856; ISO 17088; EN 13432.

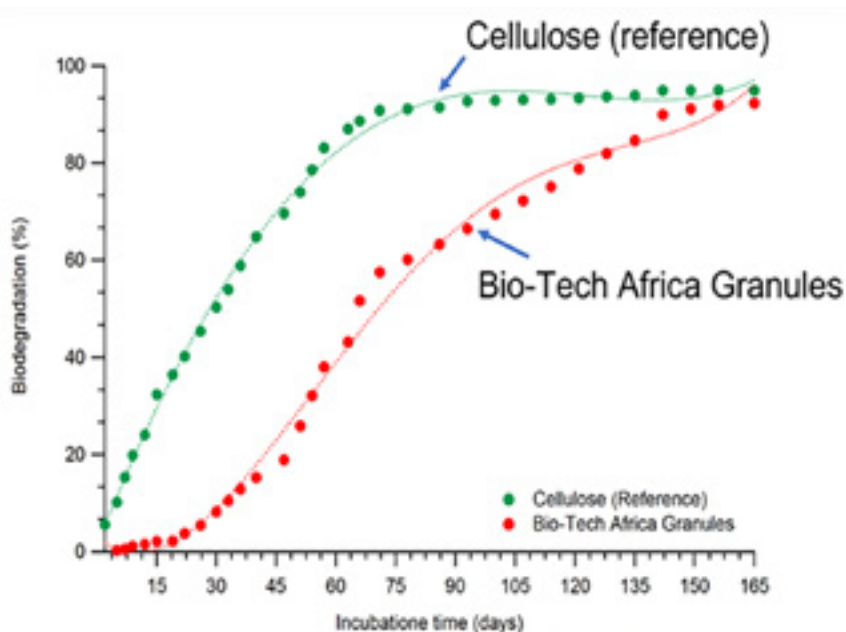
We constantly review our strategies to optimize opportunities to promote within our extensive networks and platforms to ensure that clients and the public at large benefit from environmental initiatives to reduce carbon and improve waste management and we are constantly working with clients and suppliers to identify materials and techniques that minimize environmental impact.

Our developed biodegradable granules are 100% biodegradable on soil and marine water (6 to 12 months); 100% compostable, both home and industrial composting with 3-6 months.

Its completely plastic free with no plastic added but has aesthetically tailored mechanical properties similar to conventional plastic and can be used by conventional plastic product manufacturers.

- **Innovation: Does the entry demonstrate new/ novel solutions to existing problems**

Bio Tech Africa's products is a profound example of transforming catalytic ideas into breakthrough solutions.





The Innovation team applies multi-faceted and pioneering approaches to entrenched problems of plastic pollution. Our team explores and devises new ways to use the power of convenings, networks, data science, and innovative solutions to improve the well-being of all people.

As a transformation force in the innovation ecosystem, we design, test, launch, and scale up new approaches to solving the world's most pressing and persistent challenges by manufacturing biodegradable and compostable granules that are used to manufacture carry bags, garbage bags, cutlery, straws, sanitary napkins, mulch film, pins for mulching and weed mats.

These products are created through a process of Biopolymer Compounding using agricultural materials (bio resins, vegetable oil, starch, natural fibres, and organic fillers) agricultural materials that will allow the bags to completely decompose naturally when introduced to the environment.

As these products have been tested at Council for Scientific Industrial Research (CSIR) and meets all the requirements for claiming 100% biodegradable and 100% compostable.

Bio Tech Africa's products are genuinely designed to totally eliminate landfills and the breakdown of toxic gasses in the long term. With team members working at every stage of the innovation pipeline,

we know how to mobilize the people and resources necessary to move from breakthrough ideas to scaled collaborative impacts.

By leveraging the companies research capabilities, convening power, networking reach, and funding influence, we strive to ensure that new ideas and technologies deliver positive long-lasting solutions and long-term transformation change.

As of April 2023, South Africa had the highest unemployment rate among the G20 countries. Bio Tech Africa will be creating employment for approximately 241 people in the first year of setting up a production plant in Durban, KZN , increasing to 570 people in the third year to manufacture the biodegradable and compostable granules for the African Polymer Industry. Commitment to achieve by senior personnel involved:

Have staff demonstrated their commitment.

Our current team has been handpicked as they have a progressive track record underpinned by their passion of the environment and with initiatives to reduce carbon and improve energy efficiency by working closely with clients and suppliers to identify materials and techniques that minimize environmental impact.

They are working towards going off the grid and have solar panels and drive waste management

campaigns focused on building circular economies. They are passionate about what we do and host community events at client sites to educate, inform and inspire young people.

- **Social Benefit: Have communities or areas benefited.**

As an individual and as a business we have a commitment to our people, our clients, and the communities in which we work to manage green waste as we believe in the importance of Reduce/Reuse and Recycle to minimize waste across the business.

Engaging with the communities in which we and our clients operate is a continuous process and forms part of the company's Corporate Social Responsibility. We collaborate with businesses and communities to encourage them in changing their behavior and making them more aware of the differences they can make both at home and in their working environments.

Educating young people on environmental awareness is also something we feel is a priority and we work closely with schools and education organizations of all age groups. We also host eco lessons at community events to demonstrate how they can adopt ideas to reduce their environmental footprint as the diversion of plastic from landfill is becoming increasingly important. We contribute towards Environmental, Social and Governance (ESG) Funds that work within community projects promoting waste management and environmental awareness campaigns.

We support recycling projects by providing training and facilitating recycling projects.

- **Economic Benefit: Have reductions or savings been achieved.**

Vinesh Sukhari, The Global President for the Circle of Global Business Men was unanimously confirmed by former President Thabo Mbeki and is able to

enable meaningful economic mobility in Africa and around the world by elevating the role of innovation, creating high-impact public-private partnerships, and focusing on African investments to deliver stronger results to improve and impact the lives of millions of people worldwide.

As a result, Government is looking at a number of policy interventions to cut down on the environmental impact of plastics on the African continent; The Department of Environmental Affairs is looking at amending the current policies around plastic shopping bags in South Africa as well as the introduction of legislation around single-use plastics.

Impact is evident in retail giants that have moved away from single use plastic bags to more environmentally friendly bags, restaurant chains moved away from plastic straws, etc.

- **Quantitatively evidence of impact: Are theories supported by measurable improvements.**

The economic, social and environmental benefits to waste management is creating jobs; increasing competitiveness, preventing pollution and conserving natural resources and sustaining the environment for future generations.

As outlined in the Environmental Protection Agency's white paper Bio Tech Africa will be adhering to all the tactics for measuring environmental impact of diverting waste from landfills using the EPA Recycling Content Tool and the Green Team ROI Tracker.

- **Future further development plans: How do you intend to move forward?**

Bio Tech Africa has developed and implemented an intensive investment model based on a mix of institutional, grant, and private investor funding and with the continued aggressive marketing has secured capital amount of R 311 Million to date from companies that provide transformation capital solutions to leading founder-and-entrepreneur



owned companies and is confident to maximize opportunities through product innovation and sound internal control systems and return on investments to shareholders.

- **Possible adoption by others: Can others replicate the procedures?**

Governance in business is important and therefore we must act responsibly, and ensure that our business practices are robust, and report is accurate.

We conduct regular business briefs to ensure employees are kept informed and appropriate

training is provided to ensure we comply and manage the health and safety of our people, our clients and stakeholders.

There is a risk factor to others possibly adopting and replicating our procedure however we are not deterred as our focus of providing a service of the highest ethical quality and we encourage economic and environmental mobility and impact.

Bio Tech Africa is a wholly women owned company birthed from Vinesh's innovative and creative mind and through determined consistent efforts, he works to achieve transformative, equitable change and improve lives and livelihoods.







# BIO TECH AFRICA



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Feel good about your purchases as you explore our line of biodegradable alternatives. Whether it's disposable cutlery, shopping bags, or even personal care items.



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## BLU-3 DUCT RECYCLING INITIATIVE

### INTRODUCTION

As a world-class, fully integrated infrastructure provider delivering expertise to the UK and Europe's largest construction projects, blu-3 recognises the detrimental impact resource use and waste generation has on the environment and wider climate.

Whilst recycling is common practice, the company sought to go one step further and explored the practicalities of extending circular economy principles to a frequently used product. Utility works and high-profile data centre projects involve the use of significant volumes of PVC (polyvinyl chloride) ducting, often resulting in offcuts.

Rather than recycling these offcuts into PVC dedicated skips, which typically means a downcycling of the product, blu-3 and its valued supply chain partner Plaspipes created a new, innovative closed-loop recycling scheme.

Trialled initially at two projects in the Southeast of England, blu-3 began sending offcuts of ducting back to the manufacturer to be re-made into bends and couplers. These new fabricated products were then redistributed across blu-3 projects. With the project proving to be successful and commercially viable, blu-3 is now looking to replicate the initiative across all the company's projects where suitable PVC ducting offcuts are generated, so that it continues to reduce its waste impact and use of virgin materials.

The implementation of the closed-loop system to produce bends and collars for utility ducting has prevented a total

of 5.6TCO<sub>2</sub>e being emitted into the atmosphere verses the traditional waste recycling route – the equivalent of burning nearly 2,000 litres of diesel. Of the 5.6TCO<sub>2</sub>e, 4.7TCO<sub>2</sub>e has been saved by the recycling of the materials, while the additional 0.8TCO<sub>2</sub>e was saved through scope 3 carbon emissions (reducing the transport of the materials via supply chain partners), produced via the transport of the goods.

Along with the huge environmental benefits, the innovative initiative was commercially viable too; the project team saved over £14,400 against if the products had been purchased new. One of the biggest achievements is the awareness and interest garnered across the business and its supply chain, with many other blu-3 projects now investigating how the scheme can be introduced on other sites.

### IN DETAIL

#### What did the project involve doing?

The duct recycling initiative, first trialled at two blu-3 projects in the Southeast of England, involved an innovative closed-loop recycling scheme partnership between blu-3 and Plaspipes. The aim was to reduce waste produced by the company's





Virgin material



Recycled product

infrastructure schemes, and to reduce reliance on production of raw materials.

The process involved collecting offcuts of ducting from site and taking them by road to the manufacturer in Leeds. The offcuts were then re-made into bends and couplers and returned to the original sites and other blu-3 projects across the UK. The entire initiative was made possible by well-established supply chain partner relationships, forward-thinking project management teams and efficient site management supervision.

### Why did you do it?

blu-3 is always looking for ways to innovate and to reduce its impact on the environment. Its project management teams were eager to explore the application of circular economy principles to its

utility works and data centre projects, and the significant use of PVC ducting which often results in offcuts.

Traditionally PVC is recycled via dedicated skips as the default disposal route. However, this does not reduce reliance on virgin materials for the production of more ducting, another key consideration of the waste hierarchy. Therefore, blu-3's end goal of the initiative was to actively manage the waste generated on site, whilst also addressing the environmental impact of procuring new materials required to complete works.

What did the project achieve in terms of sustainable development, economy, environment and/or equity?

To procure the new bends and couplers required for the works, the carbon impact would have been 17.6TCO<sub>2</sub>e. Recycling the offcuts and fabricating new couplers and bends generated a resultant carbon impact of 12.8TCO<sub>2</sub>e, a saving of 4.7TCO<sub>2</sub>e – the equivalent of 12,800 miles driven by car.

Carbon savings were achieved via the reduced need to transport materials. The original production of PVC pipes involves buying plastic pellets from around Europe (Italy, Denmark and Germany),





shipping them to be manufactured into ducting in Scotland, and then distribution to blu-3 sites. The closed-loop process reduced the transport of materials by 60%. Instead of travelling an average of 1,800km, the products travelled circa 700km to and from a factory in Yorkshire.

This transport reduction saved an additional 0.8TCO<sub>2</sub>e. In total, blu-3's decision to recycle ducting into new products saved 5.6TCO<sub>2</sub>e. The operation had to be commercially viable too. Versus procuring the products new, and taking into account the additional carriage charges, blu-3 saved an impressive £14,410 by engaging in this process.

### Who and what benefitted?

Construction and demolition waste is a significant global contributor to solid waste generation, with the potential to detrimentally impact urban sustainability, economic values, environmental safety and community wellbeing. This ducting initiative offers a valuable alternative to address the sustainability issues associated with resource use and waste generation.



In 2020, the UK generated 59 million tonnes of construction and demolition waste, and despite a high recovery rate of 92%, the environmental impact of producing and processing the waste has an associated carbon impact. blu-3 is constantly investigating new ways to innovate and reduce its impact on the environment.

PVC is one of the most commonly used materials for the manufacture of plastic piping, due to its strength and rigid characteristics, and the use of PVC ducting is an integral part of the company's day to day operations as a leading infrastructure provider. Although the use of plastic pipes generally has a lower carbon impact than concrete or ductile iron, the production of PVC generates an adverse environmental impact, due to the use of toxic chemicals and the overconsumption of energy resources.

While recycling PVC is common practice, this process also has the potential to release toxic chemicals into the environment. blu-3's initiative to remodel offcuts of ducting into new bends and couplers not only benefits the environment, but also people's wellbeing, whilst achieving monetary savings for the company.

### Longer term benefits and can other organisations/communities benefit from implementing your methods?

Along with providing demonstrable environmental and commercial benefits, the ducting initiative has encouraged blu-3's site teams to think differently about the management of waste on their projects. This initiative has provided demonstrable environmental and commercial benefits to the project, which blu-3 actively communicates across its business, and the construction industry, as it tries to further our sustainability goals.

### Was there anything innovative about the project?

Whilst the recycling of plastic products is already a well-established process, this initiative was the

first time blu-3's supplier, Plaspipes, was asked to send products directly back to the manufacturer for refabrication into new products.

### **What did you learn from the project and are you planning any further development?**

The process was most cost effective when fabricating the larger 200mm products in comparison to the smaller 110mm and 160mm products. It was made possible by well-established supply chain partner relationships, forward-thinking project management teams and efficient site management supervision.

Overall, the lessons learned was that the collection of materials from each site must be well planned to ensure full loads are returned to the manufacturer. blu-3 is planning to initiate a duct recycling scheme widely across the business, using its base in Detling, Kent, as a collection hub, to ensure the benefits of new products are maximised.

The company also plans to educate its subcontractors, other supply chain partners and its clients about what opportunities are available to reduce waste and the use of new products.



**Estimated impact of virgin product**



**Recycled product  
carbon impact**



## BNP PARIBAS REAL ESTATE PLANT A TREE FOR THE PLANET

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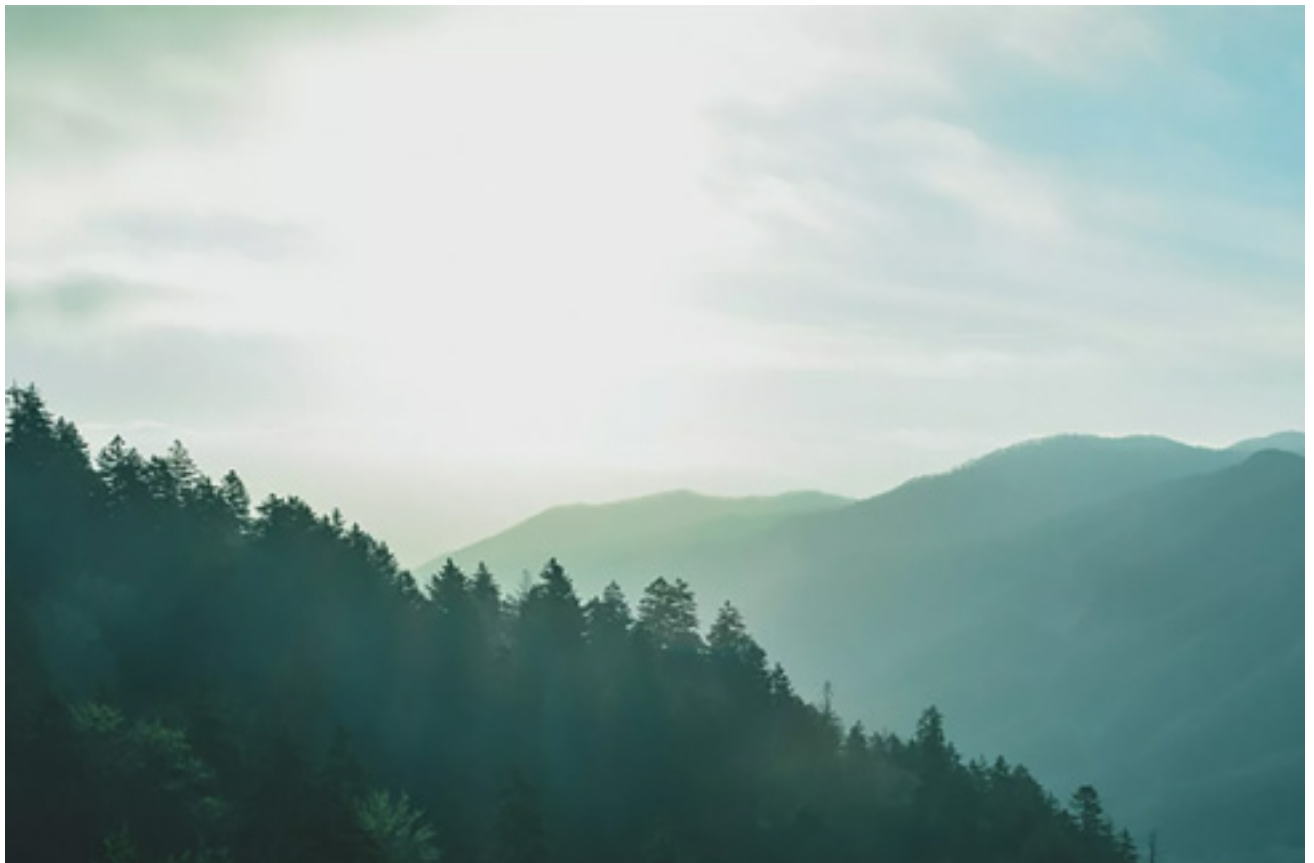
### INTRODUCTION

The project aimed to enhance the environmental and community resilience in Bagacay, Philippines, by strategically planting new fruit-bearing trees. The process involved careful planning to identify the types of trees needed for long-term benefits to the community.

After receiving feedback and assessing the needs, a budget plan was established, supported by generous donations from various companies through a Just Giving webpage. Motivated by the success of sustainability and oceans awareness events in the UK, the project aimed to address the vulnerability of the Philippines to natural disasters and climate change impacts.

The country faces threats such as sea-level rise, extreme weather events, and changes in temperature and rainfall patterns, posing risks to biodiversity and food security. The initiative focused on planting trees as a means of protecting communities against flooding and dangerous wind conditions. The roots of the trees would absorb floodwaters, lowering flood levels and preventing damage.

The project's cost, totaling PHP 38,000 (£584.00), covered the purchase of 100 trees, transportation, and refreshments. The project achieved educational benefits by improving students' and teachers' knowledge of climate change and biodiversity. The event confirmed that students would become





custodians of the trees, integrating them into the biodiversity curriculum. The long-term benefits included providing future shelter, preventing soil erosion and mudslides, and offering new fruit-bearing trees for the community.

Innovatively, the project recognized the role of trees in restoring water cycles, preventing erosion, and filtering the air, contributing to climate change mitigation. The methods employed in the project can potentially benefit other organizations and communities by promoting sustainable development and environmental conservation.

The project emphasized the importance of trees in environmental restoration and demonstrated that planting new trees could have far-reaching positive effects on communities and ecosystems. The lessons learned underscored the necessity of ongoing efforts to protect nature and enhance environmental sustainability, hinting at the potential for future projects to strengthen environmental resilience and safeguard both nature and people in vulnerable areas.

### IN DETAIL

#### What did the project involve doing?

The process involved planning out the kind of trees that is needed in the long term and how they can benefit to the community. After receiving feedback on which new fruit bearing trees are needed for the community a budget plan was put in place and thanks to numerous companies raising money, we were able to go ahead with the project, that will have a beneficial long-term impact on nature and the community.

#### Why did we do it

Due to the success of the events that we have held with in the UK with our Occupiers and suppliers we thought we would expand this to Bagacay due to the success of previous events that we have held with the elementary and secondary schools on Sustainability and Oceans Awareness.

The Philippines is constantly under threat from natural disasters and remaining highly vulnerable to the impacts of climate change, including sea level



rising, increased frequency of extreme weather events, rising temperatures and extreme rainfall patterns creating distributions, droughts, threats to biodiversity and food security.

For a country known for its beauty, the ongoing impacts are detrimental if no positive changes are made. With extreme, long-lasting consequences on the communities by nature's catastrophes many trees are the only resource to protect the communities against flooding.

However, by creating shelter for dangerous wind conditions this protects houses and electric lines that are exposed overground. New trees are an upcoming necessity that is in high demand to upkeep the health and safety of the people and environment.

Furthermore, when a flood occurs, the roots of plants absorb the flood water helping to lower flood levels, preventing damage, and allowing clear to happen sooner.

### **What did it cost?**

Through generous donations from our suppliers from the Just Giving web page that was set up for the event we were able to purchase 100 trees, which also including the transportation from the mainland to the Island.

Both the Portfolio General Manager and his assistant donated three days to the event, even though the event itself took longer to arrange than they first anticipated.

Trees PHP 26,0000.00 (£400.00)  
Transportation PHP 8,000 (£123.00)  
Refreshments PHP 4,000 (£61.00)

### **If quantifiable, what did the project achieve in terms of sustainable development, economy, environment and/or equity?**

This project also made it possible for numerous

students and teachers to improve their knowledge given by William Ball to the ongoing climate change and educate them on Biodiversity and what communities can do to improve on this.

As this knowledge is key for moving forward in the right way for the improvements for the future. It was also confirmed at the event that a number of students will become the custodians of the trees and any fruit that they produce, which will also become part of the students Bio Diversity curriculum.

### **Who and what benefited?**

Apart from providing the community with future shelter from any natural disasters and soil retention, and lessen the risk of mud slides, this project will provide the school with new Fruit bearing seedlings that students can learn and explore on and try new fruits in years to come so that they can expand and build on what we have started.

### **Longer term benefits?**

The trees and seedlings are all new fruit bearing trees alongside the usual mango and coconut trees that cover a majority of the island's new trees with new fruits such as dragon fruit, cacao, mangosteen, drag fruit.

The seedlings will also have a positive effect on Children spending more time outside as the trees will be able to serve shade for the kids to seek shelter under from the extreme hot weather conditions and direct sunlight for the students. giving shade for students.

Students were also able to keep tools that were bought for the planting project to keep using this for future gardening purposes and help keep the greenery intact during environmental influences.

### **Was there anything innovative about the project?**

Trees aid in restoring the water cycle of a landscape, preventing erosion, and reducing catastrophic





flooding. They also help recover and expand forest habitats for threatened native species of plants and animals. They protect watershed and freshwater resources and secure the livelihood of local people.

Additionally, trees filter and clean the air while helping in the fight against climate change by trapping carbon.

**Can other organisations/communities benefit from implementing your methods?**

Planting more seedlings will help the surrounding populations, as new trees will help to maintain healthy soils and humidity levels in the air around the world, especially as the Philippines struggle with high levels of humidity, trees help regulate the water

cycle.

The new planted Trees will also absorb air and transpire it back into the atmosphere, effectively filtering and controlling the levels of humidity wherever they are planted.

**What did you learn from the project and are you planning any further development?**

The project has shown the importance of rebuilding environmental needs such as trees as they have a stronger need for the planet than we think. Future projects could lead to a stronger environment to protect not only nature but also the people living in the endangered places.

## BYBOX & GO4GREENER

### SIGNIFICANT IMPROVEMENT ON BEING SUSTAINABLE AND ENVIRONMENTALLY FRIENDLY

#### INTRODUCTION

Our aim was to reduce the amount of general waste being thrown away and divert as much waste as possible from landfill, with the aim to recycle as much of this as possible.

Teaming up with Go4Greener, we have achieved not only to divert our waste from landfill, but to recycle over 98% of our waste that we classed as general waste, also reducing the amount of vehicle movements and recycling locally.

As well as this, training our teams on what can and can't be recycled.

#### IN DETAIL

As a large business that keeps growing, we knew that we were disposing of too much general waste and needed help from a local business to offer a tailored solution. The business has invested heavily in order to succeed and become more sustainable, not only for our benefit but for our customers benefit too.

We are learning everyday in regards to our waste and recycling, and as we learn, this enables us to teach our customers the correct way to dispose of their waste and what can and cant be recycled.

Teaming up with Go4Greener waste management, all of what we classed as General waste now goes directly to their facility instead of landfill. At their facility,

they manually sort our waste into categories to be then recycled.

We first got in contact with Go4Greener over a year ago, they have been very patient and accommodating. They have visited our site numerous of times to offer support and encourage us to be more conscious with our waste.

Not only have they provided us with solutions for our Coventry depot, but they are now also assisting us with solutions for our Solihull depot, reducing the General Waste by another 90%. They have supplied us with site audits, invited us to their site and showed us around the facility and how they manually sort and report.

They report to us on a monthly basis on the weights that have been recycled and how much is actual general waste. The general waste then goes to a plant only a few miles from their facility where it is sorted even further by machines.







Any general waste that can't be recycled further, is then made into RDF. Our customers will benefit from all of this as we can now report on how much and what happens to their waste with a full detailed cradle to grave. Working with Go4Greener, we are always looking at the future on how we can implement new strategies and projects.

Until working with Go4Greener, we never realised how in depth they go in order to ensure everything is recycled in a sustainable way. Whilst working with Go4Greener and redirecting our waste to them, from the start of April 2022 until the Beginning of November, we have managed to retrieve the following:

339 Tonnes of Waste sent  
210 Tonne Cardboard Recycled (62%)  
39 Tonne Plastic Recycled (11%)  
45 Tonne Metal Recycled (13%)  
9 Tonne Wood Recycled (3%)  
7 Tonne Weee Recycled (2%)

The rest has been sent to a further facility for further recovery. They have helped us recycle over 90% of what we were sending as general waste which is now being recycled.

### Putting customers first

Every service moment is an opportunity to solve, optimise, and delight... or fail and leave an opening

for competitors to exploit. We believe that companies can operate faster, more efficiently, and provide the right first time fix to real-world problems with the right technology and logistics solutions.

We're proud of the hundreds of blue-chip businesses we work with. They play a vital role in repairing and replacing the technology upon which modern businesses rely.

While you're busy transforming the world, ByBox provides the modern field service inventory management that can transform your field services and ensure you always get the right parts, in the right place, at the right time.

### The ByBox solution

Our technology evolves as the world does, and we've come a long way from our original offer of mechanical lock boxes that secure distributed inventory. While these lock boxes still play an important role in field service inventory management, the full ByBox solution today provides the right mix of software, logistics expertise, smart lockers and forward stock locations (FSLs) to ensure the right parts arrive at your field service edge in time – supercharging your supply chain so it becomes a key business advantage.

For our clients, a unique combination of software and expertise from ByBox has fast become the final word when it comes to field service inventory distribution and reverse logistics.

### ByBox by the numbers

ByBox has more than 1,900 field inventory sites, with 40,000+ secure locations. We deliver 30 million items per year, with 99.7% delivery on time\*. ByBox operates in 31 countries.

### **GO4GREENER -**

Our reputation for innovative and cost-effective solutions has been won by developing and maintaining close relationships with our clients, and treating them as if they were our only one. Go 4 Greener is one of the most pro-active and competent waste management providers in the East Midlands area.

We also provide a nationwide coverage and recycling management opportunities.

#### **Our Mission Statement**

To be the leading provider of Total Waste Management Services, delivering best value and sustainable waste solutions that improve the quality of the environment

### **Our Core Values**

We are committed to providing all our clients with a professional, responsive, and customer focused service. To create innovative solutions that will improve the quality of the environment by reducing waste further through more proactive recycling.

#### **Why Choose Us?**

To comply with environmental laws and regulations  
To supporting our customer' environmental ambitions  
To continuously drive improvements in all that we do  
To always act with integrity and honesty  
To promote a culture that encourages individual responsibility for sound environmental management  
To develop waste management solutions that are more favourable to our environment and reduce the impact that we have on the environment







# ByBox is the leading innovator in field service logistics

**Committed to streamlining supply chains through unbeatable logistics, advanced technology and intelligent solutions.**

Specialising in the development and implementation of cutting edge locker technology, we empower businesses to fulfil stringent service level agreements (SLAs) efficiently and effectively. We have over 50,000 lockers in the UK over 1,500 sites.

We are committed to helping our customers operate a leaner and greener field service supply chain and through our partnership with Go4Greener we have been able to eliminate unnecessary waste from our central hub in Coventry UK.

**By working with Go4Greener we can support with the following:**



**WEEE Waste**



**Office, Paper & Cardboard**



**Industrial Waste**



**Site Clearance**



**Confidential Waste**

**Anything unable to be recycled goes into green energy production.**

Leveraging our expertise and commitment to sustainability, ByBox continues to redefine the landscape of field service logistics, delivering not just unparalleled efficiency but also paving the way for a more sustainable future in supply chain management.

## CBRE - HOLBORN BARS

### HOLBORN BARS

#### INTRODUCTION

Amazing Victorian Gothic features including gothic turrets and groined vaulted brickwork arches inside main entrance

Courtyard B, terracotta gargoyles to front designed and installed to channel rain water away from building.



#### IN DETAIL

Holborn Bars still stands proudly on the site it was built on in 1879 by The Prudential, this site is where Furnivals Inn previously stood and housed Charles Dickens.

The decision to build Holborn Bars was the result of The Prudential outgrowing their Chief Office. The original estate was designed by Albert Waterhouse, who is synonymous for his gothic style and many architectural designs, such as The Natural History Museum.

As a tribute to Albert, the three buildings in the estate are named 1,2 & 3 Waterhouse Square. During the 1930's, the original 1879 block was rebuilt with large open plan floors inspired by Art Deco interior design by Architect E M Joseph and two additional refurbishments of 2 Waterhouse Square were completed in 1993 and 2011.

Holborn Bars possess a rich and diverse history, from having a restaurant and roof promenade solely for lady clerks, a chapel, and a meeting hall.

At this present-day, the estate is used as office and event space mixing the rich gothic exterior and contrasting between the remaining Art Deco interiors, such as handmade mosaic tiles and the grand stairwell that begins at



the entrance hall of 3 Waterhouse Square.

In 2 Waterhouse Square, the lobby acts as a transitional space between the courtyard and the main reception area. The reception houses chapel-stained glass windows and Art Deco pillars, combining the two modern atriums built in 1993. The desk has a steel halo installation above the desk making this a focal point and marrying traditional and contemporary architecture together perfectly.

Whether it is intentional or by chance, most people who wander into Holborn Bars are frequently seen panning around the courtyard taking in all its grandeur. Holborn Bars has been likened to a Hogwarts in the City due to its red gothic façade.

The team at Holborn Bars regularly observe the public entering the estate through the archway on High Holborn, they are then met with a bridge that joins 1&3 Waterhouse together. As they continue to walk under the bridge, they are met with the Waterhouse Square courtyard, where each building sits adjacent to the other.

At Holborn Bars, we have thoughtfully softened the exterior of the courtyard by adding trees, plants, and seating, making the courtyard a welcoming space for all to come and sit, enjoy lunch, or provide a backdrop for selfie lovers.





Also, each year, the outdoor space proudly hosts a Remembrance Day service at the Prudential war memorial on behalf of M&G. Holborn Bars had an extensive exterior restoration project that was completed in 2020.

The first that has ever been undertaken, which has restored the estate to its former glory. At M&G, we are extremely proud to have Holborn Bars as a part of our portfolio as it is now a part of our history.

More importantly, it is a reminder of the longstanding relationship between M&G and The Prudential that is to help people manage their savings for a life they want to live.





## CBRE - THE LONDON FRUIT & WOOL EXCHANGE THE LONDON FRUIT & WOOL EXCHANGE

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### INTRODUCTION

LFWE has been an important building for Spitalfields since its construction in 1929, but its original function disappeared with the closure of Spitalfields Market in the early 1990s.

The development retains the LFWE's principle façade and creates a series of new volumes across the entire site in a language of brick and reconstituted stone that derives from the nearby industrial buildings. An unsightly 1960s multi-storey car park has also been removed, such that the whole project adds to the grain and texture of the area.



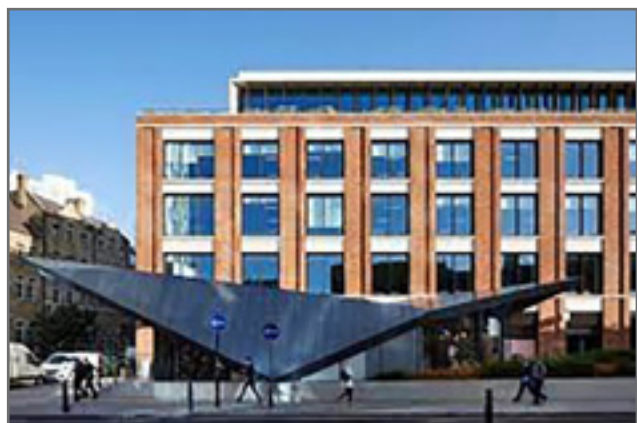
The retained facade has been interlaced with a contemporary glass design (also known as facadism), unifying the old and the new.

### IN DETAIL

Opening in 1929, when the volume of imported produce coming through the docks more than doubled in the ten years after the First World War, the mighty Fruit & Wool Exchange in Spitalfields was created to maintain London's pre-eminence as a global distribution centre.

The classical stone facade, closely resembling the design of Nicholas Hawksmoor's Christ Church nearby, established it as a temple dedicated to fresh produce as fruits that were once unfamiliar, and fruits that were out of season, became available for the first time to the British people.

After sixty years as a teeming warren of brokers and distributors, the building languished when the Fruit & Vegetable Market moved out from Spitalfields in 1991 and there were no wholesalers left to cross Brushfield St and supplement their supplies of British produce from the auctions at the Exchange. Since then, around sixty small businesses operated peaceably from the building which through its



shabby grandeur reminded every visitor that it had once seen better days.

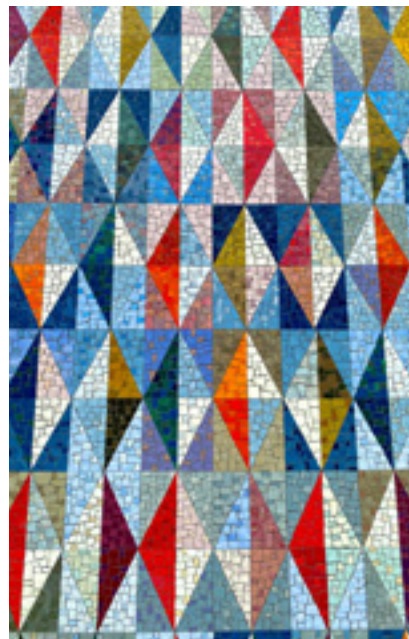
Since then, a substantial mixed-use development has been completed on the former London Fruit and Wool Exchange (LFWE) site in Spitalfields, directly opposite Christ Church, Nicholas Hawksmoor's baroque masterpiece. The neo-classical main façade of the LFWE, repaired and enhanced to its original form, has been retained to become the centrepiece of the new scheme.

With large-scale commercial development encroaching from the west and tight-knit Georgian and Victorian streets to the east and south, the development responds to dual demands: the value of broad office floorplates and the need to preserve the spirit of the conservation area.

The scheme achieved planning permission in 2012 and comprises five floors of offices above mixed uses on the ground and basement floors. Its massing closely corresponds to the scale and dimensions of the 1929 LFWE building and, at only one storey taller, is a relatively low-rise development compared to recent commercial neighbours.

The plan is symmetrically arranged so that the internal volumes retain a direct relationship to the external form of the retained façade on Brushfield Street. It re-interprets the LFWE through the use of similar materials, including brick and light-coloured pre-cast string-courses.

The largely impenetrable island site has been opened up by a new north-south pedestrian route, with shops, restaurants and accommodation for small businesses around the building's perimeter.





## CBRE - TOWER PLACE

### CBRE TOWER PLACE

#### INTRODUCTION

Following the pandemic, our focus has been to build a circular economy within our office. Through our partnership with Bywaters, we will be taking massive steps towards transforming Tower place into a more circular and sustainable building.

Our priority as always will be improving our recycling rate and educating tenants to ensure our standards remain as high as they have been. We started off the year with plans and considerations.

Our plans include a schedule of Waste Awareness Days, audits and training sessions. It also includes partnerships with the likes of TRAIID, vegware and more circular businesses.

Our considerations include reducing our carbon footprint and improving our environmental contribution through refurbishments and fit-outs; whilst considering all avenues for improving waste habits.

Following the pandemic, one of our biggest challenges has been maintaining and increasing the high standards we set in 2021 and 2022. With a plethora of detailed audits completed, we utilised our knowledge of the building and its contents to produce the best possible results for tenants and the environment, resulting in an increase in our recycling rate.

Through our partnership with Bywaters, we dived into the world of AI, by inviting NANDO into our buildings. The organisation installed scanners and cameras into our bins that let us know which items were being incorrectly recycled.

Waste Awareness Day 14<sup>th</sup> June 2023.



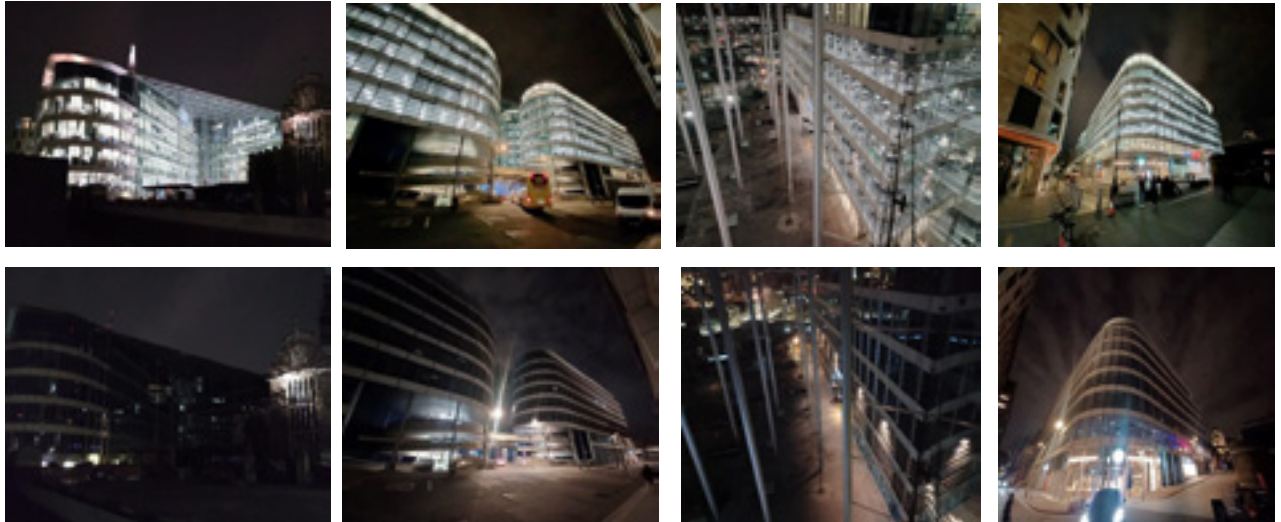
This contributed to us drastically improving our recycling rate, whilst giving us the best possible information on what to target during training and waste awareness days. Our pursuit of a circular economy reached new heights through our partnership with organisations that extend the lifeline of some of our most sort after resources, such as TRAIID, Vegware and more.

#### IN DETAIL

Tower Place is the perfect balance of modernity and sustainability in the heart of London's financial district. Nestled beside the largest river in England and built to complement the city it calls home; our mixed-use development boasts a range of retail and office spaces that are as stunning as they are eco-friendly.



### EARTH HOUR SUCCESS FOR TOWER PLACE 2023



Our commitment to sustainability goes beyond the norm, with features specially designed to reduce our environmental impact and prioritise the use of surrounding natural resources. Our recycling rate has steadily risen over the past year, thanks in part to our hardworking waste operative.

Working Monday to Friday, 8 am-5 pm, he has shown remarkable dedication. We are proud to announce that as of May 2022, we have surpassed our previous rate of 67%. Over the last year, Tower Place has taken steps towards creating a circular economy within our building.

Through our partnership with TRAIID, we were able to provide our clients with an opportunity to repurpose clothing as opposed to recycling them.

These efforts culminated in a Waste Awareness Day on June 14th.

#### AUDITS AND TRAINING:

Tower Place is a bustling multi-purpose building that houses some of London's most renowned restaurants and offices. Bywaters' conducts multiple audits to understand each client's unique needs better.

The audits are detailed and thorough, focusing on boosting each client's operations' efficiency. We recognise that each franchise comes with its own set of principles and challenges, which is why the team have committed its sustainability specialists to working directly with Tower Place, helping some of the most well-known restaurants in London; this includes Zizzi, Starbucks, Wagamama, and Subway.

Audits were carried out in 2022 for Wagamama. The first was carried out in May 2022 which offered recommendations to the retailer. The score for May's audit was 57.62%. Recommendations were implemented and a second audit was carried out in September.

This score was higher, landing at 72.38%. Our goal through our Waste Awareness Days is to empower our team with the knowledge and skills needed to make a difference in our waste management.

This is shown best in the sudden improvements of our recycling rate.

Our commitment to environmental sustainability drove us to undertake a major fit-out of our building



over the past year. As a result, Tower Place has become one of London's most environmentally friendly buildings.

Our efforts have included the refurbishment of 10 Air Handling Units to significantly improve building ventilation. We upgraded our lighting control system and all lights fittings to full LED. According to The Climate Group, LED lighting achieves energy savings of 50-70% compared to old technology.

These changes have a big impact on the planet, considering lighting accounts for nearly 5% of global CO2 emissions. Through our many transformations, we have upped our EPC ratings from a D to a B, with an improvement of more than 53 points. Our efforts have not gone unnoticed; as Tower Place has recently been recognised by BREEAM, the world's leading science-based validation and certification system for built environment.

We have also achieved the esteemed ISO 14001 certificate, marking a significant milestone in our environmental sustainability efforts.

### Traid:

Through our partnership with TRAIID we have offered clients an innovative opportunity to repurpose clothing. Not only does this partnership facilitate the reuse of personal, but it also extends the lifespan of previously unused or faded staff uniforms.

Since March 2022 to date, TRAIID made 6 collections from the textile bank at CBRE, diverting 227.47 kg of unwanted clothes and shoes from landfill, reducing carbon emissions (CO2) by 2.15 tonnes and water savings of 363 m3.

### Nando AI:

Tower Place has made a powerful move towards improving its

recycling rate by partnering with NANDO AI through Bywaters. Using a small IoT sensor, Nando AI can collect data on the type and amount of waste on a daily basis.

This innovative technology takes photographs inside the bin every 20 minutes, while maintaining privacy. Using advanced artificial intelligence, NANDO recognises all the waste inside our bins and displays the quantity and quality of the waste through professional data on a dashboard.

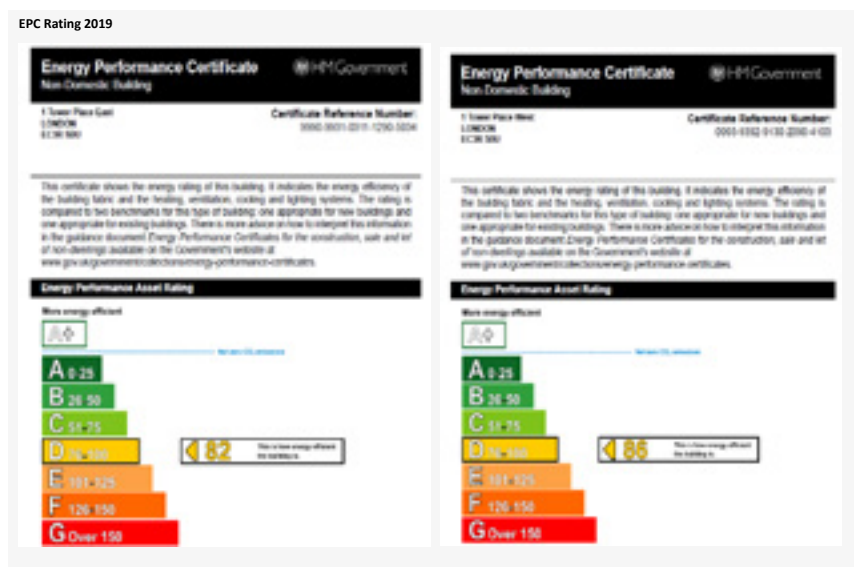
By meeting the GRI 306 standard, this partnership signifies a major milestone in Tower Place's mission to reduce its environmental impact.

### Training and audit:

Through careful and thorough audits, the Green gurus at Bywaters have identified areas for improvement and tailored training sessions to address those needs. These efforts culminated in a Waste Awareness Day on June 14th, which incorporated many of the lessons learned during the audits.

### Waste Awareness Events:

At Tower Place we believe that being sustainable is not just a buzzword, but a responsibility we all share.



That's why we organise Waste Awareness Days to engage residents in fun and interactive activities that help promote sustainability, while subtly educating them on waste management.

Our Waste Awareness Days have proven to directly improve our recycling rate. Two activities that have proved to be especially popular is our smoothie bike- a unique blend of fitness and sustainability.

This bike allows attendees to pedal their way to a refreshing smoothie. This demonstrates how energy generated from human power can be harnessed.

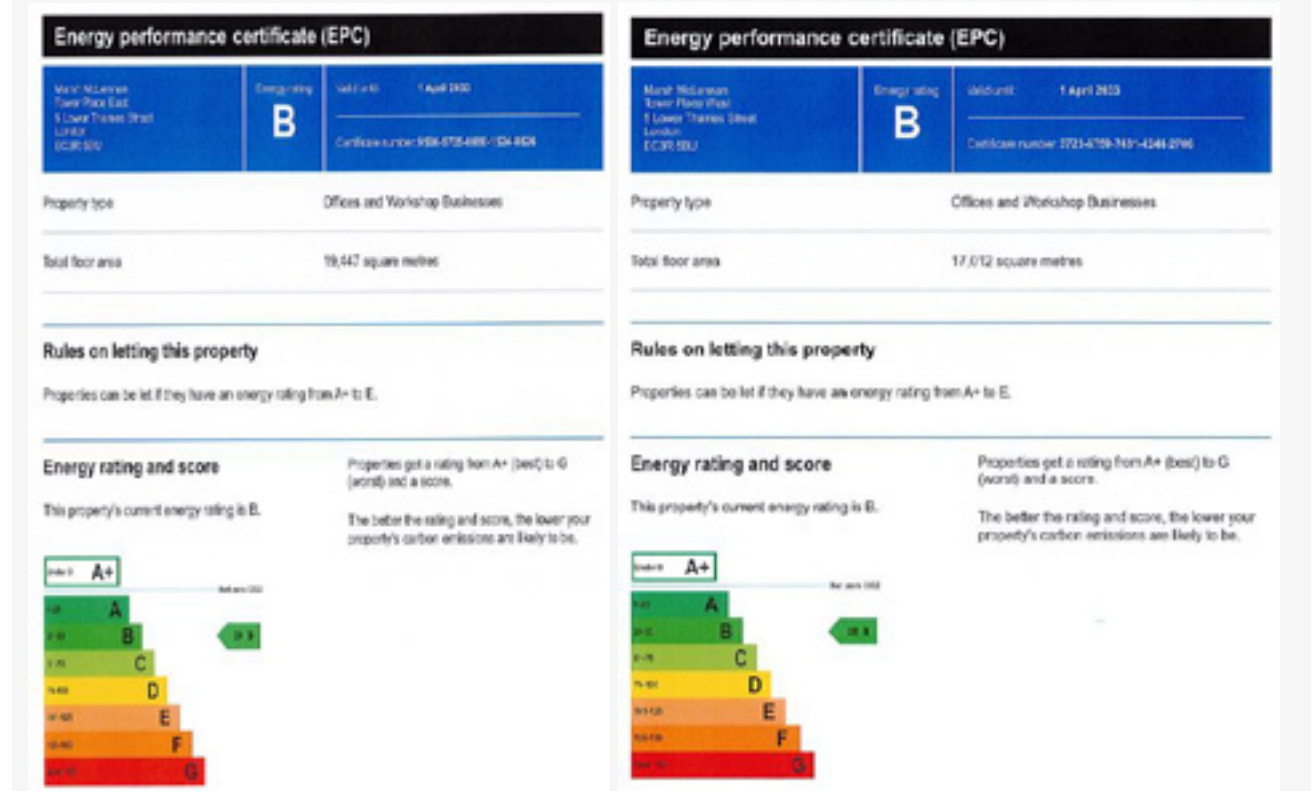
The second activity is our Living Wall, we test the clients with three recycling questions, if all are answered correctly the staff receive a plant to take home.

Our partnership with Bywaters goes beyond the traditional boundaries of corporate responsibility, as it speaks directly to the conscientious consumer. Our Waste Awareness Days was a huge success. We had an array of interactive displays and activities, including VR headsets to give a first-hand look at Bywaters' Material Recovery Facility, and informative signage.

We also had a waste sorting game with tricky items like coffee cups and crisp packets for a chance to win prizes.

Complimentary recycled tote bags, notebooks, and pens were also available. It was a fun and informative day, and clients left motivated to make positive changes in their recycling habits.

### EPC Rating 2023



## CHAMBERLAINE CLEANING SERVICES CLEANING FOR A GREENER TOMORROW

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The contemporary world is confronted with significant environmental challenges, encompassing the enhancement of air, soil, and water quality. Measures are being taken to improve industrial activities while detecting and treating pollutants to prevent pollution. Moreover, in recent decades, the issue of global warming has escalated into a critical crisis. Changes in solar output, depletion of the ozone layer due to harmful pollution generation, volcanism, and human activities have all contributed to this potentially hazardous problem. The depletion of greenhouse gases has disrupted global temperature regulation resulting in an annual temperature increase by approximately 0.56°C. An alarming 70% of respondents acknowledge that human activities are responsible for causing global warming with no viable prevention method available.

Unless these activities cease promptly, it is projected that by 2050 carbon dioxide emissions will lead to an alarming 11.6% increase in temperature compared to current levels - an estimate based on the assumption that CO2 emissions remain

uncontrolled at their present rate. The accumulation of CO2 emissions within our atmosphere poses a major obstacle for mitigating climate change.

It is imperative that immediate action be taken on a global scale through collective efforts such as reducing greenhouse gas emissions from various sectors including facility management and commercial cleaning industry while promoting sustainable practices across industries worldwide.

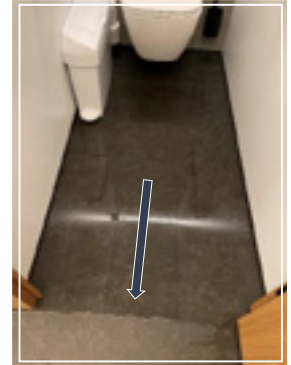
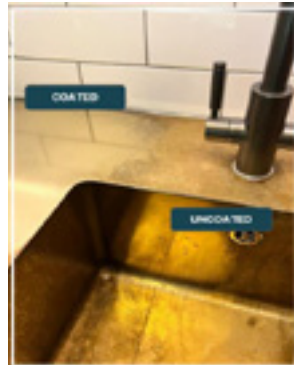
With this in mind, the usage of nanomaterials may be a solution to some of these issues. Nanotechnology, the science of manipulating matter at the nanoscale level, has revolutionized various industries, and the cleaning industry is no exception. With its ability to enhance the performance of cleaning products, nanotechnology offers promising solutions for a greener and more efficient future. By harnessing the unique properties of nanoparticles, coatings such as Nordic Chem with nanotechnology are able to target dirt and grime at a molecular level preventing contamination from penetrating the substrate, resulting in superior cleaning performance and reduced CO2 emissions.

### AIM

Over the years Chamberlaine has demonstrated great acumen and expertise in pioneering environmental solutions across complex scenarios of cleaning and maintenance across different locations. In order to support this, through our business strategy to continually innovate and improve best practice we discovered Nordic Chem and created an exclusive partnership with them as of mid 2021 in order to be a



pioneer in the cleaning industry, to serve our clients in a more sustainable and environmentally sensitive manner, to reach our net zero target by 2026 and to reduce the CO2 emissions we emit to the environment during our cleaning operations.



## BENEFITS

This revolutionary technology, Nordic Chem 2.0 Water-Based Nano-Tech – Commercial Ceramic Coating System, provides antimicrobial properties, a highly repellent layer for protecting & shielding surfaces from environmental damage, pollution, and contamination, and will rejuvenate the surface. It protects glass, aluminium, concrete, cladding, wood, textile and more. Its self-cleaning properties reduce the frequency of using machinery that require electricity, water and in some occasions fuel. i.e. jet washing daily, reduced to weekly.

This initiative creates a reduction on:

- Cleaning time around 50%
- Chemical & Solutions usage over 50%
- Non-renewable resources such as fuel around 45%, water & electricity over 50%.
- CO2 emissions for fuel, water, electricity around 50%

## IN DETAIL

The cleaning of external areas is critical to the function of commercial properties, we have analysed current and historical data in regards to those operations across and have run tests of the product at main locations of Derwent London portfolio for different surface types such as concrete, aluminium and glass to see its effectiveness.

Some of the data we have looked at during our trial are:

- Type of machinery used and technical data such a water tank capacity, rate flow, weight,

speed, engine, etc

- Total area to be clean in m<sup>2</sup>
- Number of employees
- Water consumption
- Chemical consumption
- Fuel consumption
- CO2 Emissions (Kg CO2e) for fuel, water, and electricity
- Yearly electricity consumption per machine (KWh)

During preliminary stages of application of Nordic Chem Nano-Technology surface coating material we have analysed our dependency to non-renewable resources as well as:

- Operations and operational labour
- Equipment technical specification
- External areas dimensions m<sup>2</sup>, etc.

Data was gathered from current and historical information and we extrapolated these to demonstrate the energy and water saving potential after Nordic Chem 2.0 has been applied to given surfaces. It has made a difference and it has showed us it will save cleaning time, which results in the saving of man hour, energy, and CO2 emissions during our cleaning operations! In addition to these during our preliminary stages, we have found additional benefits which are listed below:

- Surfaces stay cleaner for longer
- Daily cleaning became easier after the coating – e.g. no chewing gum stains for external areas, no water marks on glass
- No slip hazard due to coating
- Help excess water to overflow



After the completion of the preliminary stage, the first application has taken place in one of the prestigious building owned by Derwent London at the beginning of 2023. Nordic Chem 2.0 was applied to different locations across the building such as male and female toilet floors, male and female changing rooms, lift lobby and lifts, stairs and public realm of the building. At the end of the 90-day initial application period, at a considerably higher reduction rates were observed which listed below for the area of 6479 m2 covering the specified areas above:

- 30% for the time required for cleaning
- 70% in CO2 emission in total for water, electricity and fuel

### EMBRACING A GREENER FUTURE WITH NANOTECHNOLOGY IN CLEANING

In conclusion, nanotechnology holds an immense potential for revolutionizing the cleaning industry, offering greener, more efficient, and sustainable

solutions. Cleaning products with nanotechnology such as Nordic Chem 2.0 Water-Based Nano-Tech – Commercial Ceramic Coating System provide enhanced cleaning power, reduce chemical usage, and conserve water & energy resources. By embracing nanotechnology and promoting responsible practices, Chamberlaine represents a unique approach across the FM & Commercial Cleaning Industry, by targeting and understanding the full impact of our entire energy consumption , we have created a road map for sustainable development and Zero-Carbon Future for our company and the our industry.

At Chamberlaine Cleaning Services, we are aware of our environmental responsibilities in the cleaning industry and we are paving the way for a greener future by using natural resources less and reducing CO2 emissions by our operations.

Let us embrace the potential of nanotechnology and work towards a cleaner and more sustainable tomorrow with **“Chamberlaine Way”**.



## DEWA

### SOLAR INNOVATION CENTRE

#### INTRODUCTION

Solar Innovation Centre has been developed to be a world leading innovation hub promoting latest innovations in clean and renewable energy, highlighting the green initiatives of Dubai government and DEWA.

It supports Dubai Clean Energy Strategy 2050 to diversify the energy mix and supply 100% of Dubai's total power output from clean energy. The iconic 88-meter-high building located in the heart of Dubai's desert area consists of four floors covering 4,355 m<sup>2</sup> square meters.

Its award-winning design and operational aspect of sustainability has exceeded expectations by being the only government building in the world achieving



more than 100 points in the new construction category.

Considering sustainable design planning, construction, implementation, and handover, it contributed to DEWA's sustainable growth through the triple bottom line strategic objectives including minimized environmental footprint and pioneering socially responsible practices. It achieved LEED platinum, scoring 101 out of 110, taking the extra mile and exceeding the 80-baseline score by 26%.

High green marks were achieved in areas of water and energy efficiency, indoor environmental quality, innovation, and design. The green building strategy followed ensures maximizing building inherent energy, prior to adding renewables.

Without renewable energy, the building optimized energy savings by approximately 24%, which is considerably efficient in Dubai's climate. 100% of the building annual energy consumption is covered by on-site renewable energy production systems, including BIPV (Building Integrated Photovoltaics) installed by Emirates Insolaire.





Water use reduction of 54% was achieved in all building fixtures and 50.9% in flush fixtures. 24.24% of products and building materials have been extracted, harvested, and manufactured regionally. It includes preferential-parking for low-emission and fuel-efficient vehicles and 97% of storm-water runoff is treated.

Reducing internal building temperature, it has high-albedo roof area, covering 210% of total roof area. The well-constructed building envelope achieved great results under thermography test, Water tightness test as per AAMA 501.2 and Air Permeability test as per AAMA 502.

It is greatly airtight with leakage rate of 0.77 conducted as per ASTM E799-03 against Dubai Municipality and MEDG acceptance criteria.

Long-term energy, financial and operational savings across various pillars are anticipated, given

the ambitious results achieved. The Innovation Centre, targeting public sector attraction, aims to enhance visitor experience by hosting more than 35 interactive exhibitions and shows using drones and hologram technology, as well as pioneering experiences, including Metaverse, the digital telescope, autonomous bus ride, and the virtual tour across the Mohammed bin Rashid Al Maktoum Solar Park.

The angular formation of the spire and the embedded twisting ribbons of glass create dynamic, faceted interior spaces allowing efficient daylighting. The design

is inspired by the 'divine geometry' often found in Islamic art creating a synergy between design and function embodied in a beautiful organic form that simultaneously maximizes shading and insulation.

Comparable to other exhibitions, it not only educates visitors about sustainable energy, technology, and design, it also integrates this knowledge into its own design and management, with interior design set to inspire curiosity and exploration.





## DING TAI Co., Ltd

### JW ECO-TECHNOLOGY: SUSTAINABLE WATER MANAGEMENT SOLUTION ACHIEVING ON-SITE WATER CIRCULATION

#### INTRODUCTION

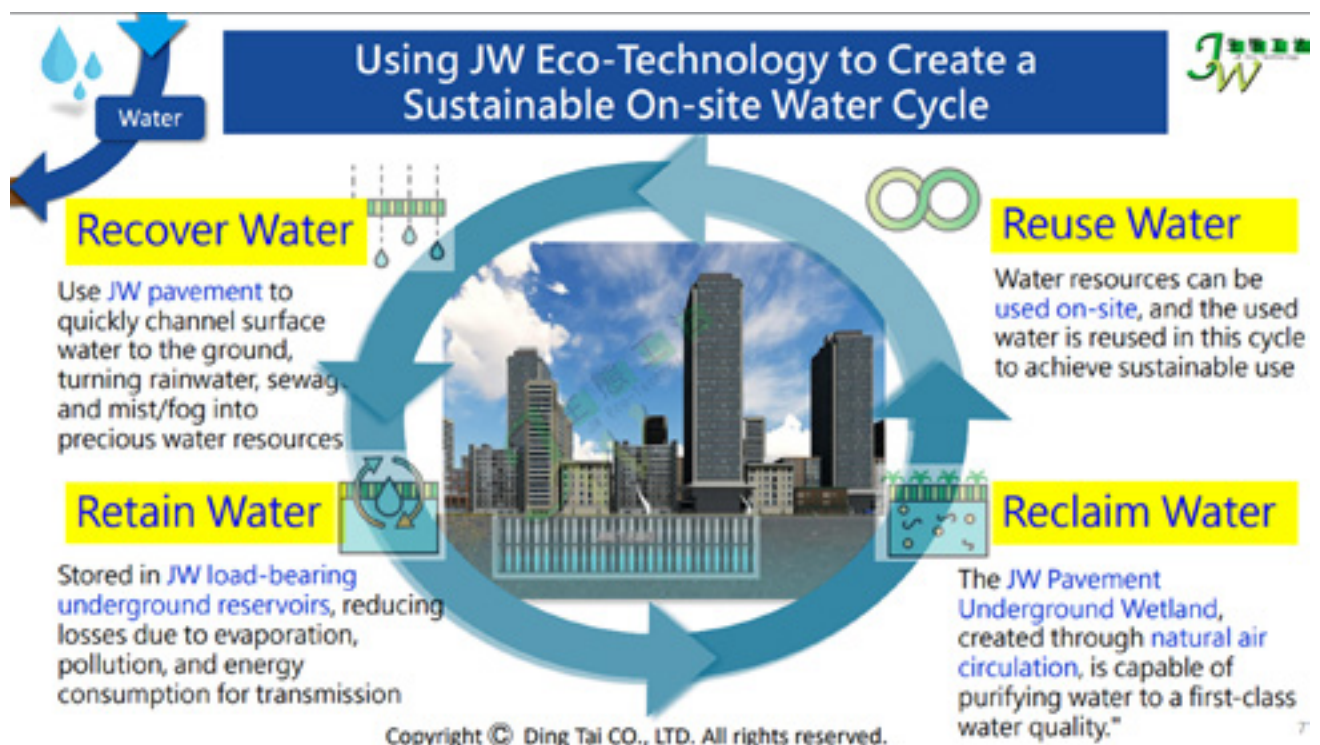
The JW Eco-Technology system offers a unique solution to the challenges of urban development, providing a highly load-bearing, permeable, and breathable road infrastructure that supports human civilization while also promoting a healthy ecosystem and providing clean water, air, and food for all.

The JW Eco-Technology has developed an on-site water circulation system that promotes the sustainable utilization of water resources, resolves issues related to “too much, too little, and too dirty water”, and reduces reliance on external water sources, contributing to protect precious water resource.

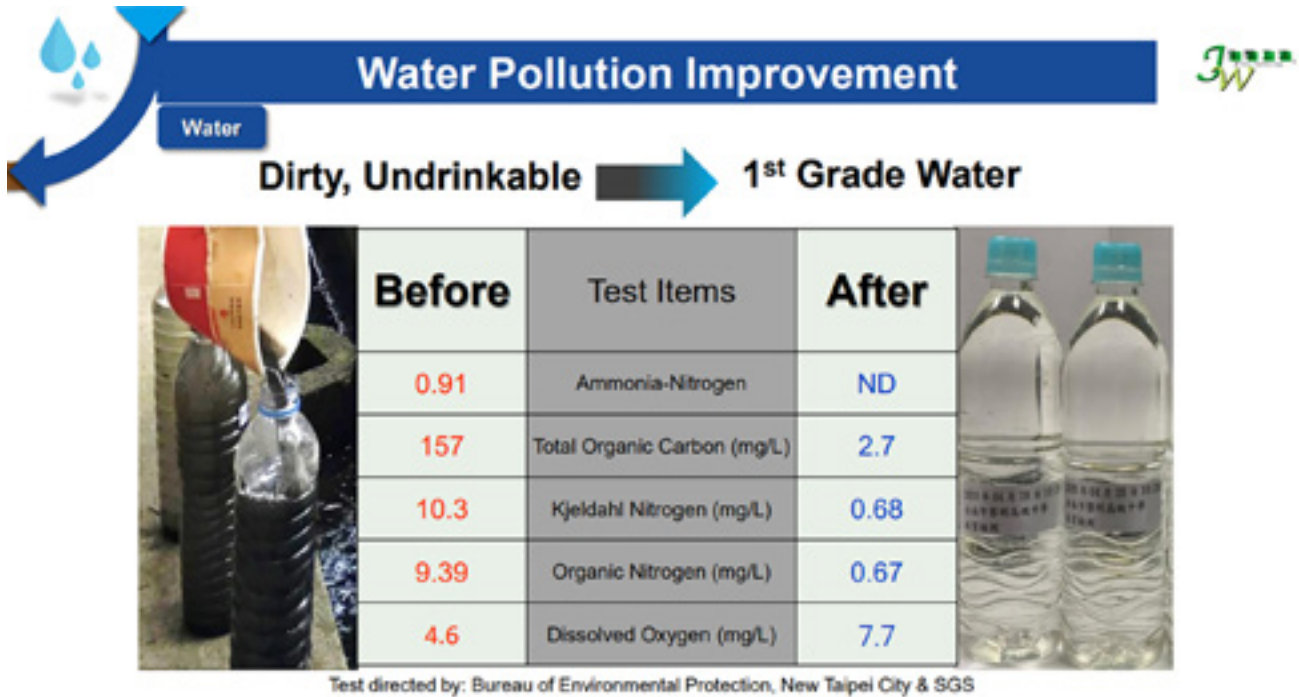
Infrastructures now can co-exist with water in harmony by implementing JW Eco-Technology. JW Eco-Technology include a revolutionary permeable pavement and underground reservoir that can simultaneously achieve multiple functions that support human civilization and nature’s way.

JW Eco-Technology provides a global solution for resilient infrastructure for mitigating climate warming and adapting to climate change to achieve flood/drought prevention, cooling, carbon capture, water quality improvement, low maintenance and other multiple benefits.

Li-Ming High School (LMHS) in Tainan For over 60 years, the campus had been frequently flooded due to being 70 cm below the road level.







By changing the pavement to JW Eco-Technology Pavement, the campus became a large underground reservoir and underground wetland without drains, requiring no change to its usage status. During the heavy rainfall of over 600mm in 24 hours that caused once-in-a-century, 7-days severe flooding in Southern Taiwan in August 2018, LMHS did not accumulate any water and held over 20,000 tons of floodwater, allowing for the reuse of water resources.

In 2021, when Taiwan faces its worst drought in 56 years, thanks to the underground wetland and reservoir system under JW pavements, LMHS still had its own sustainable water source and did not suffer from water rationing. It's noted that the school estimates that it can save more than ten million Taiwan dollars (US\$330,000) on water and electricity each year.

This benefit from the JW Pavement exceeds the total initial cost and contributes significantly to the development of the green economy every year.

## IN DETAIL

### Challenge

The world is currently facing a water crisis due to the scarcity and limited availability of water resources. Although water is recyclable, it is crucial to address the current disruptions in the water cycle.

Human development practices often disrupt the natural water cycle by prioritizing drainage from buildings and roads and excessive extraction of groundwater. This has led to problems such as groundwater scarcity, land subsidence, and flooding.

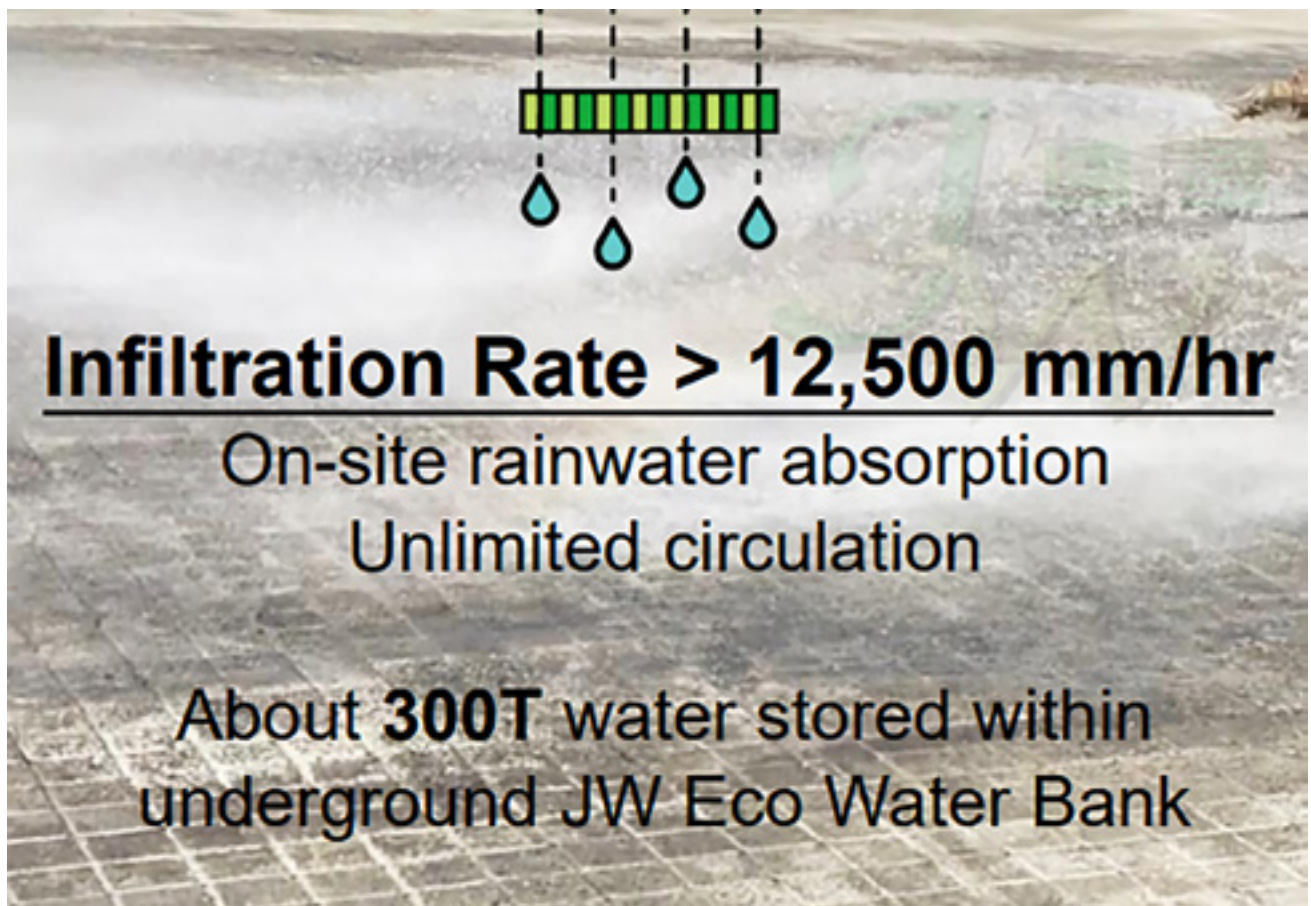
Additionally, the effects of climate change have further intensified water-related challenges. To ensure the sustainable use of water resources, it is necessary to enhance the efficiency of the water cycle.

### Solution

JW Eco-Technology has developed an on-site water circulation system that promotes the sustainable utilization of water resources, resolves issues related to “too much, too little, and too dirty water”, and reduces reliance on external water sources, contributing to protect precious water resource.

This system incorporates the 4R functions to facilitate on-site water circulation:

1. Recover water by on-site infiltration: The JW Eco-Technology System utilizes JW pavement to efficiently channel surface water to the ground, effectively converting rainwater, sewage, floodwater, and water mist, etc. into valuable water resources, thereby addressing flooding/drought-related disasters.
2. Retain water by on-site storage: Water is stored in the JW load-bearing road underground reservoir and/or the JW Eco gravel layer to minimize losses due to evaporation, pollution, and energy consumption during transmission.
3. Reclaim water by on-site purification: Natural air circulation is facilitated by utilizing aqueducts of various sizes to create pressure differentials, allowing the pavement to “breathe.” This natural aeration promotes the formation of JW pavement underground wetlands, effectively purifying water to meet first-class quality standards.
4. Reuse water by on-site circulation: On-site water resources can be utilized, and the used water is then recycled back into the system, ensuring sustainable and unlimited recycling.



### **Innovation**

The JW Eco-Technology is a revolutionary holistic solution to global water and environmental problems, achieving flood- prevention, water infiltration, storage and purification all at once, thus achieving complete water recovery and on-site purification.

JW Eco-Technology provides a global solution for resilient infrastructure. JW Eco-Technology is a revolutionary permeable pavement and underground reservoir that can simultaneously achieve multiple functions that support human civilization and nature's way.

Infrastructures now can co-exist with water in harmony by implementing JW Eco-Technology for mitigating climate warming and adapting to climate change to achieve cooling, flood/drought prevention, carbon capture and other multiple benefits.

These benefits have been scientifically proven with evidences.

### **Practical example and benefits:**

The Li-Ming High School (LMHS) in Tainan For over 60 years, the campus had been frequently flooded due to being 70 cm below the road level.

By changing the pavement to JW Eco-Technology Pavement, the campus became a large underground reservoir and underground wetland without drains, requiring no change to its usage status.

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In 2021, when Taiwan faces its worst drought in 56 years, thanks to the underground wetland and reservoir system under JW pavements, LMHS still

had its own sustainable water source and did not suffer from water rationing. It's noted that the school estimates that it can save more than ten million Taiwan dollars (US\$330,000) on water and electricity each year.

This benefit from the JW Pavement exceeds the total initial cost and contributes significantly to the development of the green economy every year.

### **Recognition**

The JW Eco-Technology has been widely recognized by international awards for its innovative and sustainable features. In particular, it has received the 2017 Global Road Achievement Award, the 2018 and 2019 Globe Energy Awards, and the 2021 Rushlight Awards, representing recognition in the innovation, environmental community, civil engineering, road profession and water management.

### **Scalability and future development**

As long as there is human civilization, there will be roads. JW Eco-Technology can be applied to all roads and outdoor pavement. Whether for new roads or transformation of existing roads, JW pavement has corresponding practical cases.

This shows the scalability and replicability of JW Eco-Technology. We have signed contracts with over 60 countries worldwide to promote the JW Eco-Technology together. In 2020, the UNOPS invited us to work together in combating climate change by using JW Eco-Technology. Recent projects have carried out in countries such as U.S., China Turkey, Philippines, Vietnam, Ivory Coast, Senegal, Guinea and France, etc.

### **Summary**

Let us unite with global partners to construct JW Eco-Sponge Cities, in pursuit of sustainable development goals. These cities, built using JW Eco-Technology, harness natural principles to establish

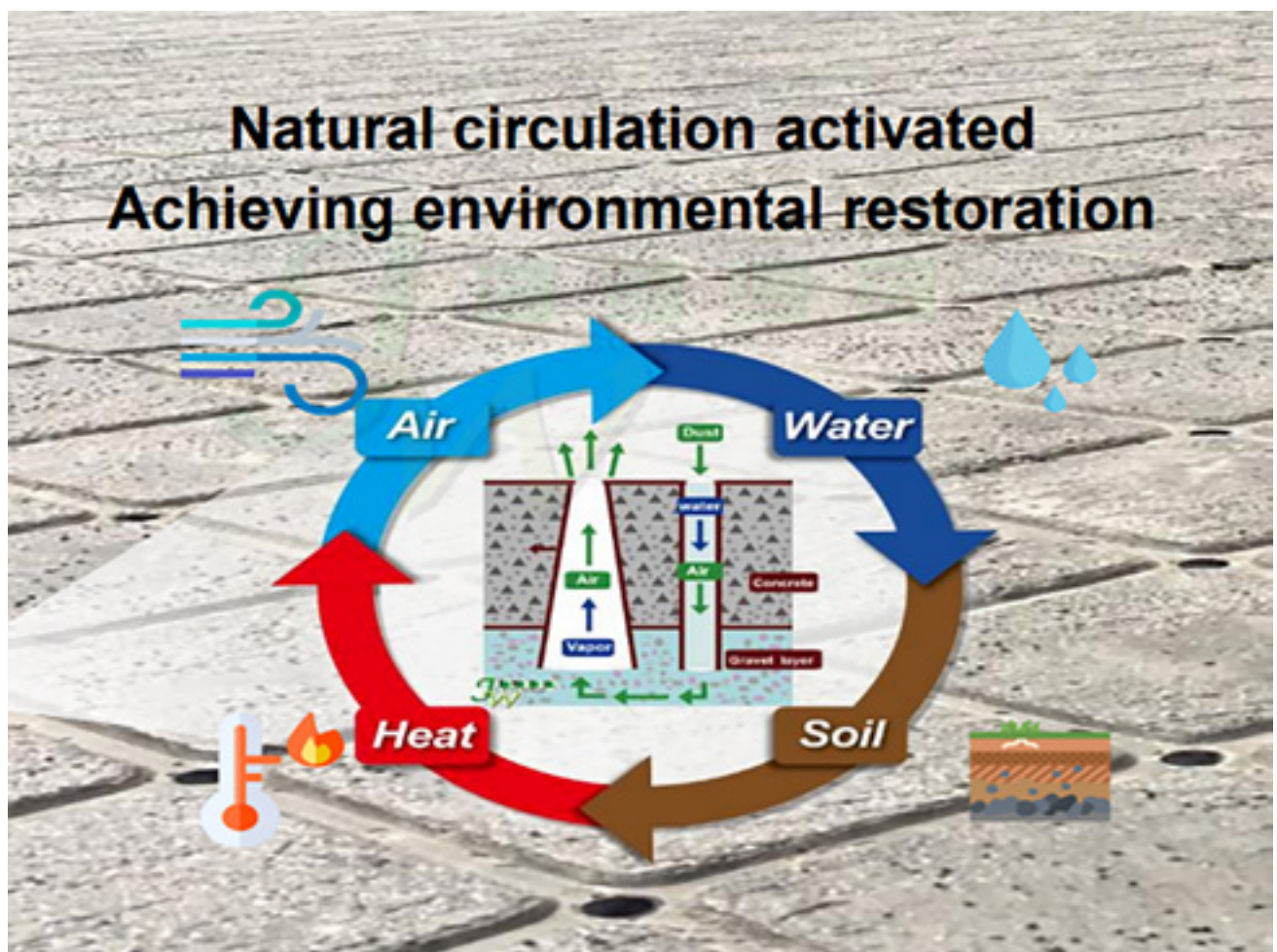


a harmonious cycle of water, air, temperature, and soil.

They incorporate underground wetlands with disaster-resistant and pollution removal capabilities. JW Eco-Technology not only offers robust transportation infrastructure through high load-bearing roads but also fosters a healthy ecosystem

that ensures clean water, air, and food. It safeguards the environment, creating a livable habitat for communities.

Together, let us collaborate in constructing JW Eco-Sponge Cities, enabling a harmonious coexistence between urban areas and nature.







## JW Eco-Technology Creates Sustainable On-Site Water Circulation - a Holistic Nature-based Solution for Too Much/ Too Little/Too Dirty Water

### Recover

JW Permeable Pavement  
Solves Problems of Too Much Water

### Retain

JW Load-bearing Rainwater Harvesting  
Module Solves Problems of Too Little Water



### Reuse

JW Eco-Technology as a Holistic  
Water Resource Solution

### Reclaim

JW Pavement Wetland Ecosystem Solves  
Problems of Too Dirty Water

Converting Stormwater into Resources, Solving  
Problems of Too Much/Too Little Water at Once



Li Ming High School, constructed by JW Eco-Technology with the collective efforts of its teachers and students, successfully reduced a 34-hour rainfall of 800mm and effectively transformed 20,000 tons of floodwater into valuable water resources. This remarkable achievement has resolved the long-standing problem of recurrent flooding and water scarcity that the school has faced since its reconstruction 60 years ago.

Before



After



Providing Clean and Sustainable Water for  
Arid Areas



Zhangjiakou City, the host city of the Beijing Winter Olympics 2022, utilizes JW Eco-Technology to implement the Sponge City Project proposed by the Ministry of Housing and Construction. The Minister personally ordered this pioneering project, which has achieved the distinction of being the world's most environmentally sustainable Winter Olympics.

### Implementing Sustainable Development Goals (SDGs)

#### JW Eco-Technology Contributes to Achieve 15 SDGs



#### Collaborating with Governments to Advance 2 SDGs



Presented as a Key Technology for  
Improving Urban Resilience at COP28



Win the First and Only Prize  
in the Global Road Achievement Award



Win the Energy Globe Award for  
Non-Construction Years



Win the UK Spotlight Awards  
Leading Sustainable Project



Win the 1st place prize award of the Technology  
and Solution Award of UK Low Carbon Awards



Winner of 2021 Green Apple  
Environmental Awards



2015



2016



2017



2018, 2019



2020, 2021



2021



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Website for more info

## DIRFT III MANAGEMENT COMPANY LTD

### DIRFT 111

#### INTRODUCTION

Daventry International Rail Freight Terminal (DIRFT) is the UK's leading intermodal (rail / road) destination, situated in South Northamptonshire near junction 18 of the M1 and West Coast Mainline.

Planning for DIRFT III was granted in 2014, covering an area of 830 acres and representing a £1bn expansion. A key part of DIRFT III was the development of Lilbourne Meadows, a new 173 acre nature reserve created in partnership with the Wildlife Trust BCN (Beds, Cambs & Northants), along with Natural England and the Environment Agency to enhance habitats for wildlife, including curlew, great crested newts and brown long-eared bats.

The new nature reserve aims to significantly enhance the biodiversity of the wider area, whilst also bringing a lasting impact to the local community through the provision of walking trails. In addition to Lilbourne Meadows, DIRFT III was designed to



be an attractive working environment and includes significant levels of onsite planting and landscaping to further enhance biodiversity by providing mixed habitats for wildlife to flourish.

The development also incorporates a Logistic innovation Hub. Lilbourne Meadows provides a mixed habitat area, including wetlands, grasslands and extensive hedgerows to maximise the area for wildlife and invertebrates. The reserve acts as a reservoir that can hold over 90,000 cubic metres of water providing a natural flood plain.

#### The following has been installed:

Lilbourne Meadows Native Woodland planting (1.5m grid) = 88,269m<sup>2</sup>

Native Thicket (1m grid) = 3,678m<sup>2</sup>

Native Hedge (mixed/single species) = 315lin.m

Wildflower/species rich grassland = 133,793m<sup>2</sup>

Reed ed/aquatic = 1105m<sup>2</sup>

Standard Tree planting (18-20) = 9no







### Infrastructure Planting

Native Woodland planting (1.5m grid) = 32,106m<sup>2</sup>

Native Thicket (1m grid) = 31,734m<sup>2</sup>

Native hedge (mixed/single species) = 10,039lin.m

Wildflower/species rich grassland = 63,965m<sup>2</sup>

Amenity grassland = 23,829m<sup>2</sup>

Mixed species Ornamental planting = 12,531m<sup>2</sup>

Marginal / aquatic planting = 1,628m<sup>2</sup>

Standard Tree planting (20-25,  
18-20, 14-16, 12-14's) = 1,000no.

Feathered trees = 1,680no.

Coniferous = 83no.

### IN DETAIL

Prologis places sustainability at the heart of their business, with a commitment to reducing their environmental impact whilst building long-standing relationships with customers and communities. This ethos was at

the heart of the development of DIRFT III, ensuring sustainable logistics buildings to complement the existing Prologis RFI DIRFT, which is recognised as the most successful intermodal logistics park in the UK.

With one tonne of rail freight reducing carbon emissions by 76% compared to road transport, air quality is also improved through reducing small particulate matter by 10x.

All new Prologis buildings are Net Carbon Zero in construction, EPC A and BREEAM Excellent rated,

whilst 100% of unavoidable embodied carbon from DIRFT construction is offset via our programme with Cool Earth.

In 2021, this was equivalent to saving over 700 acres of natural rainforest. In partnership with the Wildlife Trust, Prologis has created Lilbourne Meadows, a 173-acre nature reserve to increase biodiversity and natural habitats for plants, insects, birds and animals. By building essential logistics hubs with green spaces, Prologis is delivering benefits to customers, employees and local communities, whilst





encouraging thriving wild life habitats that will benefit overall wellbeing of ecological system.

Prologis have also constructed a new lorry park for

DIRFT III customers and an amenity building for the drivers ensured increased provision of facilities at the park in anticipation for increased services.



First phase of the lorry park has been opened with parking up to 130 vehicles with space for expansion in phase to for up to 300 vehicles. This facility is free to use for the customers delivering and collecting from DIRFT III.

The Prologis Warehouse and Logistics Training Programme (PWLTP) hosted at the innovative Hub, provides local jobseekers with the training and practical experience in a logistics environment which provides employment opportunities through placements at RFI DIRFT.

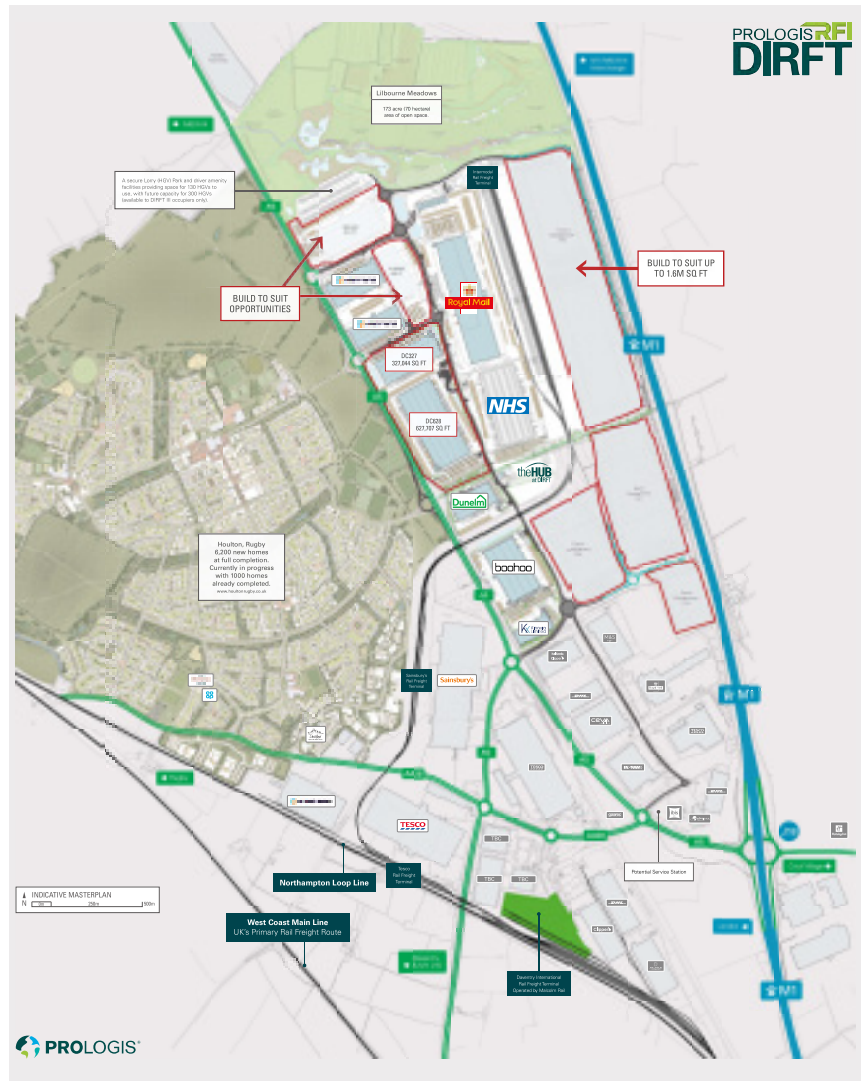


The Hub, a purpose built facility located at RFI DIRFT which the base for the park's PCSO and security team and provides customers with access breakout areas, meeting rooms and training facilities.

These additional functions have proved exceptionally successful in providing the park community with a central point for occupier and visitor engagement, coordinated by our experienced onsite and customer experience teams.

The PWLTP Programme is the latest addition to schemes already running with the Eden Forest & WCG to teach primary and secondary school children about sustainability, logistics and construction.

Since opening in June 2021, The Hub at DIRFT has delivered training to over 200 people and delivered a Social Value of £4m. We were the first company to sign up for the Social Value Supply Chain Charter – providing a framework within which Prologis entire supply chain is able to deliver value into the local community.



## **EDEN COMMERCIAL Ltd.**

### **EDEN SHOPPING CENTRE (COLLABORATIVE EFFORT BETWEEN SAVILLS & ABM) SUSTAINABILITY INITIATIVES.**

#### **INTRODUCTION**

Eden shopping centre, High Wycombe, aimed to review and enhance ESG as a business by tackling three major areas of operation: Waste, Energy and Social Value. The main aim was to become a zero waste to landfill shopping centre.

To do this, we aimed to increase our recycling on site to better than 50%, produce a Waste Management Plan and introduce a waste and environmental tenant engagement program. Previously in Eden Shopping Centre, our energy monitoring was not sustainability focused.

As part of an overall carbon reduction scheme through waste and energy management, Eden aimed to improve monitoring of energy consumption and reduce the amount of energy consumed where possible, by internally reviewing lighting and heating systems.

We are also actively supporting Charities but realised that there was potential to do better in our local community. The final aim throughout this project was to further support and donate to local communities, enriching the High Wycombe area.

Our improvement efforts began in 2018. Between 2018-2022 we have managed to produce less general waste by increasing our recycling and managing our waste segregation using the waste hierarchy.

We also introduced DMR collections in May 2019.



To meet this goal to reduce the amount of general waste on site we introduced Shopping Customer Recycling bins in July 2022, see attached photos. The site also took on energy initiatives, including installing 8 Electric Vehicle Chargers in our multi-storey carpark in April 2022.

This allowed us to achieve our goal of responsibly monitoring and reducing both our and our customers energy reduction and associated emissions .

#### **Community Initiatives included:**

- town centre litter pick,
- Ukraine donation hub - use of one of our empty units for support
- provided 2 cages of cardboard for local school craft project.
- Held an Environmental Awareness event as “Eden’s Underwater World” event in August 2022 addressing sustainability, raising public awareness and promoting Eden’s, and our tenant’s, sustainable practices.
- Installing beehives on the centre roof in May 2022, working with High Wycombe Beekeepers Association

### IN DETAIL

Since the 2018-2019 financial year Eden Shopping centre has been a zero to landfill site. Currently our main waste outputs include Cardboard, Glass, Mixed Recyclables and Food waste. We are separating and segregating our waste to ensure that maximum amount of reuse and recycling occur, based off the principles of the waste hierarchy.

By July 2019, we had achieved a 52% recycling rate. In order to improve our recycling segregation, in 2019 we introduced DMR collections to our waste management plan, this has improved our performance with a 3% increase to 55% recycling by October 2022.

We are now producing less general waste than ever and are also encouraging our customers to segregate waste at the source having introduced customer recycling bins.

These bins are clearly labelled and contain pictures to alleviate any confusion customers might have on what products can be recycled.

All our food waste currently goes to anaerobic digestion, ensuring that even after waste has left Eden centre our waste is being reused, recycled and recovered for a more circular lifespan. Our general waste is sent for both refuse derived fuel and energy



recovery.

Now, 76% of our waste was sent for recycling by Jun 2022, with the remaining 24% being sent for energy recovery. Energy management is a major priority for the Savills' & ABM UK team, and in 2020 the team decided to implement LED lighting and infrastructure upgrades.

We installed both LED lights and PIRs in the car parks, stairwells, and fire corridors to reduce carbon emissions produced. Year on year improvements in lighting and efficiency drives can now be monitored.



These activities reduced our Greenhouse Gas emissions from 327.09tCO<sub>2</sub>e to 293.47tCO<sub>2</sub>e per annum between 2020 and 2021. A further reduction was evidenced as the program proceeded into 2022 which realised a further 40tCO<sub>2</sub>e of annualised savings in emissions.

Eden will also be undergoing an energy audit in 2023 to gain a better understanding of our





energy usage and next steps on our sustainability journey. A solution to the high-level mall lights is currently being investigated to further reduce electricity use.

All A/C units' temperatures have been reduced and HVAC motors are to be tested for efficiency and changed where required. This will further reduce fuel and electrical consumption over the next 12 months. Reductions in water use have been achieved by the installation of Whiff-away waterless urinal systems and the planned introduction of water filled bags into toilet cisterns to further reduce the cistern water capacity.

The site is not currently monitoring water consumption but plan to do so from 2022, to further reduce energy and water consumption making the site even more sustainable site. Here at Eden, we

regard team member's and community wellbeing as a top priority.

Our commitment to the community, includes supporting local charities and encouraging and supporting environmental education.

This year we have dedicated time and money, with the help of our team members, we have focused on both local and international charities. In March 2022 we part took in a litter pick working with Hiwbidco to help clean the High Wycombe area.

We also supported an international endeavour partnering with High Wycombe Fire Station, to collect donations for 'Support Ukraine' in aid of Ukrainian Firefighters. We donated an empty unit for 5 days and raised as much awareness as possible throughout the shopping centre, which resulted in full 40 tonne lorry leaving our centre for the Ukrainian/Poland border with donations.

We currently have an apiary on site, that is managed with the aid of the High Wycombe Bee Keeping Association (HWBKA), We've just had our first harvest of 24 honey jars, and our next harvest is scheduled for late spring 2023, we're aiming to have a competition for local schools to design the label, and aim to donate half of the honey to a local food hub and sell the after half and donate income





to HWBKA to fund beekeeping activities, and encourage local participation.

We believe true sustainability involves cohesion between social, economic and environmental development and collaboration across operational boundaries.

To achieve this, we aim to create events and partake in community support that promotes environmental education. This year, we donated two cages of cardboard to a local school, which was repurposed by the children as part of a school art project.

We also held an education event focused on sustainability in the shopping centre, as part of our summer campaign. In August, we provided a free ocean adventure trail that involved giant sea inflatables, vinyl and centre installations.

The aim was to educate about sustainability, while letting the local community know what Eden Shopping centre does for sustainability everyday. We also want to give our team members the ability to grow and advance through green skills education opportunities. Our first step includes appointing a Sustainability Champion on site.



Our Sustainability champion, works at Eden shopping Centre and is an ABM Team member, Markus is a front-line team member who drives sustainability every day. Markus and a member of the Savills team have recently undergone Sustainability training provided by Savills. Markus is present during sustainability focused meetings, has built relationships with tenants around waste segregation and is always ready to design and promote new sustainability initiatives.

## EDGBASTON STADIUM

### EDGBASTON 4 SUSTAINABILITY



#### INTRODUCTION

Our Edgbaston 4 Sustainability ambition at Edgbaston Stadium is to operate the most sustainable cricket stadium in the UK and to be a leader and pioneer for sustainability in UK sport, while continuing to support Our Planet, Our People and Our Community.

We operate several sustainability projects and systems to support this ambition.

#### Strategy Pillars –

- Reducing Energy Usage – through a strategic partnership and working closely with our suppliers, we are identifying and delivering energy saving projects with the purpose of enabling a zero carbon, lower cost energy future.
- Recycling & Waste Management – our aim is to recycle as much as possible and operate a zero waste to landfill policy. We will eliminate single-use plastics, develop our waste segregation and give back to the local community.
- Reducing Our Carbon Footprint – we are proud of our home in the heart of the West Midlands, and want to make sure that as much of the produce we use at Edgbaston as possible is sourced from local, like-minded suppliers.
- Education, Health & Wellbeing – with the appointment of a dedicated Sustainability







Manager, we are committed to creating an equal opportunity and fair treatment environment, where we can learn and grow together.

The Sustainability Pillars guide Warwickshire County Cricket Club (WCCC) to a sustainable future and the Edgbaston 4 Sustainability (E4S) campaign will continue to evolve over future years. This enables the team to unite and introduce efficient innovations and projects that support the E4S ambition.

Since November 2022, there's been an increased focus on sustainability, with the employment of a dedicated Sustainability Manager, putting Edgbaston ahead of many other cricket clubs in the country. Edgbaston has developed new sustainability partnerships with Drax, Net Zero Now and National Express.

One achievement is the launch of the Edgbaston's first sustainable matchday – Go Green Game, to be hosted on 3rd September 2023, Men's IT20 England v New Zealand.

#### **This will focus on -**

- Reducing Scope 1, 2 and 3 emissions
- Promoting sustainable modes of transport and improving public transport links & facilities around the Stadium
- Serving sustainable menus with locally sourced, seasonal food
- Reducing energy and securing renewable energy to power the Stadium
- Improving recycling facilities and awareness

So far we have installed 472 LED light fittings saving over 21,300kWh in Year 1, improved signage on 158 bins, installed 25 new cycle racks, and saved over 600,000 single use plastic cups by implementing e-cups.

### IN DETAIL

Edgbaston 4 Sustainability (E4S) is set out to guide the team at WCCC to consider and be aware of the importance of sustainability. It allows staff to see how operations can have an impact on our sustainability journey and progress, with the aim to operate the most sustainable cricket stadium in the UK and to be a leader and pioneer for sustainability in UK sport.

The 4 Sustainability Pillars are in place to cover all aspects of the topic and to break sustainability down into understandable categories. These have provided a strong foundation to build efficiency savings and other sustainability projects from.

Since November 2022, the dedicated Sustainability Manager has led on data collection and developing sustainability policies and strategies, all part of E4S. Since the appointment of the Sustainability Manager, Edgbaston launched the Go Green Game, a project aiming to raise awareness and knowledge amongst spectators and staff, to make changes to the way the Stadium operates and to encourage behavioural changes amongst all involved.

The Go Green Game, to be held on 3rd September 2023 will see England v New Zealand in the Men's T20 play in Edgbaston's first sustainable matchday.

The planning of the event has involved implementing new projects and innovations to reduce consumption and carbon emissions across Scope 1, 2 and 3, some of which will be

permanent changes taken forward into future seasons and into non-cricket events.

We have measured a baseline and projection carbon footprint from Final's Day 2022 matchday and are using this to compare to the actual footprint that will be calculated following the 3rd September.

#### Projects include –

- Edgbaston Sustainability Policy has been approved by Executive Team and Board Members and launched on the website and around the Stadium.
- Secured REGO for locally sourced solar power throughout September, as well as exploring green gas options.





- Edgbaston have also been working closely with the City Council and local travel providers to improve green and public transport options. The council are installing e-scooter and e-bike provisions within a short walk from the stadium, 25 additional cycle racks have been fitted, with scope to install more before 3rd September and National Express provide a reliable shuttle bus service from Birmingham New Street Station.

We have implemented a Go Green Game Sustainable Travel Plan which will be part of the Spectator Guide distributed to all ticket buyers and available via the website prior to the match.

- There will be no red meat served in hospitality areas on this matchday, which will reduce the carbon emissions associated with hospitality food by an estimated 48%.

We will also be serving fruit and vegetables that have been grown on our onsite garden, reducing transport miles, saving further carbon.

- Engagement projects have included distributing several email communications,

including “Sustainability Changes” info sheet, and the implementation of the Sustainability Working Group. This is a group of like-minded people, with all departments represented, discussing future plans and projects and sharing knowledge and ideas.

At Edgbaston, so far we have installed 472 LED light fittings saving over 21,300kWh in Year 1, installed living walls around our Skyline development, improved signage on water refill points and improved waste and recycling signage on 158 bins around the stadium, installed 25 new cycle racks, and saved over 600,000 single use plastic cups by implementing e-cups.

Edgbaston desires to be a pioneer and leader in sustainability in the sporting and event industry. Currently, there are minimal clear benchmarks or guidance for hosting sustainable events or for operating sporting stadia sustainably.

This has resulted in difficult budgeting, however due to calculating baseline footprints, we have been able to prepare for costs. ECB, suppliers and partners



have been highly supportive, with some funding coming from sponsorship deals with sustainability Partners.

A huge range of people have benefitted and will continue to benefit from the E4S and Go Green Game campaign. The wider team at Edgbaston will have direct impact and influence on the success of the campaign.

Behaviour changes and improved workspaces will result in a more efficient and comfortable environment. Our visitors and spectators will benefit from increased awareness and education materials availability pre, during and post events and matchdays.

The local community will benefit from reduced traffic and improved air quality around the stadium due to an increased encouragement to use public transport or green travel methods when attending events.

The sports industry will benefit through raising awareness at the Go Green Game, visibly showing that cricket and sports industry are making changes and effort to improve sustainability efforts. The Go Green Game is a highly innovative plan, being Edgbaston's first sustainable major matchday and potentially the UK's first.

The match will be broadcast on Sky, reaching a mass audience internationally, further spreading awareness and knowledge to all those watching. We have learnt that data collection methods can be improved.

The storage and availability of data was difficult to attain, so going forward we will ensure all data required for carbon footprint calculations will be readily available.



We have also found that behaviour change amongst staff and spectator is vital so will need additional resources to reach more and more people.

We are currently working towards ISO20121 Sustainable Event Management accreditation with Stage 1 completed and Stage 2 assessments taking place in July 2023. Overall the E4S and Go Green Game launches have been highly successful with support from Sky and our Sustainability Partners.

We are promoting positive messages, raising awareness, making changes and highlighting what impact this can have if everyone contributes. Following on from the Go Green Game, we hope that other venues will be able to host sustainability awareness matches and use our experience to support and guide them.

We will continue to have dedicated Sustainability Working Groups, sustainability partners and long term plans and use what we learn from the Go Green Game to launch further sustainability targets. We have a Net Zero by 2030 target which will be built into our E4S strategy.

## ENVIRONMENTAL CROP MANAGEMENT LTD

### SALT POLLUTED LAND REMEDIATION - MAKING FIELDS FIT FOR FARMING AND CONSERVATION.

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#### INTRODUCTION

The aim of the project was to regenerate an industrial site contaminated with salt and return it back to an agriculturally productive site incorporating a nature reserve. This involves returning the soil back to health and diminishing the salt levels over time.

Salt (NaCl) is highly toxic to most plants and this site as part of a former salt works is especially challenging. Salt also destroys soil structure and disrupts normal soil chemistry and nutrient levels. Other farmland near Northwich is also polluted with salt and this project aims to deal with these more local field issues.

The project has overcome the major damage to plants caused by salt, and an initial 30 acres of derelict land made suitable for farming and

conservation. This has been done firstly by improving the soil and then working with nature to initially introduce highly salt tolerant species to the site. Over time as the salt is leached, other plants will be introduced that are less salt tolerant allowing a succession to the more normal flora seen in Cheshire.

By using plant bio stimulants that help plants survive the adverse effects of salt, the establishment of a varied plant ecosystem is made possible. These bio stimulants have not been previously on salt polluted fields but are used by ECM to overcome abiotic stress in arable crops

Localised field problems have also been overcome allowing farmers grow crops on land polluted with brine. This philosophy of working with nature is the core belief driving ECM for over 30 years, with the company winning the World environmental respect







award in 2018, and writing two Parliamentary reviews on best environmental practice in agriculture for the British government. Profitable crops, safely is our reason to be, and this project continues our long history of environmental innovation and working with nature.

### IN DETAIL

The soil has been extensively tested for all nutrients, soil organic matter and pH, with a view to correcting the deficiencies that occur when salt is very high.

Fresh topsoil has been brought to the site over the existing soil level. This will allow salt tolerant plants and grasses to establish. Research from final year students at Manchester Metropolitan University has provided a list of salt tolerant plant species.

A nature reserve of salt tolerant plants will be established ( the land still too high in salt to support the normal wildflower flora) Using bio stimulants (natural plant hormones and amino acids) applied to the plants will help these plants survive the high salinity.

These bio stimulants are normally used on desalinated( but still salt polluted at low level) irrigated crops in the Middle East.

With time and many years of rainfall it is hoped the salt will leach away and allow a more representative local plant flora to be established, in the meantime the salt tolerant plants will develop as a nature reserve.

Frequent soil testing will dictate when this threshold is reached. Habitat for birds and mammals will be



developed helping to improve the ecological health of this once desolate salt wasteland.

Initial inspection of the site saw only Pigweed, sea plantain and saltbush to be the only vegetation. The ellenbarg scale rates different plants salt tolerance and this has been used to pick where to establish a more varied plant species profile to generate a new ecosystem.

This scheme will bring over 30 acres of wasteland back to life allowing grass production and maintain a brand new nature reserve. The benefits to the local environment will be substantial as birds and mammals will be attracted to this new ecosystem.

One of the main innovations of this project is to work with nature letting a progression of salt tolerant plants give way over time to a more local plant flora. The use of bio stimulants to these early salt tolerant plants uses technology only seen in the Middle east. ECM has a history of using its extensive knowledge of plants to help plants overcome abiotic stress of all types.

Some of the bio stimulants used here may well help farmers overcome drought stress caused by climate change. Final year students from Manchester Metropolitan University had projects aimed at finding some of the answers posed by this project, as Peter Clare is an external examiner at MMU.

For the future, other sites in Cheshire (still the Salt producing main county in England) will be helped by



this pioneering project as ECM shares its knowledge with other land owners and farmers.

Looking to the future ECM is testing new as yet not commercially available bio stimulants to see if they help plants overcome salinity. This previously derelict land has been brought back to life and is adding to our understanding of how abiotic stress can be overcome to help plants and crops thrive.

# ECM

ENVIRONMENTAL CROP MANAGEMENT LTD

## BEST CROP PROTECTION COMPANY IN THE WORLD



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- Winner of 30 National Green Apple Awards
- Educated over 400 Undergraduate Students in Environmentally Friendly Farming Techniques
- Educated Farmers in Environmental Best Practice
- Re-introduced the Barn Owl and helped initiate many schemes encouraging conservation on farms

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## **ESSITY UK LTD**

### **TORK PAPERCIRCLE®**

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#### **INTRODUCTION**

Only 1% of used paper hand towels were previously recycled due to the inclusion of a 'wet strength agent' that prevented them from disintegrating, necessitating a specialised recycling process.

This innovative scheme addresses the issue of single-use paper hand towels being sent to

landfill or energy recovery. Tork PaperCircle® is a groundbreaking recycling process, which captures approximately 98% of the paper fibres, enabling them to be recycled up to 9 times. Tork joined forces with Recorra, a waste management company, to use their extensive collection infrastructure to gather paper towels from businesses throughout the south-east.



The collaboration enables us to offer clients a paper towel recycling solution, closing the loop and reducing emissions associated with using virgin alternatives. Recorra's unwavering commitment lies in continuous innovation and seeking ways to minimise the amount of waste sent as general waste.

We recycle over 35 waste streams and strive to expand this range. As a part of the Swedish multinational corporation Essity, Tork products are used by businesses worldwide. Sustainability is deeply ingrained in their culture, driving key initiatives.

Essity's overarching mission is to sustainably develop, produce, market, and sell value-added products and services in hygiene and health. Since its launch in 2022, the programme has mobilised at 23 sites and recycled a staggering 65.76 tonnes of paper towels. These recycled paper towels can be repurchased by Recorra customers through



our office services division, effectively promoting a circular economy approach.

Before this intervention, less than 1% of paper hand towels in the UK were recycled. While technically recyclable, the presence of a wet strength agent in the towels stops their disintegration when wet, necessitating a specialised recycling process. According to Recorra's waste composition audits, paper hand towels accounted for up to 20% of a building's waste, which was previously sent for

energy recovery or disposed of in landfills by other contractors.

This clearly highlighted the need for a process to capture and recycle these items. Tork embarked on a mission to develop an innovative recycling process that could extract the wet strength agent, thereby facilitating the recycling of hand towels into brand new paper towels.

To bring this vision to life, Tork joined forces with Recorra, leveraging their expertise in providing customer sites, managing collection logistics, and storing paper towels prior to their transportation to Tork's recycling mill.

### IN DETAIL

Paper hand towels remain an untapped resource, less than 1% of paper hand towels are recovered for recycling currently. With a goal of changing this, Essity has pioneered Tork PaperCircle®, the world's first recycling service for paper hand towels.





Different to recycling ordinary paper, hand towels require an additional step to dissolve the wet strength agent binding the fibres. Tork has developed an innovative process to do just that, allowing the fibres to be recycled into new towels.

Made possible by new technological developments, there is now a path for paper hand towels to join the paper sector's recycling success story and move up the waste hierarchy. Thanks to the initiative, it is now possible to recycle the fibres within hand towels up to 9 times.

The recycling process captures approximately 98% of the paper fibres, the remainder is used in animal bedding, eventually ending as a source of fertiliser, eliminating waste.

Tork PaperCircle® helps organisations meet their sustainability targets by reducing waste by up to 20% and cut the equivalent carbon emissions for paper hand towels by at least 40%, when compared to using virgin alternatives.

Partnering with Recorra has meant that the innovative process has been expanded to businesses across the South-East, utilising our customer base, existing collection infrastructure and waste storage facility to bulk paper towels to transport larger loads to Tork's mill in the north of England.

*"Paper towel recycling had previously been impossible until now. Thanks to a partnership between Recorra and Tork (Essity), an established bathroom paper towel recycling service has been developed, which is a big hit with customers. Now paper towel users can recycle a previously unrecyclable item instead of putting it general waste, improving their recycling rates and environmental credentials as a result. The recycled fibre goes back into new Tork paper towels, completing a brilliant closed loop recycling solution."*

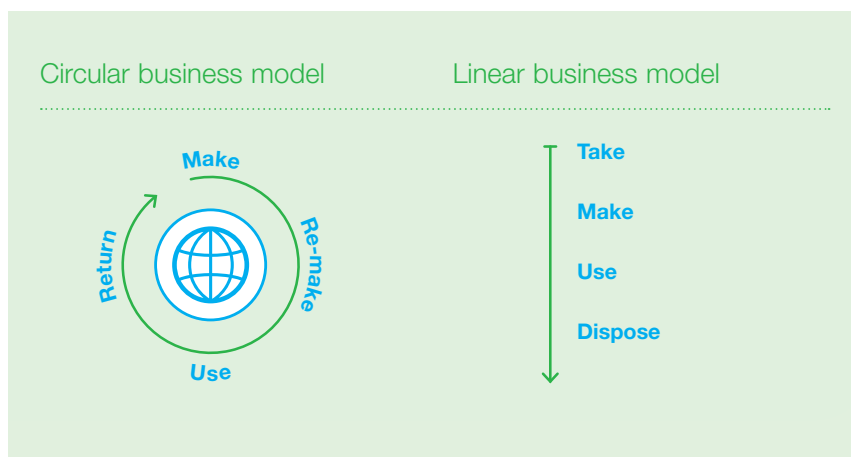
**James George** (MCIWM), Recorra Product and Innovation Manager

Essity has researched and adopted behavioural science techniques to encourage consumers to dispose of hand towels in the separate containers provided. Clear signage around the washroom informs visitors about the goals of Tork PaperCircle as well as the benefits of paper hand towel recycling.

By using consistent colours for all bin sacks, posters and bins allows for a seamless journey of paper towels from user to Essity's mill.

*"As a global hygiene and health company providing products and solutions to more than a billion people every day, Essity is committed to responsible business practices throughout our value chain."*

**Magnus Groth**, President and CEO of Essity.



This coupled with initiatives by Recorra's dedicated behavioural change engagement team, help ensure compliance with the scheme. The team undertake training with the cleaning teams to identify contamination in paper towel sacks, they also undertake lunch & learn sessions with scheme users to ensure they're aware of correct scheme usage.

### Testimonial

Tork PaperCircle® was implemented at London facility service company OCS Group's headquarters, home to 5,300 members of staff. Paper towels are in use in the washrooms where they produce around 20 tonnes of waste per year, which previously was sent to general waste, which is now recycled.

*"As a 120-year-old business with family heritage at its core, we have always cared about making a difference for the long term. We are proud to be part of the Tork PaperCircle partnership."*

said **Jack Mason**, OCS Building & Area Manager.

A collaborative approach to ensure behavioural change on site, has led to a successful implementation, with new OCS sites added to our service. This partnership initiative has been a great success, with 23 Recorra client sites contributing to over 65.76 tonnes of used paper towels material recycled over 12 months. In addition, we have several clients re-purchasing recycled paper towels made from those collected, truly closing the loop and integrating circular economy principles into day-to-day operations.

This has helped our clients to achieve their sustainability goals by reducing their general

#### The new paper hand towel circular business model



waste, increasing recycling rates and consequently, reducing their scope 3 emissions.

Contributing more material to the circular economy, in the form of new hand towels, which our clients can re-purchase through our office supplies division. Beginning the scheme in June 2022, with just 4 sites, producing 2 tonnes of paper towels to be recycled, this has more than quadrupled in just 12 months to 9 tonnes each month. .

Moving forward, we will continue to expand this service with our clients and capture as these hand towels to keep this material in the circular economy. Having expanded our client based we will continue to provide an opportunity to reduce emissions associated with these products, by offering this service to our clients.

Our behavioural change sustainability team are also working with customers to reduce instances of contamination, providing Tork with a cleaner stream, meaning that more and more paper towels can be successfully recycled.

#### Recycling process of paper containing wet-strong agent



To recycle the paper hand towels, they are mixed with water in the pulper...



...and treated in a dedicated dissolving process to deactivate the wet strong agent



The dissolved paper hand towels are stored at high temperature for a defined period of time for a hygienically safe product



Then the fibres are separated and mixed in with other pulp at the mill



A tissue machine turn the recycled paper hand towels into new tissue products

## FLANNERY PLANT HIRE DIGITAL MACHINE SOLUTIONS AND TELEMATICS

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### INTRODUCTION

As part of its Digital Machine Solutions, Flannery has been working with MachineMax to develop a data-driven reporting and management solution that provides a real-time, consolidated view of the emissions, utilisation, idling time, fuel consumption, locations, and operating hours of our fleet of plant and equipment.

This data is shared with clients, helping to reduce emissions on construction sites across the UK. This enables users to make strategic decisions that impact emissions, fuel-usage, site layout and working methodology (driving productivity) and identifying the most efficient machine mix required.

With the right analysis we can identify the small, day-to-day alterations to machine operation that will have the biggest impact on fuel consumption on construction sites.

Any changes on construction sites that decrease machine and fuel usage while boosting productivity are positive, and the MachineMax reporting tool enables informed choices that achieve just that. In terms of the environmental impact, if we assume the idling rate (engines running but not actually 'working') of machines working on a project is 30%, and apply this to a fleet of 100 - that represents roughly 250,000 litres of fuel unnecessarily burnt each year and approximately 720,000 kgs of CO<sub>2</sub> emissions.







MachineMax customers report a 10% decrease in idling time (some idling is necessary - for instance when waiting to be loaded on site etc), so a fleet of 1,000 machines could save 120,000 litres of fuel - a saving of 340,000 kilograms of CO2.

If you apply that maths to construction sites across the UK you begin to see the positive impact that can be made from reducing idling time alone.

Our training and education programs around Machine Max and Digital Machine Solutions, including the specialist Eco-Operator Program we have introduced, influence the wider UK construction industry and drive positive behavioural change on sites everywhere.

### IN DETAIL

Focused on the construction industry's commitment to Net Carbon Zero, site safety and the skills shortage, Flannery and MachineMax have collaborated to develop a consolidated data-driven reporting and management tool that provides a real-

time view of the emissions, utilisation, idling time, fuel consumption, locations, and operating hours of our fleet of plant and equipment.

The telematics system has been rolled out with clients, helping to measure and reduce emissions on construction sites across the UK. Flannery's close understanding of their clients, combined with MachineMax's IT expertise, has led to a tool that will change behaviours on construction sites nationally.

The construction industry is under pressure to clean up its sustainability act with new targets and minimum standards being set and measured by clients (HS2 and UK Highways) and the Supply Chain Sustainability School. There's also a shortage of skilled plant operators prepared for the modern day digital site focused on efficient fuel consumption and environmental factors.

Flannery and MachineMax are working together to serve our construction customers and drive the change in behaviours needed to reduce emissions, fuel consumption and increase efficiency. Our own investment in our Digital Machine Solution provision

(of which the MachineMax platform is a part) currently stands at in excess of £10m.

This is a huge financial commitment on our part to supporting our clients with their Net Zero and sustainability targets and one that we consider essential for the construction industry in the UK. It includes training and support for our clients so that we really can start to change behaviours on site.

Obviously, MachineMax as an organisation is focused entirely on making their platform as useful to the construction industry as possible to enhance sales and their own product development.

MachineMax data enables us to assume the idling rate of machines working on a project is 30%. Apply this across a fleet of 100, that represents roughly 250,000 litres of fuel unnecessarily burnt each year - producing approximately 720,000 kgs of CO2.

Customers report a 10% decrease in idling time. On this basis, a fleet of 1,000 machines could potentially save 120,000 litres of fuel, resulting in a saving of 340,000 kgs of CO2. If you apply these figures to construction sites across the UK, the CO2 reductions are enormous.

Our clients who agreed to put the telematics and digital machine solutions to use on their hires have benefited from decreased fuel consumption and improved productivity on site. As well as the immediate benefits to clients, data from MachineMax will be shared in industry-wide working groups, associations, through white papers, and college/training providers.

We are already working with the Supply Chain Sustainability School finding ways to share the



data available to benefit the industry as a whole. (MachineMax recently published a White Paper focused on the environmental impact of construction plant and equipment.)

Through the available technology and its development over time, together with our training programmes and customer support on all digital machine solutions, the longer term benefits are huge.

Fuel consumption on site will be reduced, better decisions will be made about routing, idling and loading. Operators will understand the environmental reasons for the new focus on efficiency, and the whole construction industry will be able to clean up its carbon consumption act - from workers on the ground to managers making strategic decisions.

Enabling a single platform view, MachineMax gathers data from its own sensors, OEM telematics feeds and other third-party sources, this data is aggregated and standardised using unique AI and algorithms. Reports issued by the system cover:



routes, number of trips taken, payload, idling hotspots (a huge area of potential fuel wastage on sites), emissions, indicative payload and maintenance cycles.

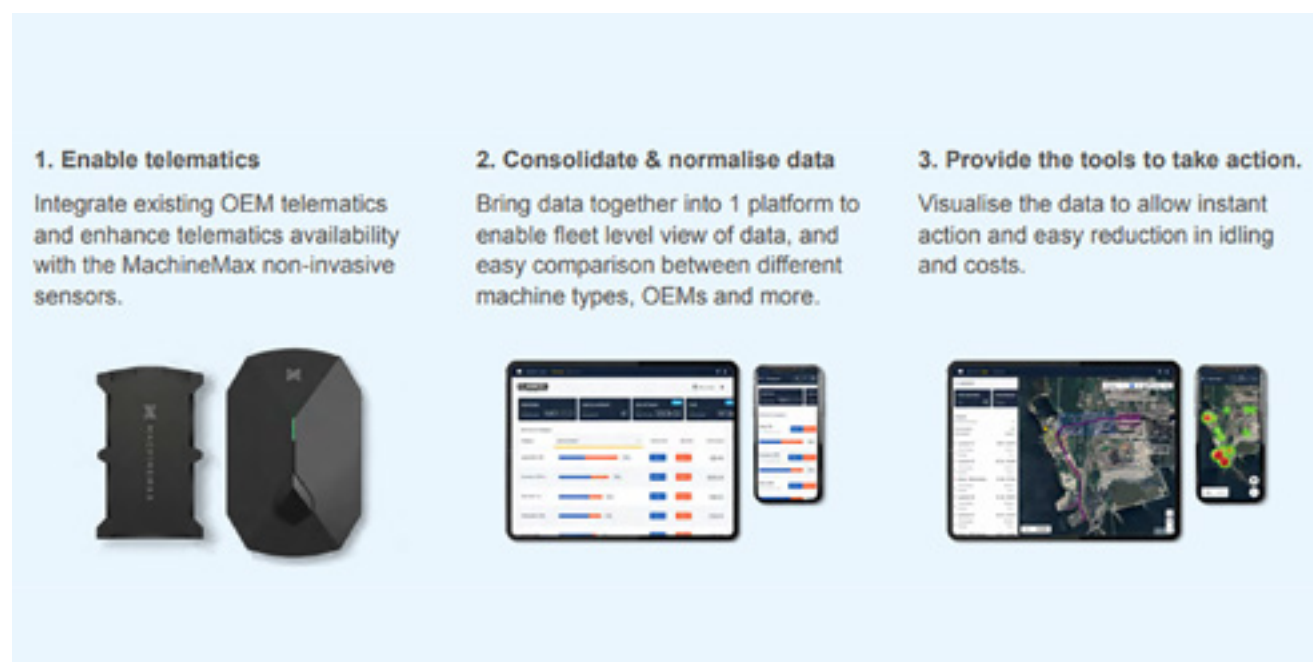
The detail displayed is as granular as users require. This is because different clients need different levels of reporting to enable them to make decisions. Views for all machines or a selection; every millilitre of fuel used or every litre; seconds or minutes of idle time... reports can be delivered daily, weekly or in a real time.

Clients can decide to use fewer or different sized machines; when engines can be turned off rather than left idling; which routes would be more efficient – even how many passes should be sufficient to complete a task so that queries can be raised if results differ. Each report and the intuitive dashboard are designed to deliver actionable insights that drive change on site.

Through our membership of the Supply Chain Sustainability

School and our training courses, we communicate at every level in the industry, on the benefits of digital machine solutions and telematics. The education and training elements of our digital machine solutions, especially the Eco-operator courses, are creating both industry-wide and in-organisation improvements to the understanding of and on site behaviour.

Due to Flannery's inside knowledge of the industry, MachineMax has been developed to be extremely relevant in its marketplace and able to be rolled out





industry-wide. We are opening up opportunities for other organisations in the construction industry to benefit from the new technology.

Open communication and commitment from board level are all key to the development of a successful project like introducing digital machine solutions and telematics. Understanding the needs of the end-user as well as the strategic goals of the organisations involved have proved equally important.

We have had to demonstrate value to the businesses as well as to the environment at every stage of development. The telematics platform and digital machine solutions are developing constantly. As new technology is introduced that helps the efficiency of machines, we incorporate them into our offering and

work to include them in our data reporting solutions.

Our investment in providing our clients with the most appropriate technology and machines is an ongoing commitment. MachineMax itself is listed this year as in the top 20 of Build in Digital's top tech partners 2023.

Another of Flannery Plant Hire's Digital Machine Solution partner, Spillard Safety Systems, have also just won a Plantworx Innovation Award. Flannery Plant Hire are also nominated for their Digital Machine Solution offerings in the Construction News Awards, Construction News Specialist Awards, Ground Engineering Awards, London Construction Awards and British Construction Industry Awards.



## FROG ENVIRONMENTAL

### UK'S FIRST INNOVATIVE BUBBLE CURTAIN ACHIEVES 99% REDUCTION IN UNDERWATER NOISE POLLUTION TO SAVE ATLANTIC SALMON

#### INTRODUCTION

Water is life, and our ambition is to protect water and all the life that it supports. The Government published its 'Plan for Water' in April - only 12% of protected rivers and streams are in favourable condition.

This follows a Government paper reporting wild salmon stocks in England are the lowest on record with 88% of salmon rivers classified "at risk" or "probably at risk". The Tyne is the most important river in England for Atlantic Salmon so when John F Hunt Regeneration were faced with creating a new river wall as part of a £20 million redevelopment of derelict dockyards into residential development, careful consideration was needed to protect the salmon yet enable construction activity.

They wished to maximise time and cost efficiencies whilst ensuring environmental protection against noise pollution, particularly as the works coincided with salmon migration seasons which would mean a daily restriction on working hours depending on the tide. Our technical team worked with John F Hunt Regeneration to find a workable solution for their project that aimed to meet environmental protection standards to safeguard one of the UK's most important rivers and protected species.

Secondary project aims included cost and sustainable, low carbon objectives. A first for the UK, our ground-breaking bubble curtain technology outperformed national regulatory requirements, protected marine life and saved thousands of pounds in time costs for John F Hunt Regeneration during piling operations on one of the UK's most important tidal rivers for salmon.



An independently verified 99% reduction in underwater noise emissions was achieved during piling operations through the use of our bubble curtain which satisfied UK's marine protection body (the MMO) and the Environment Agency's (EA) standards.

Regulators set the limit at 160dB of noise to protect migrating salmon and with our curtain in situ, noise dropped to 140dB giving no restriction on construction hours. John F Hunt Regeneration has an environmentally friendly workable solution which can be reused for other marine and freshwater construction projects across their network – more cost and time saving efficiencies as well as a more sustainable operation.

This collaborative project represents an excellent example of innovative technology and environmental best practice. It has caught the attention of national media like New Civil Engineer, but more importantly, other contractors across the UK are now deploying bubble curtains because of this project which will achieve better environmental protection for our precious aquatic and marine wildlife.

### IN DETAIL

#### Project Overview

Design and deployment of an innovative bubble curtain through Bubble Tubing® technology, a first for the UK, to reduce underwater sound pollution during marine construction piling works as part of a £20 million redevelopment of derelict dockyards into residential development along the tidal River Tyne in Holborn.

Our technical team designed a 91m long self-sinking, double line bubble curtain that releases an even stream of air across its length from seabed to water surface. The curtain was constructed so it could be easily repositioned as piling works progressed along the river wall. An agreement to use this new technology was obtained from the EA and the MMO to include acoustic measurements during piling, with and without operation of the bubble curtain, confirming its performance.

Sound reductions greater than 20dB were recorded with the bubble curtain. This 99% reduction brought worst-case noise levels down to 140db at 750m from the piling site, demonstrating assumptions made at design stage were correct, achieving environmental protection and delivering operational efficiencies on site.

#### Why?

The aim of the project was to protect endangered salmon and other marine wildlife from extensive piling activity and to meet the environmental regulations imposed by the MMO and the EA to enable works without any daily restriction on length of construction hours around the tides.

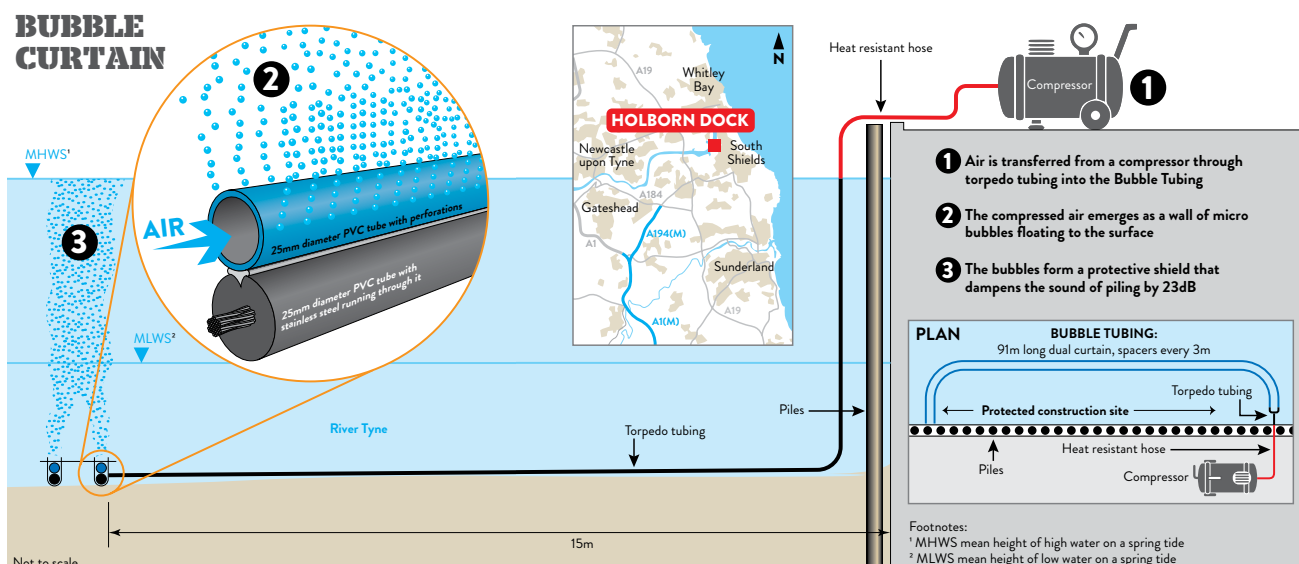
The project was designed with low carbon, low maintenance and sustainable objectives in mind.

#### Project Cost?

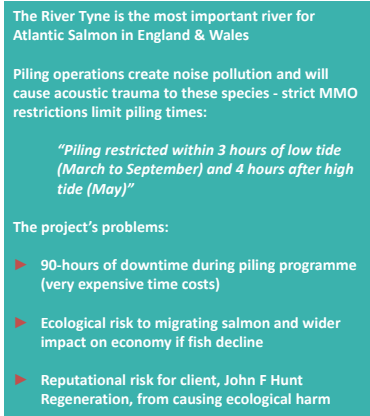
Supply and design cost £38,227 excluding installation & independent monitoring. John F Hunt Regeneration gave a conservative estimate that 90 hours were saved in downtime, giving a total project cost saving of £50,000.

#### Project Achievements for Sustainable Development, Economy & Environment

Aside from the immediate impact on salmon and aquatic ecosystems, the whole industry has benefited from this project which has become a ground-breaking example demonstrating to regulators, engineers and contractors the bubble curtain's effectiveness.







In addition to achieving outstanding, independently verified environmental improvement, what is particularly innovative that was a key consideration

when scoping out the project is that a bubble curtain has no moving parts underwater, it can be moved easily as construction progresses along the wall, and it is a self-purging design meaning the tube is self-cleaning and therefore is low maintenance.

### **Can Other Organisations/Communities Benefit?**

We have designed a system which can be easily scaled and applied to other water-based projects UK-wide. We offer free CPD training to anyone in the industry who is eager to learn more about Bubble Curtains and how they can be used for effective environmental improvement and cost efficiencies.

### **Project Lessons**

This project taught us how much of an environmental impact our bubble curtains have in reducing harmful sound and vibration underwater. Bubble curtains were developed to provide exemplary aeration but research suggested it could

be an incredible tool for noise pollution and this project proved this.

There were some further lessons learnt with regards to project delivery and installation which have enabled us to apply this knowledge to benefit other clients' projects.

### **RECOGNITION & AWARDS**

Frog Environmental and John F Hunt Regeneration take great pride in this project which has sparked national interest. Leading industry publication New Civil Engineer printed a double page article about this project in its March 2023 issue and on its website, and in June 2023, we won the SeaWork Innovation Showcase Underwater Technology Award.

SeaWork is Europe's largest commercial marine and workboat exhibition.





# Bubble Curtains & Barriers help protect underwater environments across the globe.

- Dampen noise
- Restrict silt
- Repel fish & jellyfish
- Control litter & weeds
- Limit oil spills
- Aeration

Bubble  Tubing

We're proud to have won Gold using this innovative technology.

We, as a UK supplier, collaborate with a global network to promote biodiversity and environmental best practices in water-based construction projects.

Join us on our mission to stop water pollution.

Find out more:



Read our award-winning project:



Follow our journey:



frog  
environmental

UK silt, water quality &  
bubble curtain specialists

Product sales | Technical support | CPD & training



[frogenvironmental.co.uk](http://frogenvironmental.co.uk)



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## GREEN MOTION

### GREEN HEART FOUNDATION

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#### INTRODUCTION

Green Motion's primary goal is to ensure that our operations revolve around the lowest CO2 emitting fleet in a specific region or country. Taking a global perspective, approximately 35% of our vehicle fleet consists of hybrid or electric models. Our ultimate mission is to achieve the remarkable feat of providing the world's first and only fleet with zero emissions.

Moreover, we are dedicated to offering customers the opportunity to rent vehicles from a company that genuinely cares about its environmental impact. What sets Green Motion apart is our unique model, which doesn't impose an additional cost for choosing a greener option. We believe in educating our customers that they don't have to compromise on affordability or comfort to make environmentally friendly choices.

We also focus on various environmental and sustainable initiatives, such as reducing energy consumption, minimizing water usage, implementing effective recycling practices, and incorporating sustainable and ecological materials throughout our entire business platform. Our global franchisee network serves as outstanding advocates for the green environmental movement.

The master country franchisee of Green Motion Costa Rica introduced the Green Heart Fee initiative in 2013, which has since been embraced throughout our entire global network. When customers make a booking with Green Motion, they are charged a Green Heart fee (with the option to opt-out) that is then directly donated to Costa Rica's government



reforestation and conservation programs through FONAFIFO.

This initiative empowers Green Motion customers to mitigate their CO2 emissions by offsetting the environmental impact of driving our vehicles. Through the Green Heart initiative, we have donated tens of thousands of dollars, leading to the planting of numerous trees and supporting various ecological projects.

Remarkably, nearly 52% of all direct-to-brand Green Motion customers choose to participate in our carbon offset initiatives when booking a car rental. Our customers' contributions have played a significant role in creating a positive environmental impact and demonstrating their commitment to sustainability.

We are proud of our franchisees' dedication to promoting green practices and grateful for the support of our customers, who actively participate in our efforts to reduce carbon emissions and foster ecological sustainability.



business model emphasizes that customers do not have to compromise on cost or comfort to make greener choices, as we do not charge a premium for our green fleet.

Several Green Motion franchisees have excelled in embracing our CO2 emissions philosophy. For instance, Green Motion Martinique and Guadeloupe operate the cleanest BMW and Mini fleet, including the new electric Mini and the new BMW X5 drive hybrid.

Green Motion UK has also expanded its low-emission

## IN DETAIL

### Project Overview:

Green Motion is honoured to submit its project for the Green Apple Awards: Environmental Best Practice 2022. Since its inception, Green Motion has been at the forefront of reducing CO2 emissions and promoting sustainable and eco-friendly practices in the car rental industry. Our core mission is to operate and promote the lowest CO2 emitting fleet within each region or country we serve, with the ultimate goal of achieving the world's first and only zero-emission fleet, a pledge we have made this year, known as 'Drive Zero.'

### Project Achievements:

Green Motion has made significant strides in achieving its objectives and leading the way in environmental car rental services. Currently, approximately 35% of our global fleet comprises hybrid or electric models, showcasing our commitment to low-emission vehicles. Moreover, our unique

offering by introducing a fleet of VW ID.3 full-electric vehicles and Polestar full-electric vehicles. Green Motion's partner over the past year has been Wizz Air who in collaboration with Booking.com launch new flight routes to various destinations around Europe every single month which are immediately supported by Green Motion franchise locations.

With WizzAir being one of the lowest CO2 emissions airlines in the world, this strategic partnership not only strengthened Green Motion's environmental positioning but also became a successful social





media campaign enabling customers to get extra cashback when booking with Green Motion.

The main slogan of the campaign was 'fly with Europe's most sustainable airline and rent from Europe's most environmentally-focused car rental company.' And 'If you want to fly green, then absolutely go pink - but remember if you want to drive green, then Green Motion International is the choice to make.'

Green Motion always uses an opportunity to promote its network and ideology with the two campaigns of 2022 and 2023 years: 'Join our journey' which has been a successful force for advertising Green Motion family values and what it provides to franchises and 'Drive Zero' which focuses on company's CO2 offsetting.

### **Project Impact:**

Green Motion's impact extends beyond CO2 emissions reduction. Our franchisees actively contribute to environmental sustainability and engage in social initiatives. Green Motion Morocco has focused on reducing emissions, managing waste efficiently, and promoting eco-responsible behaviour among its employees, earning them the prestigious Leaders in the Environment Award. They also support the installation of electric terminals in partnership with the highway association, further

promoting sustainable mobility.

Moreover, Green Motion franchisees such as Green Motion Costa Rica have received Sustainable Tourism Certification and organized volunteer activities to support environmental initiatives. The Green Heart Fee initiative, adopted globally, allows customers to offset the emissions produced while driving our vehicles, resulting in the planting of thousands of trees and other ecological initiatives.

### **Awards and Recognition:**

Green Motion has been recognized as an industry leader, receiving numerous awards for its environmental contributions. These include GreenFleet's 'Rental Car Company of the Year' for seven consecutive years, Energy Saving Trust's 'Fleet Hero Award,' and the 'Environmental Rental Company of the Year' from the Institute of Transport Management.

We have also been honoured as Green World Ambassadors and received International Corporate Social Responsibility Excellence Awards and Green Apple Awards.

### **The Future:**

As we celebrate our 16th year of operation, Green Motion remains committed to driving positive change in the car rental industry. Despite the challenges faced, our franchisees have thrived and expanded into new locations.

Looking ahead, Green Motion will continue to support the regeneration of the travel and car rental industries while reinforcing our green message for sustainable development. We will remain leaders in the sector, advocating for a greener future and progress towards our 'Drive Zero' initiative.



## GRUPO AMBIPAR-BRAZIL

### SUSTAINABLE BIOCAPSULES – TRANSFORMING WASTE INTO TREES

#### INTRODUCTION

Deforestation in Brazil has been a challenge that has been faced for decades. In the Amazon Forest there are high rates of deforestation, with an average of 6,750 km<sup>2</sup> per year recorded in the last decade. In 2019 alone, there was a 34% increase in deforestation compared to the previous year, reaching 10,100 km<sup>2</sup> of deforested territory, according to data from INPE (National Institute for Space Research, 2020).

Currently, another environmental problem that has been gaining prominence in Brazil is the concern with waste from the pharmaceutical industry, due to the evolution of productivity in this sector in the country and, consequently, the increase in waste generation in this sector.

Thinking about these problems, Ambipar developed the technology of “Sustainable Biocapsules”, which consists of using waste collagen capsules from the pharmaceutical industry, together with a soil conditioner - Ecosolo® (made with organic waste from the cellulose industry) and native seeds so that they can be played remotely by air (drones for example), thus reaching remote and difficult to access areas.

In contact with water, the biocapsules quickly melt and form nutrients that activate the seed, increasing the possibility of germination, especially in degraded



Collagen capsules - obtained from pharmaceutical industry waste - with seeds from native trees encapsulated with a soil conditioner, Ecosolo, have a greater chance of germination, and promote the circular economy, without the need for fertilizer or pesticides.



and nutrient-poor soils, where there has been deforestation, burning, erosion or other anthropic degenerative action.

In 2022 alone, more than 500,000 biocapsules were produced and distributed to the various Brazilian biomes.

This technology brings several positive impacts, such as: promoting the concept of circular economy through the valorization of industrial by-products; contribute to the economic promotion of traditional communities such as the “caiçaras” and indigenous people for seed collection; increase the probability of germination of seeds by guaranteeing their integrity



Biocapsule dispersed through  
drone mechanism



The dispersion of Biocapsules can be done through a mechanical system installed in a drone, which facilitates the distribution of capsules in more remote locations, reducing costs and further increasing the positive effects of Biocapsules promoting the circular economy.



Seed protected by  
collagen capsule



the capsule is biodegradable and  
releases the seed with the Ecosolo  
(soil conditioner)



The nutritive composition of the capsule  
and Ecosolo optimize germination



and protecting them from bad weather such as sun, fungi, microorganisms, animals and by guaranteeing the necessary nutrients; among others.

### IN DETAIL

The objective of this project was to develop a recovery alternative for organic waste from the paper and cellulose industries and drug capsules from the pharmaceutical industries, through a product/technology of great socio-environmental impact, in

order to change the way in which this wastes are disposed of. (sanitary landfill) in addition to providing an alternative to reforest areas degraded by fire, erosion and deforestation through the use of these capsules together with a soil conditioner - Ecosolo®, produced from waste from the paper and cellulose industry and native seeds of the biome that you want to recover, this set called biocapsules.

To launch the biocapsules, autonomous drones were developed that can carry around 20,000 biocapsules

per flight and disperse them in a controlled manner, collect geographic coordinates and photos for monitoring areas such as riparian forests, springs, among others, with a view to their recovery and preservation.

Thus, the project was developed due to the need to serve customers in the pharmaceutical industries to achieve zero landfill objectives and for Ambipar to specialize in reforestation services through this innovative technology.

In addition, by using the project together with clients, Ambipar helps obtain carbon credits and improves the sustainability indexes of companies, as well as contributing to a more sustainable society.

The project's methodology, initially, was based on opening the capsules manually and inserting Ecosolo® and the seeds of native trees into each one of them and closing them. Initially, with a commercial drone and the creation of a recycled paper device, around 1,000 biocapsules (2,500 seeds) were loaded to disperse them in the areas.

With the development of the project, an automatic encapsulator was developed to make it possible to produce a greater amount of biocapsules (15 thousand in one shift with one operator) and in partnership with the Federal University of Itajubá (Minas Gerais), a new drone model called Hexacopter, which has greater battery life, follows the flight plan previously drawn by GPS, does not require a pilot (autonomous) and can carry up to 2,000 biocapsules (5,000 seeds).

At the end of 2022, also together with the University, a larger drone was developed, with even more battery life, also autonomous and which also follows the flight plan traced by GPS, autonomous and capable of carrying up to 20,000 biocapsules (50,000 seeds) per flight.

When launched, hitting the ground and with the occurrence of rain, the biocapsules dissolve since the capsules are made of gelatin, or hydrolyzed collagen and are biodegradable and hydrophilic, absorbing water to the point of turgidity and breaking the film, releasing what's inside you.



In addition, when the capsules dissolve, they release macro (Nitrogen, Phosphorus and Potassium) and micronutrients (Boron, Copper, Zinc, Manganese), which help in soil nutrition, seed germination and seedling growth.

To store the biocapsules, a package was created that has the concept of design thinking in order to facilitate the visualization of the product internally (through a transparent band). Its size helps the ergonomics of handling and display on existing commercial shelves.

Its composition is made of Kraft paper with a thin layer of recycled





polymer, allowing the preservation of the biocapsules for a long period, which protects against moisture and oxygen, extending the useful life of the seed.

The “zip look” of the packaging allows the consumer to open and close it without damaging its structure. The positive impacts brought about by this project are diverse and are among different spheres such as environmental, social and financial, in addition to increasing the company’s sustainability and environmental marketing indices.

### **Financial:**

The relevance for the business is mainly due to the indirect gains arising from the project, since Ambipar’s core business is around 50% the valuation of waste with a focus on the circular economy, therefore there are gains from the contract of total waste management with both Vale (Pará) and Aché (São Paulo) until the creation of a new business unit: the department for the generation and sale of carbon credits.

In addition, it is possible to obtain direct gains from the project, due to the hiring of Ambipar for the reforestation of degraded areas or the neutralization of carbon emissions by companies. For each project with each company, it is possible to adapt the seeds that will be encapsulated depending on the biome of the area, amount of biocapsules needed, dispersion time and amount of biocapsules per flight, thus generating a personalized project for each client.

### **Sustainability:**

Elevation of sustainability indices, in particular the ISE index (B3 Corporate Sustainability Index) which Ambipar shares through the stock exchange, being obtained in the last publication of the scores in the



best companies in Brazil (January 2022), Ambipar was among the first, obtaining a score of 79.04.

### **Environmental Marketing:**

Visibility, only in the first months of 2022 several articles of great national repercussion were released (SBT, Band, Forbes, Um Só Planeta, Globo); Social: Partnerships established with traditional seed cultivation cooperatives, such as Cooperativa Caik (indigenous agricultural cooperative), bringing indigenous organizations and traditional communities closer to technology, in favor of the environment.

In this way, the culture of these peoples is preserved and they get in touch with a new technology that helps to preserve the environment, an objective that they also seek.

Partnership signed with the Ceres Seeding Student Organization of the Federal University of Itajubá, encouraging the approximation of public education institutions with the private sphere. Environmental: The reforestation of degraded areas brings numerous environmental benefits such as climate regulation, particularly in relation to humidity and temperature; maintenance of the water cycle and consequently of rainfall, which increases the

availability of water in surface sources and also in underground sources, such as aquifers and groundwater.

In addition, the presence of vegetation and trees around rivers, lakes, swamps, mangroves, help to improve the water quality of these sources, as this environment is filled with riparian forest, which has a sponge effect and filters pollutants, preventing -the ability to reach the water sources and therefore also preserve them in addition to preserving the precious springs, water holes and underground sources; contribute to the geological stabilization of soil texture, topography and fertility, making possible the development of complex and diversified ecological niches.

Furthermore, forests play an important role in capturing CO<sub>2</sub> (carbon dioxide), the main pollutant gas that causes the effect greenhouse and therefore, this project promotes carbon neutralization on a large scale.

In addition to all the benefits mentioned, the project is in line with the UN Sustainable Development Goals, meeting the objectives:

SDG 1: No Poverty

SDG 2: Zero Hunger and Sustainable Agriculture

SDG 3: Health and well-being

SDG 6: Drinking Water and Sanitation

SDG 8: Decent Work and Economic Growth

SDG 9: Industry, Innovation and Infrastructure

SDG 10: Reducing Inequalities

SDG 11: Sustainable Cities and Communities

SDG 12: Responsible Consumption and Production

SDG 13: Action Against

Global Climate Change

SDG 14: Life in the water

SDG 15: Life on Earth

SDG 17: Partnerships for the goals

## MEANS OF IMPLEMENTATION

In terms of achievements, in 2022, through this project, we won the ABRE packaging award 2022, Design For a Better World Award 2022, Positive Impacts, Grow Innovation Awards – 3rd edition and the 8th Action for Water Award - PCJ, indicating that the project has environmental and innovation relevance.

The project can be better understood and illustrated by the video, which has more information: <https://www.youtube.com/watch?v=n7ylukTE198>.

Therefore, the project presents an innovative seed encapsulation and protection technology that increases fertility and reduces costs with the use of inputs of recycled origin and also brings a solution for its planting in areas of difficult access, degraded soils, burned and deforestation through planting and drone monitoring.

That is, an “end-to-end” clean technology that responsibly disposes of and values waste that was previously sent to landfills, fostering the circular economy and ESG (Environmental, Social and





Governance) premises. In addition, the capsules do not have drug residues, being free of any contamination and are highly soluble in water (a 100% organic and compostable product).

Airdrop by drone is considered a clean and practical form of application as it does not use petroleum-derived fuels and with the launch device, it is possible to launch up to 20,000 biocapsules per flight.

The project can be replicated in all biomes and all regions of Brazil and the world, since native seeds from all biomes can be placed in the capsules. Additionally, with the use of autonomous drones that follow the prepared flight plan via GPS, it is possible to reforest remote areas, difficult to access, on slopes, areas with degraded soils and that have suffered from fires and deforestation, thus helping the water cycle and protection of water sources and springs.

### ABOUT FUTURE PLANS

We intend to capture around 80% of the leftover capsules in the Brazilian pharmaceutical market, which includes large companies such as Bayer, Aché, Euroforma, Medley, Roche, J&J, Catalent and others.

With this, we will have enough inputs to produce about one million capsules per month for the next 3

years. With drones, through a partnership with the Federal University of Itajubá, we intend to develop new autonomous UAVs (Unmanned Aerial Vehicles) drones, which have greater flight and cargo autonomy, being able to transport up to 50,000 biocapsules per flight.

In this way, in addition to the production of biocapsules already existing, we will obtain a team to build all the drones with the seed dispersion controller launch devices. In the distribution of biocapsules, we have already developed packaging

that preserves them for almost a year and is now available for sale on e-commerce (internet).

Over the next two years, we also intend to be physically present in supermarket chains and in the main agricultural input stores.

Finally, we intend to carry out reforestation not only in Brazil but also in all continents, disseminating the technology, since the production of capsule residues and the need for reforestation is a worldwide problem.





## **JOONGANGILBO**

### **REALISTIC 360-DEGREE VR ENERGY MUSEUM**

#### **INTRODUCTION**

In the digital age, all content must compete for people's "time." Education about the environment and energy is no exception. It is difficult to hold people's attention and inform them about climate change and the energy transition when there is so much interesting and stimulating content available on YouTube and Netflix.

Climate change and energy conversion are more important than any other topic right now, and people need to know about them. To do this, we needed a way to get people interested while also getting the message across.

A single, blurry photo taken in a simple place or a short video clip that only lasts a few seconds can't

tell the whole story. The answer we discovered was "realistic VR content."

We thought that if we could directly experience the field around us in all directions and see objective data about carbon neutrality and energy conversion in it, that would be enough to change people's minds.

#### **IN DETAIL**

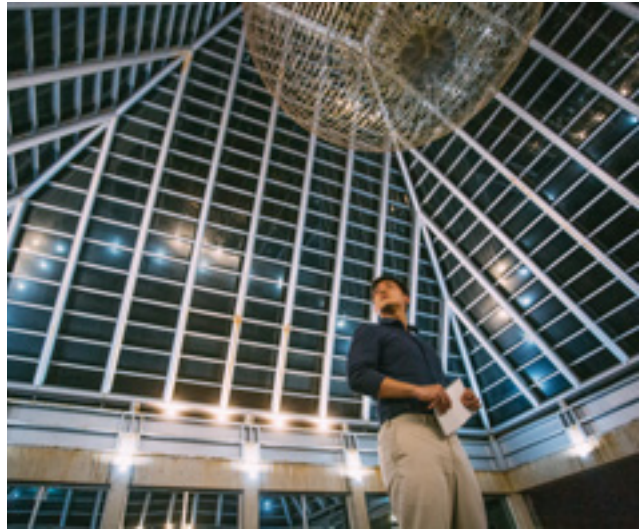
Rather than volatile information like breaking news articles, we wanted to create digital content about carbon neutrality and energy transition that people could visit on a regular basis. Anyone, similar to a museum, can visit for an extended period of time to directly experience the upcoming energy transition



and create a space where they can see and feel it right in front of their eyes once it is built.

It would be too expensive and hard to get permission to build such a museum in downtown Seoul, so we went digital and made a 360-degree immersive energy museum where people of the future can see, hear, and experience the theme of energy conversion through VR content. In the meantime, there have been many articles and pieces of content that discuss carbon neutrality. Also, the articles' contents weren't clear, so there wasn't enough reason to do carbon neutrality or energy conversion.

However, there is no site where you can find all of these articles and their contents at once. Furthermore, there was insufficient reason to do carbon neutrality or energy conversion because the contents of the article were not intuitive. To address this, it was created in such a way that graphs and numerical icons can be seen alongside each other



in the 360-degree video that runs on the “Realistic Energy Museum” web page, and it is actively linked with realistic media art so that citizens can enjoy and view related data.

It was designed to make specialized data easier to understand for readers of all ages. Also, instead of





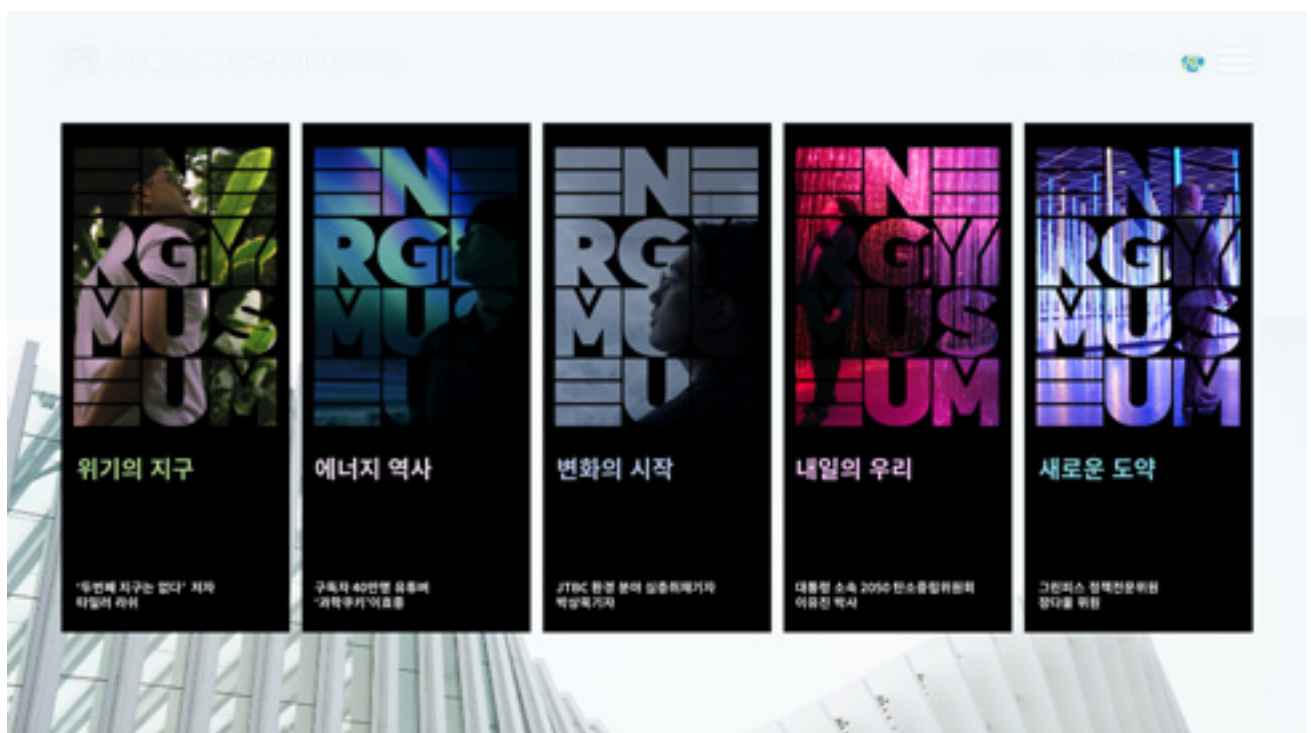
just letting people watch content, we added parts where they could directly take part. We planned a way to experience and participate at the same time because of the element on the webpage that gradually greens the earth with the number of citizens participating by leaving a comment or clicking the “like” button and the last of the five categories.

The remaining carbon budget until the earth’s temperature rises to 1.5 degrees Celsius is linked in real-time, with data calculated in seconds in all parts, allowing people to be alert. Energy Day has gotten a lot of attention from experts and citizens since it was announced on August 22.

We wanted to get different points of view on energy conversion in particular, so we went to different fields and talked to experts, like YouTubers, broadcasters, environmental groups, government agencies, and environmental journalists with a lot of influence. After the first web page and article were posted, the participating organizations, 400,000 science YouTubers, and broadcasters all actively shared the content, so we got more interest and support than we expected.

The web page has received over 1,300,000 likes, and the data and images used to create it are being prepared for publication as an educational book. We are holding meetings with Ministry of Education and Ministry of Environment spokespersons who are very interested in carbon education and energy conversion, and we are discussing in detail how to use the contents as elementary and middle school education materials.

We plan to work with the Science Museum to do hands-on learning starting in 2023. There, you will be able to watch 360-degree videos.





## JSW CEMENT LIMITED

### JSW CEMENT - THE GREENEST CEMENT COMPANY WITH LOWEST CO2 EMISSION INTENSITY IN THE WORLD

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#### INTRODUCTION

JSW Cement, part of the \$23 billion JSW Group, is a global eco-friendly building materials company with 17MTPA production capacity.

JSW Cement is India's leading Green Cement company with current capacity of 19 MTPA having six operating plants in India which are

- Nandyal (Andhra Pradesh),
- Vijayanagar (Karnataka),
- Dolvi (Maharashtra),
- Salboni (West Bengal),
- Jajpur (Odisha), including one subsidiary unit Shiva in Odisha.

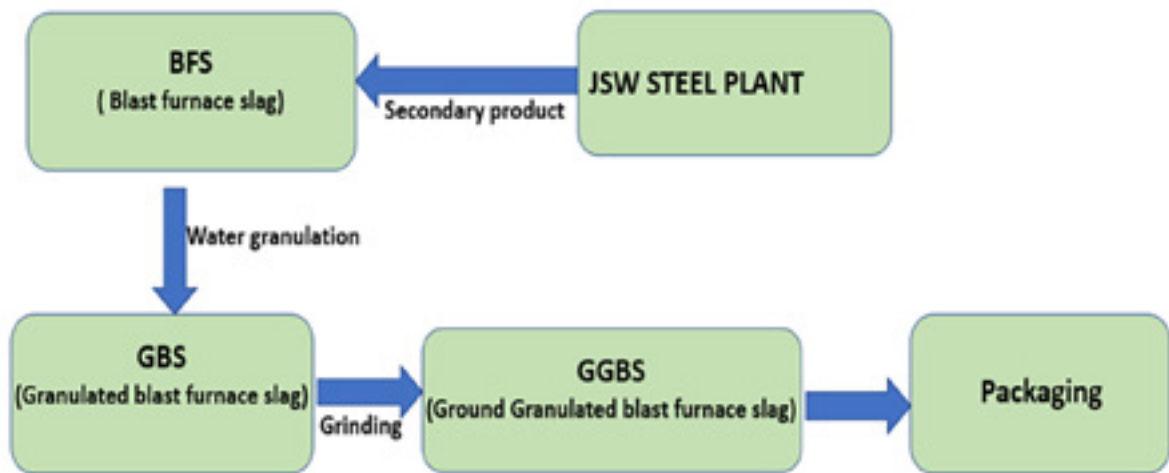
The company is present across the entire value-chain of building materials comprising cement, & construction chemicals. At JSW Cement, our major objective is to leverage technology to successfully integrate sustainability in the production process by

converting an industrial by-product (Blast Furnace Slag) into green cement and cementitious materials, i.e. PSC, CHD and GGBS which is engineered for strength and durability thereby reducing carbon emissions.

The cement sector is the world's third-largest industrial energy consumer, responsible for 7% of industrial energy use and the second industrial CO<sub>2</sub> emitter, with 7% of global CO<sub>2</sub> emissions. With the rising population and urbanization, global cement production is set to grow, and despite increasing efficiencies, direct carbon emissions from the cement industry are expected to increase by 4% globally by 2050

With 173.5 Kg CO<sub>2</sub>/tonne of cementitious materials, JSW Cement has the lowest specific CO<sub>2</sub> emissions intensity (scope 1), making it the world's most eco-friendly cement manufacturing company. The Company has been able to achieve this because of the conscious choices undertaken with respect to





the product portfolio, focusing on blended cements and GGBS and deployment of energy efficient technologies.

Today, it is in the top 10 cement companies in India in terms of installed capacity and around 90% of its product portfolio is blended cement and cementitious products. As a way forward, JSW Cement is focusing on initiatives such as increasing alternative fuels and raw materials, enhancing its Renewable Energy (RE) portfolio through Solar plants, sourcing of RE through PPA, installation of Waste Heat Recovery Systems (WHRS), encouraging rainwater harvesting, greenbelt development and biodiversity conservation.

### IN DETAIL

JSW Cement, part of the \$23 billion JSW Group, is a global eco-friendly building materials company with 17MTPA production capacity. We utilize slag waste from JSW Steel, demonstrating circular economy initiatives.

Our emissions intensity of 173 kg/T set us apart as the 'Greenest Cement company'.

In order to demonstrate our commitment towards net zero future and take concerted actions as a part of our decarbonization strategy, JSW cement has:

- Committed to GCCA 2050 Cement and

Concrete Industry Roadmap for Net Zero Concrete.

- Committed to RE100, EP100, and EV100 by The Climate Group, for dedication to renewable energy, energy efficiency, and electric vehicles.
- Signed the UN Energy Compact, reinforcing voluntary commitments with specific targets and timelines to achieve SDG7 and Paris Agreement Goals.
- Signed 'Global Framework Principles for Decarbonizing Heavy Industry'
- Became member of UNIDO's Industrial Deep Decarbonisation Initiative's advisory group and 'Development Council for Cement Industry (DCCI)' set up by Govt. of India in 2021
- Signed CII's Climate Charter and became member of CII Climate council, in 2022
- Committed to Science Based Targets Initiative (SBTi) for setting science-based emission reduction targets.
- Membership in Xynteo's 'Build Ahead' Project, uniting businesses to scale decarbonisation efforts in the Indian construction value chain.

### The method, Investment and Impact:

The company is known to be the most eco-friendly company globally, owing to its least emission intensity.

This was achieved through pursuing different levers.

### • **Clinker Substitution -**

Currently, 90% of our products consist of blast-furnace slag or combinations like slag/fly ash. This approach conserves natural resources, lowers carbon emissions and energy consumption. Investing ~10% of total investment from R&D, we've achieved 2% reduction in the clinker factor in FY23, leading to a 14% decrease in absolute CO2 emissions.

Our commitment supports sustainable waste management and fosters local economic development by sourcing materials locally.

### • **Using more AFR (Alternative Fuels and Raw Materials) –**

We're actively implementing climate action strategy by increasing the usage of AFR.

Through this initiative, we've replaced ~8% of fuel requirement with alternative fuels measured in Thermal Substitution Rate (TSR) and ~2% of raw mix with alternative raw materials.

We plan to increase TSR to over 30% by 2030. We've invested nearly 2.5 crore in the AFR (Alternative Fuel and Raw Material) facility at Nandyal, with a provision of around 5 crores investment in next three years.

This will help increase our TSR (Thermal Substitution Rate) from 8% in FY23 to 14-15% in FY24. This transition has also contributed to improved air quality, reducing the impact of air pollution on respiratory and cardiovascular health.

Additionally, it has led to the creation of new job opportunities

and sustainable waste management practices.

### • **Increased clean and Green energy portfolio –**

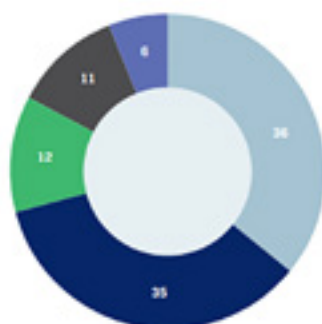
Using solar power plants, Waste Heat Recovery Systems (WHRS), and renewable energy through Power Purchase Agreements (PPAs), ~4% of our power is from renewables, aiming for 50% by 2030.

We've consumed 15.2 million units renewable energy and aims to expand this. Currently we've installed solar power capacity of 26.5 MW across Nandyal, Vijayanagar, and Salboni units. We are committed to RE100, with targets of reaching 60% RE by 2030, 90% by 2040, and 100% RE by 2050.

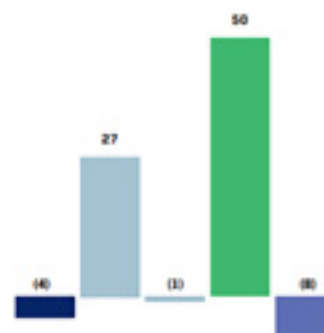
Moreover, we've recently installed WHRS of 12.3 MW and 9.0 MW capacity at their Nandyal and Shiva cement units, respectively.

### Product-wise highlights

Product-wise production volumes (excluding clinker) (%)



Product-wise sales volume growth (%)



Legend: GGBS, PSC, Concrete HD, OPC, PCC

### Growth

Cement

2% ^

GGBS

27% ^

Overall

10% ^



In total, we've built approximately 48 MW of non-fossil energy capacity, with plans for further expansion in the future.

- **Innovation and Research:**  
We've established R&D centre working on sustainable and low-carbon products like LC3 cement, Super Sulphated Cement, and Geopolymer Cement. We're collaborating with academic institutes to use various slags in cement manufacturing.

Additionally, We're working with IIT Roorkee for biodegradable cement bags. Our latest addition, Slag Sand, revolutionary substitute for natural river sand conserving river sand and reducing ecological impacts from sand mining.

We've invested more than INR 2 Crore in FY23 towards R&D. We are working with few start-ups such as Coomtech and Fortera for innovating technologies.

- **Product Stewardship:**

We've taken significant steps to assess the life cycle impacts of our products and support our claim of offering Green products. We've obtained externally verified Environment Product Declarations (EPD) for most of our products and achieved certifications such as CII Greenpro and GRIHA.

- **Sustainable Linked Loan:**

We've secured sustainability-linked loan agreements with MUFG and BNP Paribas, where loan terms are linked to CO2 emission intensity reduction targets. Furthermore, the company is exploring Carbon Capture and utilization projects with several companies, including start-ups.



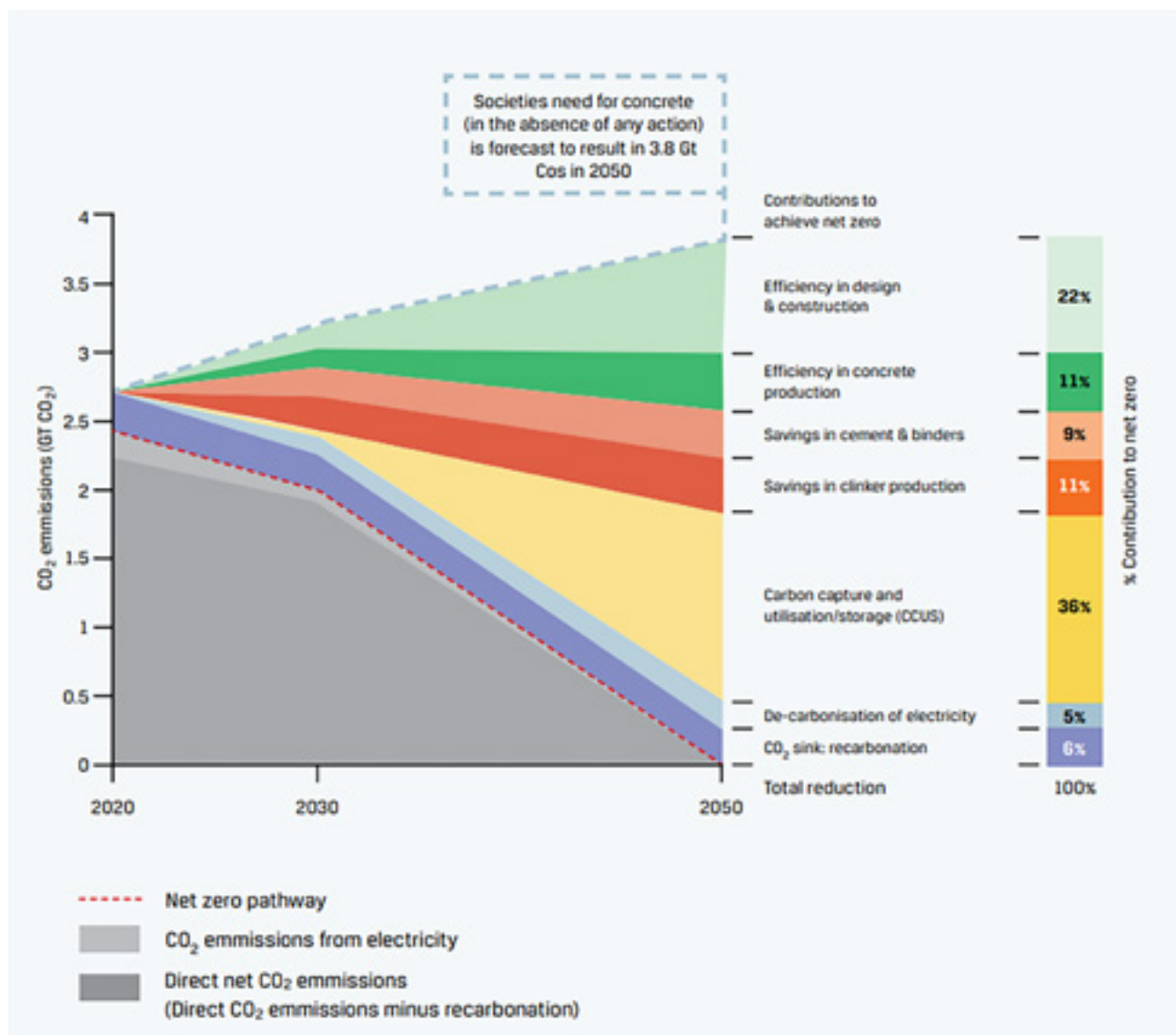
### Future Targets:

- Net Zero by 2050
  - SLL's Net CO2 emission Intensity Reduction Target (Scope 1+scope 2) by 15% by FY26 vis-a-vis FY21
  - RE100 Target of 60%, 90% and 100% RE target by 2030, 2040 and 2050 respectively.
  - EV100 Target of making all our passenger vehicles into EV by 2030.
  - EP100 Target to double our energy productivity by 2037 which is already achieved in FY22.
  - UN Energy Compact Target of substituting our coal requirement (Thermal Substitution Rate) in kiln by 30% by 2030.

### Achievements and Accreditation:

- FY23 - Raised SLL of 100 Million USD linked to CO2 reduction Targets.
- FY23 - Released our first Integrated Report.
- FY23 - Ranked first in ESG risk among 140+ global construction materials companies, with a score of 17 analysed by Sustainalytics

- FY23 - Topmost recognition in the CII-ITC Corporate Excellence award, India's renowned sustainability award.
- FY23 - GRIHA Certifications for our low carbon products including construction Chemicals
- FY23 - EPD for Concrete
- FY22 - Improved our CDP rating from 'C-' to B in the last four years.
- FY22 - Released our First Sustainability Report
- FY22 - Selected to be a part of UN's Vision 2045 campaign - a series of ground breaking documentary films aims to inspire businesses and people to take collective action to insure a better future Accreditation:
- Economic Times Sustainable Organisation of the Year 2022
- CII Greenpro certification, EPD, and GRIHA Certifications for our low carbon products
- Received the Award in Circular Economy (2023) by International Council for Circular Economy
- "Lowest ESG Risk Company of the Year" recognition at the 4th Annual ESG Summit and Awards 2023 by Transformance Forums, India





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\*CO<sub>2</sub> percentage reduction is calculated for our average scope 1 CO<sub>2</sub> emission intensity (173 kg/T) of FY 23 against the national average of 539 kg/T (GCCA 2021)

\*\*Year 2022-23

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## LAKESIDE SHOPPING CENTRE THE SUSTAINABLE ALLOTMENT

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### INTRODUCTION

Lakeside has a naturesque environment, i.e. lake, bees, bugs, ducks and green foliage, we wanted to increase and improve our environmental performance and encourage the efficient use of resources, with the aim to meet Savills sustainability targets.

We also wanted to promote the wellbeing aspect and further develop our reputation for caring about the environment. As a business at the core of retail and the heart of the community, we wanted to demonstrate sustainability to encourage other retail outlets and the public to get involved.

Demonstrating to retailers, our community and the public how easy it is to grow your own food and recycle. -Lakeside are leading by example, showing other Savills properties what can be achieved and how our idea can be replicated. -

Working with more local schools/community groups,

promoting the allotment project,

sharing knowledge, the benefits,

teaching how to implement allotments,

act as ambassadors to promote the initiative.

### IN DETAIL

The sustainable allotment is an initiative devised by the Environmental team.

Lakeside has a genuine care about sustainability and a desire to improve this. The team brainstormed and came up with the initiative to create an allotment, to grow our own food.

Every member of the management team planted seeds in pots and grew them in the office. It created comradery, healthy competition, developed knowledge and interest in sustainability.

A small piece of unused tarmac was utilised and turned into an allotment for staff to nurture. We recycled and reused as much material around the centre to make the allotment.

Once the fruit and vegetables outgrew their pots, the team rehoused them in the new allotment. Successfully transforming a previously neglected area into a thriving and environmentally conscious allotment, making a positive impact on our centre and the community.





Lakeside has a nature-sque environment, i.e. lake, bees, bugs, ducks and green foliage, we wanted to increase and improve our environmental performance and encourage the efficient use of resources, with the aim to meet Savills sustainability targets.

We also wanted to promote the wellbeing aspect and further develop our reputation for caring about the environment. As a business at the core of retail and the heart of the community, we wanted to demonstrate sustainability to encourage other retail outlets and the public to get involved.

The initiative only cost £1,000 to purchase soil and astro turf, other materials were donated by retailers i.e. planters, benches, plant pots. A School was invited as part of our sustainable development aim, to show young people the allotment.

Treetops school has young people with moderate learning difficulties, many are on the autistic spectrum, with speech and language problems. The aim for the young people was for them to gain an understanding of the economic benefits of having an allotment, via cost savings, protecting the environment by using natural pest control methods rather than pesticides, learning about food production during the cost of living crisis, encouraging appreciation of the environmental benefits in a digital age, to encourage putting down electronic gadgets and replacing with outdoor activity and practising wellbeing.

For the young people to build a sense of achievement, pride and be advocates by sharing this information with family and friends. To truly feel a part of the project, every class in Treetops school created artwork that was developed into a collage to

create the allotment sign. To keep the momentum, the Environmental team identified locations within Treetops school and implemented mini allotments which they check every 6 weeks.

In addition, we developed dedicated wildlife-friendly areas around the centre and within the allotment, including birdhouses, insect hotels, and wildflower patches, to enhance biodiversity.

The allotment initiative provided an array of benefits:-

- reating a nice area for staff to enjoy, a sense of community, area to socialise, relaxation, wellbeing, boost morale.
- onating food we grow to staff and local community
- ncouraging exercise and benefitting mental health by involving staff in the project
- elping to improve the environment and the benefits to local wildlife
- tilise items rather than creating more waste.

We detailed the longer term benefits on the Lakeside website to inform people, which are :-

- Demonstrating to retailers, our community and the public how easy it is to grow your own food and recycle.
- Lakeside are leading by example, showing other Savills properties what can be achieved and how our idea can be replicated.
- orking with more local schools/community groups, promoting the allotment project, sharing knowledge, the benefits, teaching how to implement allotments, act as ambassadors to promote the initiative.
- Having an allotment can help you live a healthier lifestyle. If you don't like the idea of pesticides in your food, an allotment allows you to choose what goes into your soil.



Opportunities to grow varieties that you might not find in the shops.

- Meet new people and make friends with fellow plot-holders. Sharing advice and experiences, a bonding activity, sense of achievement
- Save money on expensive supermarket fruit and vegetables.
- Getting outdoors within nature and plants is good for mental health and wellbeing. Spending as little as 15 minutes a day in the sunshine can build levels of vitamin D, essential for healthy teeth and bones.
- The exercise that comes with gardening on an allotment is great for your physical health. 30 minutes of gardening on your allotment can burn 150 calories, the same as doing low impact aerobics.
- Help your community to thrive, as well as essential wildlife that may inhabit in and around allotments.

The initiative was innovative as no other shopping centre has created an allotment through a sustainable method and encouraged others to do the same, offering support to help retailers, shopping centres, organisations, community groups and visitors to implement, so that they can reap the previously mentioned benefits.



To promote the allotment initiative, Lakeside posted updates to staff on the centres app, newsletters, Savills shopping centres app which is shared to 150 Savills shopping centres, to the public across social media platforms, Lakeside's website and on the centres large screens. <https://lakeside-shopping.com/news/turning-tarmac-green-at-lakeside>

The project created a number of learning opportunities:- Any space can be transformed to enhance the environment. The opportunities for recycling and reusing are endless and not everything has to go in a bin. -The most obscure locations are opportunities waiting to be utilised. We've demonstrated that spaces can be transformed into environmentally sustainable allotments that benefit individuals and communities.

### **We will build upon the project through the following:**

- Extending allotments into other areas around the centre.
- Conduct educational workshops and hands-on learning experiences for students, create educational materials on how to create a sustainable allotment/ gardening practices.
- Work with KidEco Charity who promote sustainability (reuse/ repurposing clothing to families in need
- Donating produce to Thurrock foodbank, helping local people in crisis.
- Work with AgeUK to encourage gardening activities for children and seniors, to encourage intergenerational relationships.
- Collaborate with local conservation organisations to host community events, i.e. gardening workshops, seed swaps, school harvest festivals.



## LAMBWOOD HEIGHTS CARE HOME

### DRIVING SUSTAINABLE CHANGE INTO CARE HOMES AND INSPIRING CHANGE IN THE WIDER SECTOR

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#### INTRODUCTION

In the last 3 years Oakland Care have created and sustained a culture where sustainability is now at the heart of the business and seen throughout all areas of operation. We set ambitious targets for our business which contribute positively towards appropriate UN SD Goals 12 and 13.

We have achieved The Greenmark Level 3 certification (the highest level available), have been certified as a Carbon Neutral Business 2 years running, and are now working towards compliance to ISO 14001 - Environmental Management.

These successes are unprecedented in the Social Care sector, and we are proud to lead in this field. The main successes of our environmental policy and practice are the cultural and 'on the ground' changes that we see.

We've established a Green Committee and each Care Home has made real world changes to their operation to reduce waste, utility use and to raise awareness of Environmental issues - and given back to the local environment through volunteering initiatives or on collaborative projects with local groups.

We often see that our Residents themselves get involved in these initiatives. We have now also created and implemented a fully documented Environmental Management System (EMS) to coordinate our sustainability focus.

We have invested heavily - both financially and in terms of project time to ensure our targets are met for the benefit of the environment. All of our buildings are constructed to high standards and BREEAM accredited.



Our newest buildings have significant environmental enhancements such as dedicated wildlife gardens and electric car charging points. We now look to grow our efforts even further into 2023. We present on sustainability in care at a variety of events and forums, and work with others in the industry to drive change across the whole of the sector.

#### IN DETAIL

At Oakland Care we have grown our sustainability credentials and practices significantly within the last 3 years. We have multiple projects and strategies across the organisation and have achieved accreditations that are the highest in the UK in the social care sector.

We aim to continuously reduce our impact on the environment and grow the business sustainably. We also aim to inspire change in the wider social care sector and motivate other care home providers to start a sustainable journey.

We've focused our sustainability practices to contribute towards UN SD Goals:

- Goal 12 – Responsible consumption and production
- Goal 13 – Climate action As detailed in our EMS, we have implemented an end to end approach, making changes in all areas of our business. This has required full engagement and communication throughout the business to deliver a culture built around sustainability. In the last 3 years we have implemented and sustained the following: Monitoring, minimising and then offsetting our carbon footprint:
- Offsetting our remaining carbon footprint - Certifying as Carbon Neutral, focusing our carbon credits into the 'Global Climate fund'
- Completing the Greenmark accreditation programme (we are the only Business in the Care Sector to achieve Level 3 – the highest level of accreditation)
- Detailed utility and waste volume monitoring
- Waste reduction strategies (increasing recycling collections and reducing general waste, waste compacting to reduce volume of our clinical waste by 30%)
- 100% recycling of key items (separating batteries, food waste, electrical goods, waste oil)
- Sustainable procurement resulting in 30% reduction in delivery miles
- Greener travel options for staff (Cycle 2 Work scheme, establishing a green travel plan)
- Giving back 1500 hours a year of staff time to local community projects such as tree planting, litter picking and beach cleans - from their paid working hours Increased biodiversity in the local area and reducing our local environmental impact:
- Creating wild flower and wildlife gardens in each Home
- Adding bee hives, releasing butterflies, planting more fruit and vegetables
- Running tree planting and beach cleaning, litter picking and other volunteering initiatives in each Home's local area Improving awareness and education on sustainable practice for all of our stakeholders:
- Training all new staff during induction on Oakland Care's sustainability goals
- Running 'Green' activities/events with our residents and staff
- Appointing Green Champions throughout the business and delivering regular updates through the Green Champion committee meetings and circulated minutes
- Running Oakland Care's annual 'Greener Month' – a week of raising awareness, celebrating changes and local volunteering Creating a culture of change that would encourage the rest of the sector to follow:
- Establishing a full Environmental Policy and Environmental management System (EMS)
- Embedding sustainability in every meeting, process and product choice
- Encouraging every team member to share ideas and make suggestions
- Clear objectives for continuous improvement year on year Development and technology:
- All new builds include electric charge points, rainwater collection systems and wildlife areas





- All our sites are on an assessment program under the BREEAM method
- Investing in sustainability and new innovations such as clinical waste removal to reduce the amount of hazardous waste going to landfill
- Implementing e-technology for invoicing, rostering, purchasing, care planning and the recording of medication and becoming paperless

We have achieved all of the above in the last 3 years and our momentum continues with a robust future plan. Although we are busy successfully growing as an organisation, we dedicate significant time and investment to achieving our sustainability goals. We have a dedicated lead on sustainability and report on sustainability at board level monthly.

We have a clear set of targets and a team of 'Green Champions' (forming our Sustainability Committee) to help deliver on these. We focus on ensuring we work to improve education, and raise awareness of Environmental issues.

All of our team are aware of our sustainability goals as it forms a core part of staff induction at Oakland Care, and other businesses and groups in our sector are inspired to start to change by following our lead. We have formed effective partnerships with organisations to improve our sustainability, but also to inspire others.

- We've been selected by 'Greenmark' to act as a Green Champion representing the sector on its Green Champion committee
- Our purchasing partner, MPP, are now working toward the same accreditations, inspired by our work
- Our wildlife garden at our Maplewood Court Site is being developed as an education resource for the local community, working closely with the Kent Wildlife Trust
- We partnered with a Vacuum Pack company to significantly reduce the volume of our clinical waste by 30%
- We are members of the Woodland Trust and have partnered with local councils and

volunteering groups when organising our local environmental benefit events.

We were certain that we needed to make a change to operational practices in order to act responsibly in line with UN Goals 12 and 13. Residents and Team Members alike were asking what could be done in the workplace to reduce our impact and it was clear from the interest and commitment at all levels of the business that this should be a development path for us.

For our size of Care Home business and the pressures facing social care, the level of investment we place into sustainability is significant and by far the highest in the UK. In the last 2 years, despite the challenges facing care providers with the pandemic the group has invested in excess of £471,609 into sustainable interventions.

The actual figure will be higher than this when taking into account smaller investments such as installation of new LED lighting and macerators, however the main investment costs are as outlined below.

- 2022 - Installation of Vacumatic machines to reduce clinical waste to landfill - £21K
- 2021 & 2022 - Labour costs for staff time given back to the community in voluntary work - £19,324 (2021) & £23,138 (2022) TOTAL - £42,480
- 2020 / 2021 - BREAAAM in construction additional costs to build to excellent in construction specification - £200K
- 2022 - Appointment of dedicated Sustainability lead time & labour cost time of sustainability committee activities £47,244
- 2021 & 2022 - Installation of electric car charging points - £31K 2021 - 2022 - BREAAAM assessments - £61,200
- 2020, 2021 & 2022 Greenmark costs - £600 PA = £1800 2021 - Carbon neutral offsetting -£4785
- 2022 - Carbon neutral offsetting - £7500
- 2022 - Wildlife Garden & Biodiversity Projects - £15K

- 2021 & 2022 - Installation of Bicycle sheds - £30K
- 2020-2022 - Food recycling costs - £9600

By contributing the UN SD goals 12 and 13, we are benefiting the Environment and conducting business responsibly. It is also important to recognise that other stakeholders benefit, either directly or indirectly:

- Residents and Families (clients) - Our Residents rightly expect the business they engage with to be doing all it can to reduce its impact on the environment, minimise its Carbon Footprint and to seek opportunities to improve its practice wherever possible.

Our residents live with us, and so have the opportunity not only to see the changes we are making, but to be part of it.

Residents may help with recycling and development of the gardens, for example.

- Employees - Our employees correctly expect their workplace to provide opportunities for sustainable working. Green travel, recycling, eliminating utility waste are all a focus in our personal lives and the business the team work for should focus on the same.
- Investors - Increasingly investors need to demonstrate their portfolio are acting responsibly and meeting their own ESG targets. Investors ask for data and action plans and at Oakland Care we are keen to demonstrate that we lead the sector in this aspect.

Accreditations, awards and certifications all add to the companies credentials. Financially - at the present time, the vast majority of our work is investing in sustainability and the benefits of this will be realised in future years.

There are however some areas that we can already quantify including:

- Clinical waste vacuum pack system: Savings

of approx. £247 per month per site (30% reduction in spend) due to waste volume reduction and reduced collection frequency. This will equate to £23,713 by FY2023

- Closing the London head office to reduce unnecessary travel into London by staff and reduce utility usage. We now make use of our existing care home buildings for team meetings which has reduced spend on estates.

Savings are

- £56K in 2021 and £84K in 2022
- Reduction in utility use due to improvements to lighting systems and smart usage - 5% reduction in 2022 although cost per unit of utilities has risen significantly in the UK
- Reduction in water usage at new sites due to rainwater collection - Volume to be assessed as full year impact in Dec 2022 - estimating 30%
- Reduction in travel miles into head office - 50 return journeys a week from counties outside of London into central London.

We are confident that this level of intervention has never been made before in our sector; we are the only Carbon Neutral Care Group and the only business from our sector to achieve Greenmark Level 3. Not only this but we evidence multiple on-the-ground changes to operational practice that help make differences in the 'real world' contributing to UN SD Goals 12 and 13.

Other groups in our sector often look to us for guidance on how to start their Green Journey and we attend as guest speakers at events to share our inspiring progress.

We strongly believe that all businesses in the sector can benefit from becoming more sustainable; acting sustainably improves the whole business:

- Operational 'common sense' and efficiency
- Greater employee engagement
- Financial benefits to reduced waste and utility usage

- Opportunities for marketing and PR
- Meeting ESG criteria for investors and other stakeholders
- Brand development

We are now forming a steering group with cross sector representation where we can inspire change amongst other providers, large and small, and help them to start their journey of sustainability.

We have learnt that becoming more sustainable requires input and commitments from all areas of the business. The involvement of our Residents and Team members has been essential to ensure real changes that benefit all stakeholders, as well as the Environment.

Our plans for 2023 are robust to ensure a cycle of continual improvement, and are outlined on our website as our 15 Corporate Sustainability Targets:

- All homes will only use cleaning chemicals that have zero hazardous properties by 2023.
- All of our construction projects to be certified minimum of 'Excellent' by BREAAAM.
- All our new homes will be designed with at least 25% of garden space dedicated to biodiversity from 2023.
- We are committed to setting science-based targets and becoming carbon net zero.
- We will achieve Greenmark level 3 accreditation by end of 2022.
- We will achieve ISO-14001 accreditation by end of 2023.
- We will continue to reduce delivery miles for each home to achieve a total reduction of 50% by end of 2023 (compared to 2021).
- We will give back at least 1500 hours of staff time to local communities to volunteer with environmental projects.
- We will have biodiversity gardens in every home by the end of 2023.
- We will maintain our carbon neutral certification and work towards net zero.
- We will only use FSC certified timber for all construction projects.
- We will plant at least 1000 trees per annum.
- We will provide all team members with training on improving sustainability.
- We will reduce plastic waste from chemicals by 90% by end of 2023.
- We will reduce the volume of clinical waste in each home going to landfill by 50% (2023 vs 2021).





## LANDASAN LUMAYAN Sdn Bhd

### SELANGOR MARITIME GATEWAY- A MALAYSIAN RIVER TRANSFORMATIVE PROJECT BY LANDASAN LUMAYAN SDN BHD

#### INTRODUCTION

This is a project of Transitioning an Urban Polluted River Into a New Sustainable Economy. Klang River in the state of Selangor in Malaysia is a historical waterway and was the main channel to transport tin mined in Kuala Lumpur to the ports in the 1800s.

With progress, this river, which today flows through four of the country's most populated and highly industrialised cities, has lost its value and economic viability leaving it as a polluted river- listed as one of the top 50 dirtiest rivers in the world.

To reverse and recover our wasted natural resource, the Selangor State Government introduced the Selangor Maritime Gateway (SMG) initiative in 2018 and appointed a state-owned entity, Landasan

Lumayan Sdn Bhd (LLSB) to prepare the waterway and realise longer-term economic and social opportunities.

#### IN DETAIL

Along the tagline 'A Gateway to a Better Tomorrow', the SMG initiative looks beyond solely cleaning the river; instead, it is boldly looking to revive 56km of river and transform 27,960 hectares of surrounding land and islands in a sustainable manner to establish Klang River as a key economic generator in the region.

This is the first time in Malaysian history that a highly polluted river is being cleaned and transformed into an economic powerhouse, while retaining its environmental integrity.



In April 2022, global ocean activist Boyan Slat, CEO of The Ocean Cleanup, who chose to partner in the SMG project with its river INTERCEPTORTM, called the project “a model for other countries”.

### 2021 was the key turning point in:

- transitioning Klang River towards achieving a balance between environmental preservation and population liveability with new economic opportunities for Selangor
- creating acceptance amongst its wide stakeholders and built trust and credibility for LLSB as a progressive master developer



## OBJECTIVES

The big goal is to make SMG a new economic generator and game changer for the State of Selangor. A master plan was designed to spur new sustainable social and economic growth along Klang River that includes elements of river cleaning, rehabilitation, development and connectivity. By implementing the right elements, the SMG initiative will give people reasons to embrace Klang River to live, play and work here.

### The Goals (Final Part of Phase 1 ending Dec 2022):

1. **Cleaning:** Develop an integrated river management solution to clean and mitigate floodings and become a source of future water consumption.
2. **Rehabilitation:** Protection, conservation and rehabilitation of biodiversity and landmass to ensure its sustainable existence for following generations. Includes managing unchecked discharge of effluents and illegal dumping into the river.

3. **Development:** Invest in initial infrastructure to pave way for urban regeneration to attract investors and implement big data management for a well-managed sustainable future development of the area.
4. **Connectivity:** Klang River as an indispensable means of transport for locals and tourists alike, through a River Taxi service by fishermen and riverbank trails for communities.

### These goals will allow LLSB to achieve:

- A stronger fiscal position that provides for improved community employment and income opportunities to the state, private entities and citizens
- Tourism as a thriving gateway to the biggest population in Malaysia and the region
- Creation of sustainable and affordable living for future communities
- Less downtime at the ports
- Less plastic outflow into the sea and ocean

The successful implementations of these initiatives are important in establishing LLSB as a credible and trustworthy agent of change for the State Government and help secure the bigger goal for SMG - the establishment of an economic zone to be known as ZPE SMG (Zon Pembangunan Ekonomi SMG or the SMG Economic Development Zone).

## ACHIEVEMENTS

SMG is a three-phase plan spanning 14 years. 2021-2022 represents an overlapping of efforts to create a pathway for an economic generation value proposition that will determine the future of this project.

The structured Master Developer strategy has:

- Created a holistic approach to managing the river by uniting over 15 state agencies and municipalities under one banner
- Provided private and non-governmental organisations with direct access into the project
- Improved governance transparency and fiscal management
- Created confidence in the environmental, social and financial potential of the SMG initiative
- Attracted the interest of investors and collaborators
- Attracted the attention of the Federal Government as the first river in Malaysia with a clearly tenable vision and strategy
- Attracted the attention of The Ocean Cleanup to locate two INTERCEPTOR™ which recognises the commitment by the State Government and LLSB.

The Ocean Cleanup has also located its global assembly in Klang River since end 2021. The pandemic slowed down deliverables, but the team pushed forward with several initiatives.

### 1. Catalysts projects

Opening and activation of the 1st riverbank Pangkalan Batu Urban Park; 80% completion of Mangrove Point biophilic park; initiation for river



trails and the start of the River Taxi services for river education trips with fishermen communities along the Klang River.

### 2. Waste Management

Continued operation of 7 log booms, complimentary waste traps, and the deployment of 2





INTERCEPTOR™s by The Ocean Cleanup with sponsorships by Westports Malaysia and UK band Coldplay. Waste disposal twice daily from each collection site throughout the year.

### 3. New Discharge Policies

Round tables debates and planning sessions with state water and river authorities for the development of 2 policies to stem the discharge of untreated effluents into the river - Zero Discharge Policy and Polluters Pay Principle.

### 4. Corporate Participations

Participation in webinars and seminars to attract private sector collaborations to invest in projects and conduct CSR activities led to 5 new partners including 2 key investors for the project.

### 5. Onsite Visits / Online Briefings

Visits by state representatives, senior government officials, NGOs, academia and foreign visitors that are keen to learn and emulate the SMG river model. A sharing session was also done with the UN Habitat Nairobi and UN Global Compact Network Malaysia & Brunei.

### 6. Communications

15 activities even during lockdowns; 439 coverage clippings from both local and international media; active interaction and organic growth on Instagram, Facebook and LinkedIn to push awareness and encourage participation in public activities in our park, mangrove cleaning, innovation challenges and boat trips.

### 7. Successful Engagement with key stakeholders

Being a state-led project, the principal driver for the SMG initiative is the Chief Minister of Selangor alongside a multitude of stakeholders.

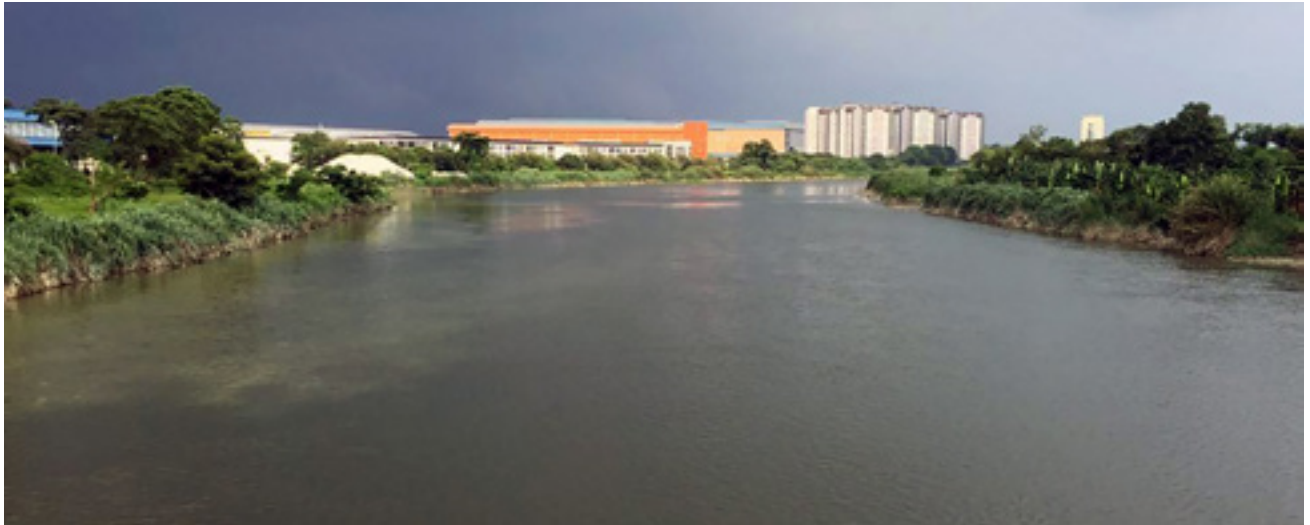
#### I. For the state:

- A BOD with the Chief Minister as Chairman and 4 other key individuals to form the main decision making
- A consultative council with key representatives from each state agency and municipalities for collective agreements on important decisions ensuring one voice for plans
- Round table sessions to debate on new plans
- Monthly WIPs with working level state and municipality representatives to ensure alignment

#### II. Water & Environment NGOs & Advocates:

As potential opponents to developments, issues have been negated with regular updates and invitations to participate to this group who are regarded as valuable partners. We have also ensured that local NGOs and vocal advocates are allies of SMG thus securing their support of our programs.





### III. Corporate Partners:

Trust is built through one-on-one engagements and via online platforms.

We are working with:

- Nestle- Recovery and recycling of plastics
- Dutch Lady- Tributary adoption
- Westports Malaysia- INTERCEPTOR adoption and Mangrove cleaning and replanting
- Berjaya Corporation- Sustainable Living
- Port Klang Authorities - River Education

### IV. For the Youth,

Interactive awareness sessions and micro volunteerism sessions in person and via Instagram & Twitter, circular economy ideas, river and mangrove clean-ups.

### V. Communities

Communities by the river operate our River Taxis and have social enterprise activities to retail to visitors.

### VI. Public

Public were reached with active Instagram, Facebook and LinkedIn to keep them invested in the SMG projects.

### VII. Media

Media is our biggest voice with interviews, infographics and releases, on-site briefings, VIP visits and general stories. We have received both local and international publicity for our work with SMG. In May 2022, LLSB was featured in the inaugural ESG print by a prominent business media in Malaysia, The Edge.

To date, all our coverage is earned with zero advertising. In the area of innovation:

- New log booms were designed to withstand strong currents and we now have 7 units positioned to catch the maximum amount of rubbish depending on the stronger direction of water flow.
- In 2021, in a major attempt to divert waste from landfills, LLSB partnered with The Malaysian Global Innovation and Creativity Centre to run an innovation challenge for Malaysian solutions to Convert Waste To Wealth.

With judges from LLSB, The Ocean Cleanup, Nestle and UNDP, five solutions were shortlisted and the winning solution converting river waste to biogas is currently being tested.

- Mangrove Point under SMG is a pollution-compromised mangrove sanctuary being regenerated and upgraded along a 'biophilia'

concept that will make it the 1st park in Malaysia that consciously promotes this ideology.

To further protect the space and ensure minimal damage, LLSB is building elevated walkways around the park leading to the river with no heavy machinery entering the park. This park will open end 2022.

### **BENEFITS UP TILL AUGUST 2022,**

SMG has successfully removed 81,856 metric tonnes of waste (equivalent weight of 446 units of Boeing 747) from the river.

#### **This has:**

- seen a reduction of waste extraction by 38% from the baseline of 2016
- reflected the improvement of Klang River's water quality monitored by stationed Water Quality Management Systems from Class V (contaminated and dangerous) in 2016 to Class III or better on 48% of days in the year 2021, while hitting 70% between Jan-Jun 2022 Improved water conditions have seen the return of riverine animals such as otters, crocodiles, migratory birds, nesting eagles, fish species, and other riverine and marine flora and fauna.

As a result, the cleaner looking river that smells better has generated more visitors especially to our riverside park at the Pangkalan Batu Urban Park. No illegal dumping incidents have been reported in 2021 due to surveillance and increased conservation awareness.

Higher awareness about the SMG

revival efforts has attracted investments by two private entities for the development of sustainable homes (not just for the affluent but tapping on inclusivity with affordable homes too) from now till 2030 with an estimated GDV of USD 2.5 billion.

It has also attracted CSR interest for various river-related programs by organisations looking to partnerships on sustainability platforms Lastly, ZPE SMG - the new economic corridor for Selangor that kicked start in 2022, is the end goal that has been achieved through collaborative efforts.

### **FUTURE PLANS**

Covering over 27,000 hectares of land currently ideal or encroached along the river and islands in the Straits of Malacca, SMG has reached a key milestone after 40 months - the 1st river fronting economic development zone in Malaysia called ZPE SMG.





This was approved by the Selangor Government in April 2022, which gives LLSB the mandate to exercise IWRM is necessary and timely, and the entire drive new industries, businesses and other revenue with an estimated investment cost of USD154 million opportunities thus allowing Klang River to become a new economic revenue generator for Selangor. that will also cover relevant remedial construction works and maintenance along 56km of river.

ZPE SMG is the most significant advancement from this project, LLSB will lower the risk of flooding the SMG project with 3 focus areas and touches by increasing river capacity by 40%, improve water most Sustainable Development Goals (SDGs): quality through the enhanced removal of chemical

- Environmental conservation sustainability spills, sewage accumulation, decayed plant life which looks at how we will balance progress with conservation (SDG 3,6,13,14,15)
- Job creation through the pathway of new industries and businesses (SDG 1,8,9) The cascade effects of this will result in a healthier aquatic ecosystem, which leads to a more suitable habitat for riverine vegetation, fish and other wildlife.
- Sustainable living which will see real estate developments that will recognise the need for IWRM will ensure effective and efficient management of all segments of society with a suitable allocation of affordable homes amidst additional raw water for public consumption. the promotion of riverfront living (SDG 2,7,11,12) 2023 and beyond will see ZPE The SMG project is being studied as possible SMG as the key platform of this initiative with models for other rivers in Malaysia and even by Environmental, Social and Governance (ESG) one of our neighbours. We are hopeful of its principles as its north star. potential as a 'Gateway To A Better Tomorrow' and the celebration of two overarching SDGs: 16 (Peace, Justice and Strong Institution) and 17 (Partnerships For The Goals).

One of the most important and immediate undertaking under ZPE SMG is the Klang River Deepening and Widening Project which includes soil reinforcement of riverbanks and construction of bunds that is being activated under the Integrated Water Resources Management (IWRM) in 2022. Klang River. We are making sustainability our business and ensuring that we are impacting change, starting with

Klang River, apart from being subjected to decades of floating debris has also seen massive sediment build-up on its riverbed that has compromised the depth of the river leading to major floodings in the region.

In December 2021, Selangor suffered one of the worst floodings ever due to heavy rainfall for 3 consecutive days that resulted in 25 deaths, thousands of citizens displaced and losses of some USD500 million. The



## McALEER & RUSHE BRENTFORD LOCK PHASE 3

### INTRODUCTION

The Brentford Lock West Phase 3 site is situated in a unique waterside setting beside the Grand Union Canal and Robin Grove Recreational Park. The works involve the construction of a replacement Bus Depot and Site Enabling Works.

The project has encountered various environmental challenges including heavily contaminated land and invasive species. Motivated to drive down carbon emissions and ensure a healthy environment for future generations the team focused on ways to provide environmental enhancements including the betterment of soil to improve the land quality.

The project has been able to achieve several benefits by incorporating environmental best practice, this includes:

- Reduction in the percentage of waste sent to landfill
- Reduction in land pollution by remediating soil and treating 250,000 litres of contaminated groundwater.
- Removal of invasive species including Giant Hogweed and Japanese Knotweed.
- Reduction in traffic congestion, a total of 1860 17T lorry movements saved by re-using and remediating materials on site.
- 105t carbon savings from re-use of materials and reduction in waste disposal transport.
- £500,000 cost savings through eliminating waste transportation costs to landfill facilities and through avoiding hazardous waste landfill taxation.



### IN DETAIL

At the initial stages of the project waste minimisation options and plans were discussed to investigate how the site could best apply the principles of the waste hierarchy.

On discovery of the site being heavily contaminated with an estimated total spill volume of over 1,000,000 litres of diesel the team were given a choice of removing the hazardous spoil and disposing of it as landfill waste.

Aiming to mitigate the project's carbon impact the team considered the environmental benefits of material re-use and recovery. Following consultations with Consultants GEA (Geotechnical and Environmental Associates Ltd) the decision was made to go against the traditional dig and dump method and to bio-remediate and treat the hazardous spoil as this approach offered both economic and environmental benefits.





The team selected an Environmental Champion on site to enable close management of the project's key environmental risks, this was especially important given the sensitive location of the site beside the canal.

This involved liaising with the Ecologists on the removal of the invasive species and Geo-technical Consultants on the remediation strategy to drive protection and enhancement of the natural eco-system.

Through the increased knowledge on environmental matters the team were empowered to promote biodiversity friendly initiatives on-site for operatives and in the community. Through planning with Consultants GEA the team opted to excavate, and bio-remediate the spoil to a betterment standard for re-use.

This process also involved treating 250,000 litres of contaminated groundwater using an activated carbon tank on site reducing pollution pathways to the River Brent which is on a down gradient to the site.





By remediating the soil this extended the programme of works from 12 weeks to over 12 months. Despite the challenges this involved it facilitated environmental benefits. The process eliminated the need for over 520 journeys of 17T lorries to the waste disposal facility (10 miles from site) and the soil being landfilled saving 85 tCO<sub>2</sub>e.

The remediation works cost over £2 million, £500,000 was saved through avoiding hazardous waste landfill disposal tax and the cost of transporting the waste for disposal. The team are delighted with the outcome and delivery of environmental best practice minimising the projects carbon footprint on such a large scale.

Keen to maximise re-use over 11,420 tonnes of demolition crush from existing substructures are being used for the piling mat. This again highlights the environmentally conscious attitude of the team prioritising and applying the waste hierarchy to decisions.

This saved over 1340 journeys of 17T lorries to the waste facility (4 miles from site) and landfilling the waste saving 20 tCO<sub>2</sub>e. Following the Preliminary Ecological Survey, over 357 tonnes of invasive species namely Japanese Knotweed and Giant Hogweed were uncovered at the Robin Grove end of site.

The team brought on board a specialist barging contractor to safely transport and remove the invasive species across the canal rather than through the highly populated residential area. This eliminated the need for 6-wheeler lorries coming through the area over a two week period.

To avoid re-growth and eradicate the invasive species a chemical treatment plan was devised.

The team have also been promoting environmental initiatives through various engagements including:

- Installation of bird boxes and insect/bee friendly planters.





- Creation of an on-site herb/vegetable garden to promote sustainable living practices.
- Donation of a mud kitchen, bird boxes, and planters made from scrap timber to The Brentford Day Nursery allowing them paint and plant a mixture of wildflowers and vegetables.
- Site team completed a 'Paddle and Pick' along the River Brent.
- Numerous trees planted to off-set carbon.

The extensive remediation of the site and removal of invasive species has offered impactful benefits not only to the environment but also to the community of Brentford. This initiative has resulted in an improvement to land quality, offered protection from pollution to the River Brent through remediation of 250,000 litres of groundwater and delivered 105tCO<sub>2</sub>e savings from treating 4410 tonnes of hazardous soil and re-using 11,420 tonnes of demolition crush.

By fervently advocating sustainability and delivery of best practice this has created greater opportunities for biodiversity enhancements leading to an array of long-lasting benefits to the community helping to

promote regeneration and restoration of the land.

The lessons learned have been transferred to many other projects and will hopefully inspire more focus on responsible soil management and soil creation in the future.





## OCTOPUS ENERGY

### ZERO BILLS, ZERO WORRIES: MAKING 'ZERO BILLS' HOMES THE NEW NORMAL

#### INTRODUCTION

Unlocking zero-carbon, 'Zero Bills' futures  
Octopus Energy launched in 2016 to deliver fairer, cheaper and greener energy through the power of technology.

We've been relentless on our mission to target the biggest carbon culprits and drive the green energy revolution to bring down costs for our customers.

In 2022, we trialled the UK's first mainstream zero-carbon, 'Zero Bills' energy efficient housing solution to make it possible to give up energy bills – and carbon emissions – altogether by kitting out new homes with the right combination of green energy technology.

Recognising cost barriers of building zero-carbon homes - an additional £10k-£20k for a typical build and even more for retrofits - our sustainable development project aimed to:

- Innovate a 'Zero Bills' technology bundle and support package optimising domestic low carbon technology kit
- including air-source heat pumps, roof-top solar panels and storage batteries
- and underwrite it with a zero energy bill for a minimum term of 5 years.
- Invest in like-minded partnerships to deliver thousands of operational zero-carbon homes per year for major housing developers, housing associations, and councils across the UK and pioneer

'Zero Bills' homes as the new standard.

- Inspire an entire housing sector to engage with our nationwide 'Zero Bills' accreditation programme. Delivering unrivalled social, environmental and economic benefits. Such is the magic of renewable energy: once the infrastructure is paid for, clean energy is abundant and completely cost-free.

Our 'Zero Bills' proposition has proved the concept of eliminating outdated carbon-emitting energy systems to bring down costly bills, all while paving the way for future scale-up:

- On target to complete 10,000 UK 'Zero Bills' homes by 2025
- Dozens of homes built with our 'Zero Bills' tech and occupied by March 2023
- 80+ partnerships underway including GS8 and Verto
- 600+ homes accredited, 1200 assessments complete. No energy supplier has attempted a project of this kind and scale in the race to Net Zero, and all from a standing start according to Alistair Wardell, Investment Director of 'Zero Bills' partner Gresham House:







“An innovative and much-needed solution to the historic undersupply of shared ownership housing.”

Fraser, ‘Zero Bills’ resident: “We’ve always been conscious of wasted power, so ‘Zero Bills’ was just so attractive. It gives you stability. You can plan. You don’t need to worry about big, big bills in the winter. You’re helping yourself, you’re helping the planet, and you’re cutting down CO2. It’s a win-win, all round.”

### IN DETAIL

Making ‘Zero Bills’ homes the new standard In 2022, we recognised the urgent need to help struggling customers through the cost-of-living crisis, satisfy the growing demand for heat pump and solar panel technology and support developers to meet government Net Zero targets and building regulations.

At the time, the UK housing stock ranked the worst in Europe for energy efficiency with domestic heating responsible for 31% of a home’s carbon footprint and 14% of the UK’s total carbon emissions. By partnering with developers, housing associations,

and local authorities across the country and taking on the 200,000 newbuild homes built every year in the UK, we could offer customers ‘Zero Bills’: a first-of-its-kind energy tariff providing zero bills for at least five years, guaranteed, and give customers one less thing to worry about.

Our aim: for every newbuild in the UK to embed our zero-carbon, ‘Zero Bills’ specification. We were confident that as zero-carbon technology became cheaper and more accessible, ‘Zero Bills’ would showcase a feasible and effective financial solution to policymakers and developers - changing the way we live and making Net Zero a universal reality.

Piloting world-first sustainable development concept With no time to lose, we quickly identified obstacles delaying roll-out of low-carbon technology homes, for example, the cost of embedding low-carbon technologies within shared ownership and affordable housing developments.

Next, we secured funding from sustainable investment-focused asset manager, Gresham House, to trial the first 2 of 22 ‘Zero Bills’ homes in Stanford-le-Hope, Essex with the first two tenants moving in by March 2023.

Following the success of the pilot, we invited all UK developers across factory built/modular housing, housing associations/registered providers, shared ownership and social rent, and volume housebuilders, to bid to deliver 10,000 'Zero Bills' homes by 2025.

Award-winning sustainable housebuilder Verto will deliver a total of 70 homes across two sites in Cornwall and Exeter, meanwhile developer GS8:

- Kitted out 8 carbon negative, zero waste properties with solar panels, a home battery, and an air-source heat pump
- optimised by our proprietary cloud-based platform, Kraken.
- Tracked energy and cost savings from pilot homes, and leveraged stakeholder feedback to enhance end-user experience.
- Set a 'Fair Use' allowance around twice the expected usage to ensure maximum comfort, with minimal lifestyle changes. £0.00 energy bills showed exactly how much energy is imported and exported to engage customers with sustainable energy use.
- Applied the UK Green Building Council's framework to forecast an annual operational carbon footprint of negative 10 tonnes CO<sub>2</sub>e/year, without the need to offset.

Groundbreaking innovation solution 'Zero Bills' has addressed the cost barriers of building zero-carbon homes by harnessing partnerships, advancements in flexibility and a mix of energy efficient technologies to benefit buyers, renters and developers of all sizes and types:

- Combining low-carbon air source heat pumps, solar panels and storage batteries to provide cheap, clean energy 24/7 and allow residents to use power from their solar panels on sunny days. Battery technology stores excess

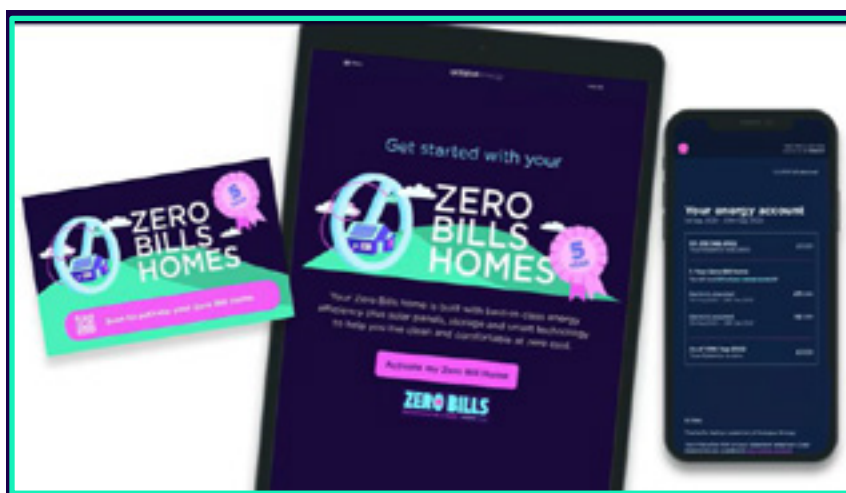
green electricity for later use and offsets the cost of energy imported from the grid when it's cloudy.

- Proprietary, flexible, cloud-based platform, Kraken, helps the system work perfectly by seamlessly importing energy at cheapest, greenest times and exporting energy at dirtiest, most expensive times in exchange for a bespoke 'Zero Bills' smart tariff and guaranteed free energy bills year round.
- -AI, robotics, and digital design enable a 'fabric-first' approach - maximising the energy efficiency of a property right from conception - and high-precision engineering that cuts energy waste by 90%, saves residents 50% energy and outperforms current building practices by around 20%, at no additional build cost.

### From 'Zero' to hero in just one year

The following achievements demonstrate the rapid progress of 'Zero Bills' in just one year. Pipeline plans are set to accelerate phenomenal scale-up and universal replication to benefit communities across the world:

- Dozens of 'Zero Bills' homes already built and kitted with our first-of-its-kind 'Zero Bills' tech spec with first tenants moved in March 2023 -600+ 'Zero Bills' homes accredited to date through contracts with prominent developers including GS8 and Verto among others -80+



further developers have begun the partnership process with Octopus, submitting 1200+ homes for assessment across the UK

- Plans to deliver 10,000 'Zero Bills' homes in the UK and beyond by 2025
- Positive media coverage in top titles
- Driving further positive change, we're actively speaking with banks to unlock discounted funds for zero emissions developers and accessible mortgages that take into account our 'Zero Bills' gains when calculating prospective homeowners' ability to pay.

### Environmental and sustainability benefits

Every Zero Bills home is built with sustainability and environmental benefits in mind. For one development we've achieved measurable environmental improvements:

- **CARBON NEGATIVE:** sequestering more carbon than we create Using UKGBC's reporting methodology, we anticipated an annual operational carbon footprint of negative 10 tonnes CO<sub>2</sub>e/year, without the need to offset
- **ZERO WASTE:** re-using 100% of non-contaminated materials through deconstruction Converting waste stream into building materials and reducing offcuts to

near-zero by allowing materials to drive design rather than the other way round, we could audit, deconstruct and repurpose 8 existing buildings into finished buildings

- **ENERGY POSITIVE:** generating more energy through on-site renewables than the development consumes per annum The development achieved an 'as-designed' energy intensity of 41 kwh/m<sup>2</sup>/year, with expectation to improve when 'as built' model completed, with solar photovoltaic panels (PVs) expected to provide 60 kwh/m<sup>2</sup>/year.

Ben Spencer, co-founder of developer-partner GS8, heralds 'Zero Bills' as "a major breakthrough in sustainable housing and we're proud to be at the forefront of this movement"

Greg Jackson, Octopus Energy Founder explains how our groundbreaking 'Zero Bills' innovation ticks social, environmental, sustainable and economical boxes, "Zero Bills is debunking a long-standing myth – that cleaner energy will mean higher bills for consumers. Instead, people living in these homes won't be paying for energy at all. This is yet another demonstration that clean energy is cheap energy, and the best answer to the fossil fuel crisis is accelerating the transition to renewables."

### RAPID PROGRESS IN ALL AREAS

The following achievements demonstrate the phenomenal progress of 'Zero Bills' in just one year - from a standing start.

Targeting  
**10,000**  
'Zero Bills'  
homes

In UK & Europe  
by 2025

Accredited  
**500+**  
'Zero Bills'  
homes

Via contracts with  
**G8** and **Verto**  
and others

Pipeline of  
**80+**  
developer  
partnerships

With **1200+** homes  
under assessment



## ORANO MINING FRANCE IRHAZER PROJECT

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### INTRODUCTION

Located in the Agadez region in northern Niger, the Irhazer project promotes modern, efficient and sustainable agriculture. Implemented in 2012 and financed by the State of Niger and Orano Mining, the project takes part in the “Nigeriens feed Nigeriens” initiative addressing the goal of achieving Zero Hunger by 2035.

The Irhazer project’s main goal is to support the populations of this desert area, in terms of food, nutrition and access to water. The project also sponsors resilient agriculture practices to fight against global warming effects.

The project area extends over 750 ha of land which will be enhanced by developing adapted irrigated agriculture and livestock farming. Skills of local producers and cooperatives are also enforced to enable independent and profitable management of crop and livestock sites.

In addition, the project contributes to the stability of the region, encourages its economic and social development and sponsors biodiversity preservation.

With the creation of direct and indirect jobs, more than 35,000 people and 5000 households will ultimately benefit from this project.

Currently 15487 people are benefiting from it and 780 jobs have been created. Orano is the main funder of the Irhazer project, contributing €17.4 million to its implementation. The Irhazer project is part of a long-term social strategy with its partners

and designed to support the communities living close to its activities. It is one of the Group’s largest international social investments.

Irhazer is the only project of this type in Niger. Combining the use of Solar energy, the cultivation of water-saving plants and sustainable practices for desert zones, it is a model project, recognized by the population and the authorities. Its end is planned for 2024.

### IN DETAIL

The Tamesna and Irhazer plains are located in the North of Niger. They represent 25% of the irrigable land potential of the country. Since the 1970s, many initiatives have been launched to enhance these desert lands without success. In 2006,

The FAO report indicated that 2 million people in pastoral areas suffer from food insecurity and water deficit due to global warming.

In 2012, after a feasibility study, Orano decided in partnership with the Niger Government to finance



an economic development project. Based on sustainable practices, this new project called Irhazer, will guarantee water access and nutritional security for local people.

1000 ha of land will be valorized by developing resource-efficient and environmentally friendly farming practices. As a responsible miner and in accordance with its Corporate Social Policy, Orano Mining is funding this major project to strengthen the economic fabric of the region.

It will develop modern and sustainable agriculture and increase the well-being of the communities living close to its mining site.

**Governance** The governance involves all stakeholders of the project. It is a multi-party governance, ensured by 3 decision-making bodies :

- The Steering Committee supervises the project. It is composed of national and local authorities, members of Orano, representatives of civil society and producers.
- The Technical orientation committee which validates the technical choices
- The Coordination unit is in charge of the project.

To ensure effective follow-up of the project, the program has been divided in 4 components dedicated to managing expenditures for: community irrigation, private irrigation, livestock farming and product conservation. At the end of the year, all community irrigation plots will be transferred and managed by the National Office for Hydro-Agricultural Developments (ONAHA, state of Niger). In parallel, private irrigation will be reinforced to make producers autonomous, with a complete value chain for agro-pastoral products deployed.

### **-The project**

The implementation of the project was in 4 steps. From 2013-2015, product models and materials were tested to choose the best method.

Supported by Orano experts in hydrogeology, specific water infrastructures adapted to the terrain were implemented. The Minister of Agriculture also subsidized botanist and biologist experts to train producers on new culture types such as alfalfa or wheat.

Since 2015, 6 community irrigation plots were developed. In 2018, small and big private irrigation areas were launched. Livestock farming was sponsored. In 2019, the surface to be developed was reduced.

Only 750ha will be exploited in order to optimize productivity and promote the development of private irrigation. So there will be:

- 164.5 ha dedicated to community irrigation
  - 570 ha valorized for private irrigation (70 ha for large and 500 ha for small private irrigation)
- This year, 20 small private irrigation plots will be deployed in another zone to extend the



project. The innovative nature of the project and its success are related to technological choices and to the social approach :

- Introduction of crops such as alfalfa to reduce fodder deficits and water consumption
- Creation of modern livestock watering points guaranteeing a constant supply
- Use of sustainable energy through solar pumping systems on all community and private sites
- Promotion of local agro-pastoral products
- Development of permaculture gardens
- Support for inclusion of women through the creation of income-generating activities
- Creation of sedentary jobs and settled populations.
- Establishment of autonomous and profitable agro-pastoral sites -Budget Orano is contributing €17.4 million for project implementation.

Annual budget of approximately €1.5 million, with €11.3 million invested to date. The end of the project is expected for 2024. €6 million will be spent in the next two years to finish the project.

### **-Results/Impacts**

The impact of the project is economic, social and environmental. Socially, the Irhazer project includes the creation of hundreds of jobs, both direct and indirect.

More than 35,000 people and 5000 households will ultimately benefit from this project. 10 municipalities of the Agadez region are concerned by this project whose main beneficiaries are producers, surrounding populations, nomads, local service providers and women's organizations. The increase in the income of producers (including women) has improved access to healthcare and the wellbeing of the population.

At the same time, Irhazer by - contributing to modernizing water access - makes it possible to reduce children's water chores. It strengthens

access to education and promotes literacy among young girls. In terms of production, since 2016 the project has produced, each year, more than 200 tons of alfalfa hay and 350 tons of food products (including wheat in 2021).

The crops increase land utilization capacity by a factor around 1.5 for small irrigators. From the private irrigation point of view, 231 producers have been trained and are in operation, including women and young people.

79 farmers developed 200 ha allowing 9149 persons or 1307 households to benefit from the products to date. 52% of the surface area has been developed to date. Irhazer also promotes livestock hydraulics through 6 solar-powered livestock pumping stations and 41 water wells. 2145 households are directly impacted in surrounding camps and 73,000 animals requiring daily water. The project supports breeding by vaccinating.

More than 45,000 animals have been vaccinated each year since 2017 i.e. 261,956 by the end of 2021. Three livestock feed banks and one poultry farm have also been created. The sale of crops and livestock products is facilitated by five comptoirs or trading posts set up for this purpose.

In terms of environmental impact, the introduction of solar technology reduced CO2 emissions into the air by 75%, compared with traditional agriculture. Farmers and producers are accompanied by botanists and trained in permaculture.

Water management training is also provided to raise awareness about issues of water stress and resource preservation. The project also contributes to preserving biodiversity through by virtuous agricultural practices and protecting natural habitats (fauna and flora).

### **-Feedback**

The project has highlighted the importance of water management which was also a major challenge.



Good water management brings regular and balanced growth, labor savings as well as regular yields and production over time.

Market garden wells will be replaced by drilling to secure water supply and make it available all year round. A third-party organization will also manage water supply and maintain infrastructure. With this feedback, extensions of the project will be focused on private rather than community irrigation.

Without a community management body, producers are more involved in the project and more empowered. -Outlook To continue moving forward and to develop the concept, the steering committee decided in 2022 to extend a pilot to the city of Arlit. Located on the Nord of project perimeter, this pilot will concern 20 new operators, with the installation of a solar field, a greenhouse and a drip irrigation system to manage water supply.

Water management will be provided by a third-party organization and each operator will pay a fee used for infrastructure and network maintenance. A meter

will be installed on each plot, to adjust water use and limit wastage.

Another orientation of the project will be the establishment of income-generating activities for women's cooperatives and the creation of small processing/conservation units for agro-pastoral products.

The Irhazer project is seen as a model by local and regional elected officials. This is the only project of this type in Niger, remarkable in terms of results, management and longevity. People want this project to be sustained over time.

The future of the project will depend on synergies found with new economical reconversion projects in the Agadez Region.

At this stage, the project coordinator estimated 5 more years to continue to develop the project and allow the entire market gardening community in the region to benefit from project outcomes in terms of water management and responsible practices.



## PEARTREE CLEANING SERVICES LIMITED

### PEARTREE, PEOPLE, PLANET

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#### INTRODUCTION

Project aim Peartree, People, Planet encompasses who we are and how we operate. By including the 'planet' throughout our core messaging we reaffirm our commitment to sustainability and hold ourselves accountable.

Our 'planet' project involves sourcing innovative solutions to make a positive impact on the environment; training all members of staff so that they understand their responsibilities; collaborating with leading environmental organisations to continually improve; and working with clients and suppliers to achieve shared goals.

As a family business, we want to leave a positive legacy for future generations and are proud to prioritise the environment across our decision-making and operational activities. Over the last year, we have focussed on pollution and emission reduction in particular.

Historically, the cleaning industry is very wasteful, and we have made it our mission to change our workflows to minimise pollution. Project achievements We have made significant progress as part of our 'planet' project and look forward to building upon this progress to continuously improve. Joining The Green Organisation and Net Carbon Zero has helped us to learn from industry experts and streamline our process.



By undertaking audits of where we are, we gained a broader understanding of our key areas for improvement and worked with experts to develop measurable targets. We are pleased to report that our carbon emissions have decreased year on year - 32.1% absolute carbon reduction in the last year (as assessed by Planet Mark) and we are on track to be carbon neutral in 2050.

Initiatives such as electrifying our fleet, carbon offsetting through tree planting, and sourcing new innovations has helped make tangible difference across all of our sites.

For example, switching to SoluDose cleaning sachets has reduced our plastic consumption by 88% and a 75% saving on average CO2 emissions and transportation costs.

### IN DETAIL

Our planet project aims to deliver a sustainable cleaning solution which optimises staff and client benefits. It focuses on several key areas, including carbon emissions, pollution reduction and social value.

We appreciate that the choices we make today will have an impact on tomorrow and are working tirelessly to ensure that the needs of future generations are not only met but exceeded. In-house innovations As a national operation, we work with over 200 clients across the UK to deliver cleaning services. With environmentalism in mind, we developed an in-house account management platform, Peartree 360, to offer visibility regarding sustainability and encourage collaboration.

This is an excellent tool which helps us to reflect on our projects and work collaboratively with our clients



to make improvements and promote best practice.

Each month are clients are presented with the following data:

- The number of trees planted via our clients Metsa paper pulp consumption
- The number of single use bottles saved from being used
- The number of Fare Share meals donated
- Our cleaning staff salary, which will be the Citizens Living Wage or higher

This data is refreshed monthly, and clients can view both monthly and annual reports regarding environmental data. This has led to collaborative working practices with clients, for example, a large client has worked with us to improve their recycling rate to over 90%.

This significant achievement is thanks to investment in sustainability and collaboration to reach shared goals. We are also in the process of electrifying our fleet, this will mean that our team there will be no transport emissions associated with our fleet.

Currently, 90% of our fleet is fully-electric and we are on-track to have a fully-electric fleet by the end of 2023.





### Working with suppliers

We understand that the most significant progress happens when we work with others as a team.

In our industry, we work closely with manufacturers and our supply chain to undertake our daily operational tasks. As we committed to working more sustainably, we knew that our manufacturers and suppliers needed to join us on this journey.

By having open discussions and being clear about our expectations regarding sustainability, we were able to work collaboratively to source the best-in-class sustainable products and innovations to help our clients.

This has led to improvements for our clients, the environment and all 18 of our suppliers accelerating their own Carbon Net Zero journeys. This has helped us to source innovative products including SoluDose, which has led to a significant reduction in plastic wastage and emissions across our sites.

SoluDose is a cleaning product which offers accurate dilution, convenient storage, cost-effectiveness, enhanced safety, and versatility.

SoluDose sachets replace cleaning spray bottles; by mixing the sachets with water in a reusable spray bottle, we have reduced our plastic consumption by 88% whilst maintaining the same high level of cleaning.

The sachets' sustainable design, with reduced plastic packaging and complete water solubility, aligns with our environmental goals.

### Working with clients

Our passionate team members are always on the look out to deliver project-specific

innovations; this has led to some key successes, allowing us and our clients to become more sustainable.

For example, our account manager at a high-profile site drove an initiative to transform an unused area into a Woodland Walk. Set in a rural locality, our client manages an area of land which included a pathway that had become inhospitable.

With unsafe gym equipment, hogweed and an insecure path, the space was closed. Whilst working on-site, our account manager suggested to the client that this land would be best optimised as a green space available for staff. Opening this space would lead to significant ecological and employee benefits, as the space would be maintained and staff would benefit from a private outside area for exercise, walks and meetings.

Our client loved this idea, and our account manager worked collaboratively with the client to deliver this as a cost-efficient, timely project. Whilst working on this project, we were sensitive to the ecology of the space, and ensured that all materials used benefitted the site and that wildlife was managed correctly.

For example, rare orchid species grow by the brook. We ensured that the orchids were untouched and able to thrive in their environment. This space was safe to open in 2022, allowing employees to reconnect with nature. The client was so pleased with this that they are planning to build upon this project and create a larger, more accessible space.

### Accreditations

We are proud to work with some of the most prominent environmental programmes and initiatives, including Cool Earth, the Woodland Trust and Terra Carta. We are also accredited by EcoVadis (Silver rating) and Planet Mark.

Our partnerships with these organisations have led to:

- A carbon footprint reduction

- The protection of an acre of rainforest from deforestation
- 20 planted trees being dedicated to Peartree Cleaning and our clients

We are pleased to have recently become a Green Organisation Bronze member, benefitting from 100 trees being planted.

### Finances

As a financially independent company, with no borrowings or investors, all our environmental initiatives are funded in-house demonstrating our commitment to progress.

The EcoVadis logo, featuring the word "ecovadis" in a lowercase, sans-serif font. The "e" and "v" are green, while the rest of the letters are grey.

## PEARTREE CLEANING SERVICES LTD

has been awarded a

**Silver medal**

as a recognition of their EcoVadis Rating

- JULY 2022 -



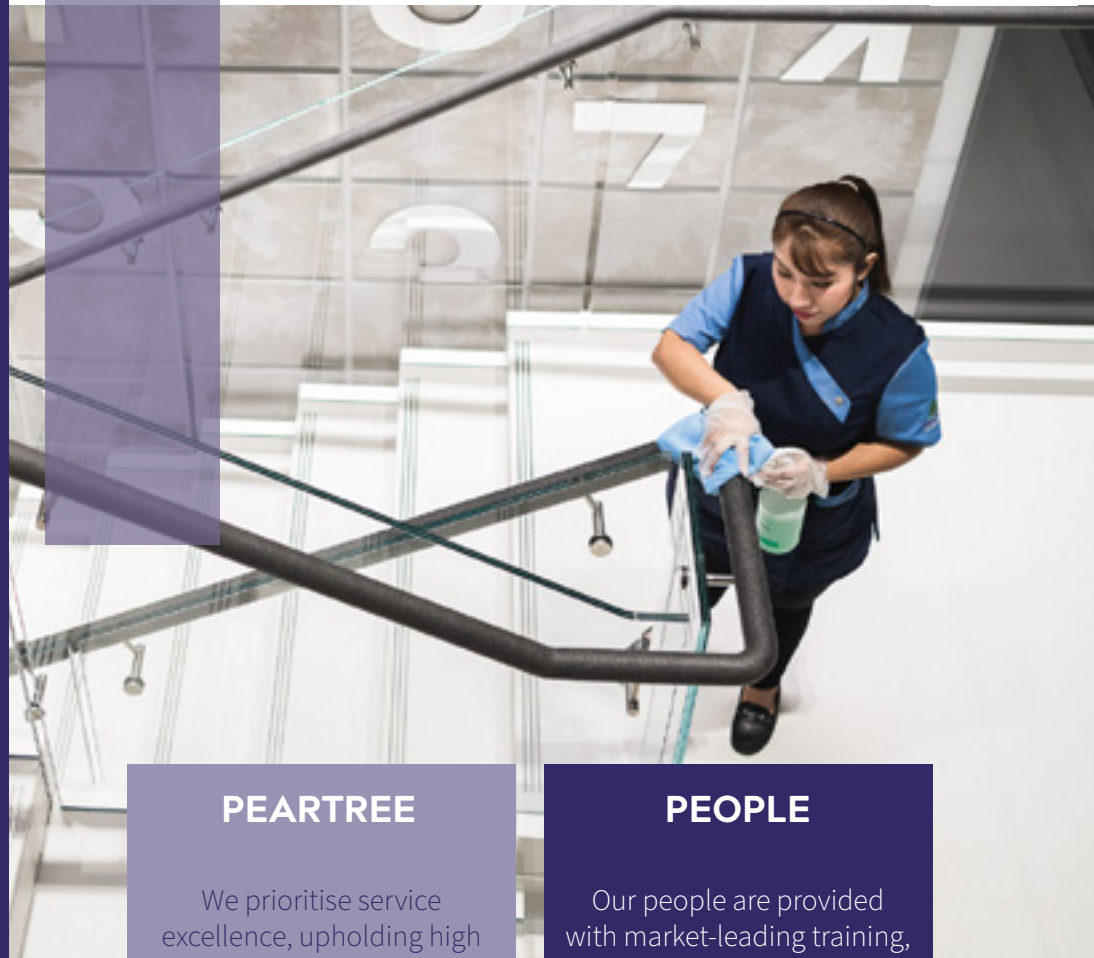
You are receiving this score/medal based on the disclosed information and news resources available to EcoVadis at the time of assessment. Should any information or circumstances change materially during the period of the scorecard/medal validity, EcoVadis reserves the right to place the business' scorecard/medal on hold and, if considered appropriate, to re-assess and possibly issue a revised scorecard/medal.

**Valid until: July 2023**

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# PEARTREE PEOPLE PLANET

Align your cleaning solution to your sustainable values with Peartree.



## PEARTREE

We prioritise service excellence, upholding high standards to welcome colleagues and visitors into clean, hygienic spaces. Our in-house app offers real-time service tracking and enhanced customer support.

## PEOPLE

Our people are provided with market-leading training, fair pay, benefits and career development opportunities. Through empowering our people, we have created a culture which champions the best outcomes for our clients.

## PLANET

As sustainability award winners we're your trusted partner to achieve your ESG goals, whether it's reporting on your Scope 3 emissions or embarking on Science Based Targets. Peartree are leaders in providing cleaning in the most environmentally friendly way.

## CONTACT

If you would like to learn more about how we can improve your cleaning solutions, please get in touch via the below:

Tel: 03316 300 904

Email: [sales@peartreecleaning.co.uk](mailto:sales@peartreecleaning.co.uk)

OFFICE CLEANING

HOUSEKEEPING

CARPET CLEANING

WINDOW CLEANING

WASTE MANAGEMENT

WASHROOM & HYGIENE SUPPLIES

IT CLEANING

PEST CONTROL

RETAIL CLEANING

PLANTS & LANDSCAPING

STONE, MARBLE & TERAZZO CLEANING

SPECIALIST PERIODICS



## PT PERTAMINA GAS OPERATION WEST JAVA AREA PERISAI BUMI (Earth Shield), COLLABORATION TO PROTECT COASTAL AREA FROM COASTAL EROSION

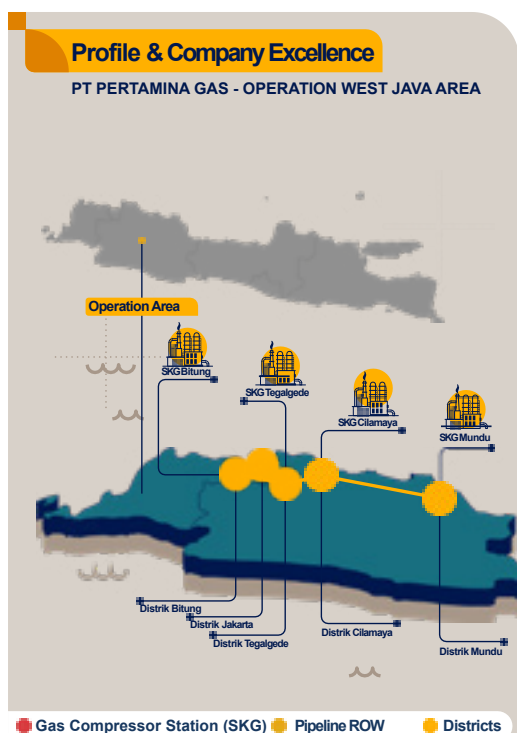
### INTRODUCTION

Perisai Bumi or Earth Shield is an collaboration project to protect coastal area from coastal erosion. According to data from The National Agency for Disaster Countermeasure from Indonesia, abbreviated as BNPB, Juntinyuat village is one of the most higher vulnerabilities to coastal abrasion in Indamayu. In Juntinyuat, 6.8 hectares of the beach have eroded out of 14.2 hectares. Through the Geotextiles as innovation, the company protects gas pipe from free span can cause of distribution failure and explosion, moreover protects 23 hectares of local agricultural. through the Perisai Bumi Program, we promote social empowerment by developing Educational Tourism with the theme of abrasion disasters.

Edu-Tourism aims to disseminate more information about abrasion disaster management and raise public awareness of the importance of coastal environmental preservation. We assisted economic recovery during the COVID-19 crisis by empowering local communities and former immigrant workers at Shields.

Through various activities, we have attempted to contribute to Sustainable Development Goal 15, 'life on land.' Our goal with the Perisai Bumi program is to protect not only one of our company's assets from beach abrasion but also more than 23 hectares of rice fields, which provide a primary source of income for more than 110 farmers in our gas pipeline area.





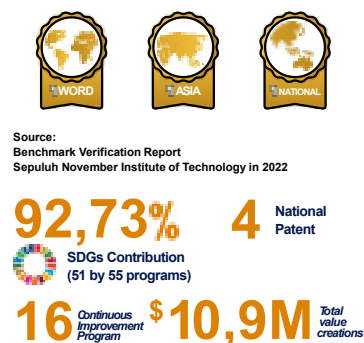
### Vision

To be the best gas distribution company committed to environmental preservation and sustainable development for the community around the company.

### Best Practices & Awards OWJA



### Benchmarking Reduction of Non-B3 Waste



**522** Kilometers  
Transmission Gas Pipeline from Banten – DKI Jakarta – West Java

**255** MMSCFD  
Distribution of Natural Gas Energy

**35.8** MMSCFD  
Compressed Natural Gas Distribution

Furthermore, we expect to raise public awareness about conserving coastal areas by protecting mangrove forests from abrasion. To assess the environmental, social, economic, and corporate impacts of Shielding the Earth.

We employ the SROI (Social Return on Investment) method, SDGs, and biodiversity assessments. The SROI of the Perisai Bumi was calculated to be 19:1 mean that that Rp19 (0.0010GBP) of social value is created from an investment of Rp1 (0.00053GBP). The Perisai Bumi actively contributes to SDG 15 (Life on Land) and SDG 8 (Decent Work and Economic Growth) for the SDGs. Finally, the Perisai Bumi's reduces coastal degradation, and the Shannon-Weiner Species, Diversity Index value, is 1.65H'.

### IN DETAIL

Indonesia is an archipelagic country with an 81,000-kilometer coastline, but 40% of it has been damaged by abrasion. Many people had their homes, livelihoods, and surroundings destroyed. Indramayu Coastal Area which is dominated by

a large wave threat risk index and high abrasion (BNPB, 2018). Geotextiles, as an innovation, can be used to protect coastal areas from abrasion and can be implemented in other Indramayu and other coastal regions of Indonesia.

Likewise, developing an Edutourism site managed by the local community and former migrant workers is a form of social empowerment with environmental, social, and economic benefits.

PT Pertamina Gas Operation West Java Area is one of the operational areas of PT Pertamina Gas located in the West Java Province of Indonesia. PT Pertamina Gas Operation West Java Area, as apart of PT Pertamina Gas, have the vision to become the best gas distribution company committed to environmental preservation and sustainable development for the communities around the company.

The main business activity is to manage a 522 km gas transmission pipeline from Banten to Cirebon. We also support Indonesia's Renewable Energy

Transition by distributing Compressed Natural Gas as much as 71.4 MMCF/year. We also contributed to SDG's achievement through several business activities and from Corporate Social Responsibility program.

As our vision is to commit to environmental preservation and sustainable development for the communities around the company, PT Pertamina Gas OWJA is answering one of the current and future needs of the Juntinyuat Village from coastal erosion or abrasion.

### BACKGROUND

1. Juntinyuat Village is one of the most vulnerable to coastal erosion in Indramayu, according to data from the National Disaster Management Agency (BNPB).
2. According to the Ministry of Fisheries and Maritime Affairs data, 6,8 km of 15,5 coastal area in Juntinyuat has been eroded by abrasion.
3. More than 100 rice farmers and young people who work near coastal areas threatened to lose their livelihoods.

4. Wave and coastal erosion damage tourism places and mangroves.
5. Eighty meters of gas pipe free span.

### OBJECTIVES

There is a collective awareness of living in disaster-prone areas and the potential for other livelihoods besides the agricultural sector.

There is a more structured mitigation mechanism and prepare a draft action plan for disaster risk reduction in the tourism area of Rembat Beach.

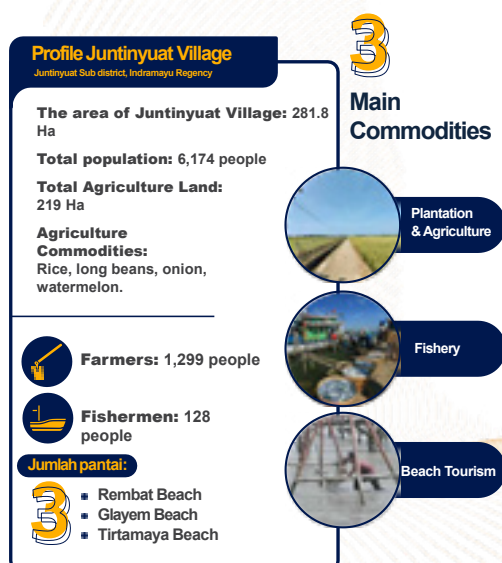
Protected existing sources of income for the Juntinyuat community; agriculture and tourism.

Preserving the coastal area of Rembat Beach.

There is a learning platform for emergency response and abrasion preparedness for the people of Indramayu.

The emergence of new sources of income for Juntinyuat residents.

### The Background of Perisai Bumi



### Main Problem

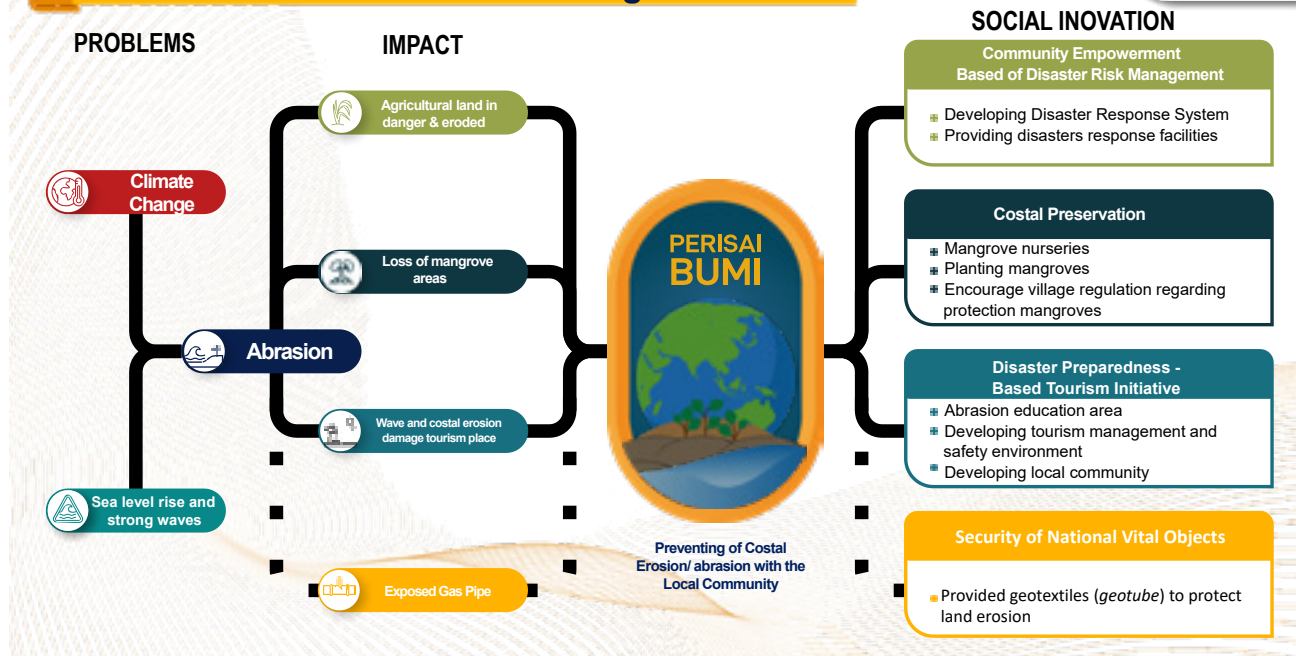


### 6 Impact of Abrasion





### Problems Outline and The Strategies



### STRATEGIES

According to the 5 stages of disaster management cycle;

1. Prevention; identifying potential hazards and devising safeguards to mitigate their impact
2. Mitigation: minimize the loss of human life that would result from a disaster.
3. Preparedness; individuals, communities, businesses and organizations can plan and train for what they will do in the event of a disaster.
4. Response; to help restore personal and environmental safety, as well as to minimize the risk of any additional property damage.
5. Recovery; stabilizing the area and restoring all essential community functions.

### PROGRAM DESCRIPTION

First, the basic data of the area vulnerability area from Juntinyuat is based on National Disaster Management Agency (BNPB) as a prevention activity from local institutions.

Community Empowerment Based on Disaster Risk Management: educate people about the risk of abrasion, improve the capacity of community groups in disaster management, and also develop a disaster mitigation system with National Disaster Management Agency (BNPB) Indramayu and Bandung Search and Rescue (SAR) Oöce for disaster management training and search & rescue activities. This activity also covered the preparedness stage of the disaster management cycle.

Coastal Conservation: planted more than 1.850 mangroves and another coastal tree to protect the coastal area and the rice field. Also, encourage Juntinyuat authorities to set up regulations to protect nature conservation. This activity refers to mitigation from the disaster management cycle and is also one of our activities to recover areas after coastal erosion in 2020.

Disaster Preparedness-based Tourism Pilot Project: providing knowledge and understanding of tourist culture that is alert and adaptive to the threat of disaster, reduces vulnerability and increases the

### PERISAI BUMI

Disaster preparedness-based  
tourism pilot project



#### Innovation

Disaster preparedness-based tourism pilot project as a learning platform for coastal ecosystems for the community.

Tourism Awareness Group members as agents of managing disaster management and maintain lifeguard facilities and infrastructure.

Rembat beach tourism management group and mangrove farmers group become disaster management stakeholders collaborate on sustainable project



#### Beach Tourism Business Management



#### Outcome & Impact



**57 people**  
Labor absorption



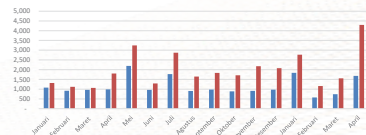
**1** Transportation engineering  
Public Shuttle



**100%**  
Increased education-tourism revenues



**Rp21.375.000**  
Increased revenue from coastal conservation and edu-tourism collaboration per month



capacity of tourists both individually, households and communities in dealing with disasters, and prepare a draft action plan for disaster risk reduction in the tourism area of Rembat beach. This activity refers to preparedness activity from the disaster management cycle.

**Build Disaster Management Facility:** Geotube or geotextile is one of Pertamina Gas Operation West Java Area innovations that was implemented in Indramayu Regency to protect coastal erosion, which was accomplished by obtaining a patent number license from the Indonesian Patent Agency: IDS000004664. With the geotube, 23 ha of agricultural land as a primary resource of the local community is protected. This activity refers to the response from the disaster management cycle after the tragedy in 2020.

The actual results that the community has felt are the protection of 23 hectares of rice fields, which

are the primary source of income for 110 farmers, and the protection of one year's income from the areas of \$25,476. Moreover, 5,963 Juntinyuat Village residents were spared the risk of a gas pipe explosion due to free span due to abrasion and the company's efficiency costs in maintaining the pipeline, worth \$462,097.41.

To assess the environmental, social, economic, and corporate impacts of Shielding the Earth. We employ the SROI (Social Return on Investment) method, SDGs, and biodiversity assessments. The SROI of the Perisai Bumi was calculated to be 19:1, which means that an investment of IDR 1 (\$0.0001) generates a social value of IDR 19 (\$0.00126). The Perisai Bumi actively contributes to SDG 15 (Life on Land) and SDG 8 (Decent Work and Economic Growth) for the SDGs. Finally, the Perisai Bumi's reduces coastal degradation, and the Shannon-Weiner Species, Diversity Index value, is 1.65H'.

## PT TIMAH Tbk

### THALIA ISLAND

#### INTRODUCTION

Climate change as a global phenomenon is a reality that cannot be avoided, including in Indonesia. The impact of climate change significantly affects the lives of people on small islands. This is because people on small islands are very dependent on climatic conditions such as weather, wind, and water conditions, such as wave height, one of which is Setunak Island. Setunak Island is a small island starting to feel the impact of the climate change disaster, which can be seen from the uncertainty of the weather, which causes obstacles for Setunak Island fishermen to go to sea.

This condition impacts the community's socio-economic vulnerability because their primary income as fishermen is not optimal. On the other hand, meeting the necessities of life from other potential resources such as agriculture does not support conventional agricultural management due to a lack of nutrients and high salinity.

The people of Setunak Island also still manage waste by burning it or stockpiling it in their yards. This causes environmental hygiene and health on Setunak Island to become less suitable. This project has been ongoing since 2020 and aims to increase the capacity of the people of Setunak Island to mitigate and adapt to climate change for a sustainable life.

This program consists of efforts to provide an alternative income for fishermen through crab cultivation using the silvofishery technique, increasing community awareness of mangroves, increasing household food security through hydroponics, and better household waste management.

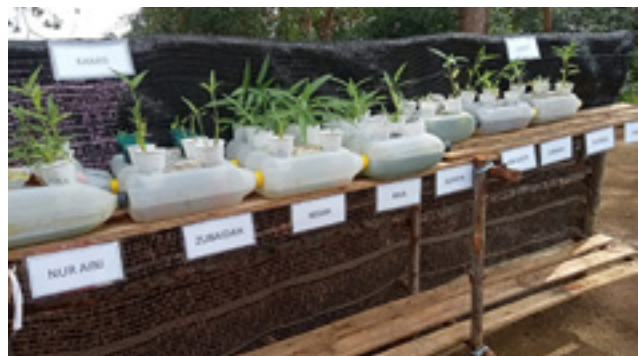
Further development of this “Thalia Island” project is planned. Thalia in bahasa is an abbreviation of Tahan Iklim Berkelanjutan, which means Sustainability Climateproof.

#### IN DETAIL

##### A. Problem Formulation and Project Objectives

Climate change as a global phenomenon is a reality that cannot be avoided, including in Indonesia. According to Indrawasih (2012), the impacts of climate change include causing sea level rise, widespread coral bleaching, and a decline in coastal ecosystems, especially mangrove forests and coral reefs (Indrawasih, 2012).

The result of climate change significantly affects the lives of people on small islands. That is because people on small islands depend on climatic conditions such as weather, wind, and water conditions such as wave height.







Administratively, Setunak Island belongs to the Bone Village area, Gelam Strait District, Karimun Regency, a small island starting to feel the impact of the climate change disaster. That can be seen from the uncertainty of the weather, which causes obstacles for Setunak Island fishermen. Based on data from the Journal of Meteorology Climatology and Geophysics Vol. 3 No. 2 of 2016, the highest average sea waves in the waters of the Riau Archipelago reached 5 m in October.

This condition impacts the community's socio-economic vulnerability because their primary income as fishermen is not optimal.

Uncertainty of income from fishing due to weather anomalies due to climate change causes the community's ability to meet their daily needs to decrease. On the other hand, meeting the necessities of life from other potential resources such as agriculture and animal husbandry is difficult due to limited land.

Setunak Island's land condition also does not support conventional agricultural management due to a lack of nutrients and high salinity. This condition causes the people of Setunak Island to depend on other islands to fulfil their needs.

In addition, climate change, often marked by extreme weather such as high waves, also makes

small islands like Setunak Island more vulnerable to abrasion. On the other hand, public awareness still needs to improve in protecting and preserving the mangrove ecosystem as a green belt or natural green belt to resist abrasion around it.

That is influenced by the culture of the community in utilizing mangrove wood to be sold as raw material for charcoal. This culture is difficult to change as a result of the uncertainty of income from

fishing. The people of Setunak Island still manage their waste by burning it or stockpiling it in their yards.

This causes environmental hygiene and health on Setunak Island to become less suitable. This habit is also unprofitable because it will increase greenhouse gas emissions which are outside the line with climate change mitigation efforts.

Based on the background of the problems above, this project initiated and developed the "Climateproof Island" project. This project aims to increase the people of Setunak Island's capacity to mitigate and adapt to climate change for a sustainable life.

This program consists of efforts to provide an alternative income for fishermen through crab cultivation using the silvofishery technique, increasing community awareness of mangroves, increasing household food security through hydroponics, and better household waste management.

### **B. Project Cost Realization**

Project plans and budget realization are presented in the following below: 2020 : IDR 4.700.000 2021 : IDR 40.940.000 2022 : IDR 40.260.000 Totally : IDR 85.900.000

### C. Project Execution

The Climateproff Island project is implemented on Setunak Island, Tulang Village, Gelam Strait District, Karimun Regency.

This project aims to increase the people of Setunak Island's capacity to mitigate and adapt to climate change for a sustainable life. This project is conducted by empowering fishermen in the fish farming group, commonly called the Setunak Bersatu POKDAKAN, to carry out crab cultivation and conserve mangrove ecosystems through the application of the silvofishery method as an alternative livelihood.

In addition, this program empowers homemakers in the Setunak Jaya Women Farmers Group (WFG) to manage hydroponic gardens to increase food security and waste management in line with climate change mitigation. The waste management that WFG Setunak Jaya has carried out is by composting for organic waste and making eco brick for inorganic waste.

The Setunak Bersatu POKDAKAN utilizes the compost produced by WFG Setunak Jaya in mangrove nurseries. The resulting compost is also used to plant spices used as raw material for probiotic crab feed, which POKDAKAN Setunak Bersatu cultivates.

Mangrove seeds, crabs, and hydroponic vegetables are sold as additional community income and group coffers. Continuing activities demonstrate the sustainability of this project by the target group community and replication by individual communities.

### D. Benefits

In addition, this project has also provided economic, social and

environmental benefits for the target community groups and other communities.

#### Nature:

- Reducing Greenhouse Gas (GHG) emissions through processing organic waste, which is usually stockpiled into raw materials for composting by 0.068 tons of CO<sub>2</sub>e.
- Reducing Greenhouse Gas (GHG) emissions through processing inorganic (plastic) waste usually stockpiled into an eco brick of 0.948 tons of CO<sub>2</sub>e.
- Reducing Greenhouse Gas (GHG) emissions through mangrove ecosystem conservation of 43,961 tons of CO<sub>2</sub>e.
- Utilization of unproductive land of 0.0012 Ha as a mangrove nursery.

#### Social:

- Two new groups were formed: the Setunak Jaya Fish Farmers Group and the Setunak Jaya Women Farmers Group.
- Increasing harmony and trust between group members.
- Increasing cooperation between group members.
- It was becoming a resource person related to hydroponic cultivation.
- Better known through program coverage in the mass media (recognition).
- Ease of getting vegetables.





### Economic:

- Increase in income of the Setunak Bersatu POKDAKAN by IDR 18,750,000.
- Savings on costs for procuring mangrove seedlings of IDR 600,000.
- Setunak Bersatu POKDAKAN cash from the sale of crab cultivation and mangrove nurseries in IDR 6,250,000.
- Increased income of the Setunak Bersatu POKDAKAN through alternative livelihoods through crab cultivation and mangrove nurseries IDR 18,750,000.
- WFG Setunak Jaya cash through hydroponic cultivation of IDR 4,228,000.
- Savings on the cost of building the Setunak Island landmark IDR 25,716,015.

### Wellbeing:

- Increased income through crab cultivation and mangrove nurseries.



- It increased cooperation between group members.
- It is increasing the ability of members to cultivate crabs.
- It is increasing the ability of members to manage mangroves.
- Increasing the ability and confidence of members in public speaking.
- It is increasing the ability of members to do hydroponics.
- It is increasing the ability of members to conduct waste management.
- It increases the ability of members to carry out group governance.







### E. Project Goals

The targets of the Climateproof Island community empowerment program are fishermen who are members of the Fish Farmers Group, commonly called the Setunak Bersatu POKDAKAN and homemakers who are members of the Setunak Jaya Women Farmers Group (WFG). Members of these community groups are dominated by vulnerable people who work as fishermen and homemakers.

### F. Novelty and Innovative Elements of the Climateproof Island Project.

The Climateproof Island program implemented has the following elements of novelty:

#### 1. New Way Application

This project has an element of novelty, seen from the regional aspect and the aspect of the industrial sector that developed it. Before this project ran, no similar project had been conducted in the Karimun Regency area.

Likewise, there has never been a similar social innovation project in the mineral metal processing sector.

#### 2. Level of Innovation

This project has novelty at the level of disruptive innovation. This program encourages the following changes:

- Encouraging changes in the profession of

fishermen, before this program, fishermen on Setunak Island only fished in the sea. After this program, fishermen on Setunak Island have additional activities (not yet replacing the initial activities as a whole), namely silvofishery crab cultivation and mangrove nurseries.

- Encouraging changes in patterns of fulfilling household vegetable needs.
- Encouraging changes in the activities of fishermen's wives on Setunak Island who actively manage hydroponic gardens and waste into compost and eco brick.
- Encouraging a change in the pattern of waste management in the community, which has been stockpiled or burned to start composting organic waste and using it as eco-bricks for inorganic waste.
- Creating new markets and business models

#### 3. Uniqueness in the Climateproof Island Program

- Application of probiotics in silvofishery crab cultivation with local ingredients. Probiotic feed was developed to support silvofishery crab cultivation activities in this project. In this case, the feed is given additional probiotics before being given to the crabs.

The developed probiotic uses raw materials available in the community and easily obtained, such as old coconut water and spices.

Probiotic crab feed using raw materials available in the community has been tested by the laboratory of PT SUCOFINDO Semarang Branch, with the results



of probiotic testing that the protein content in pure probiotics is 2.11%.

The results of testing the protein content in pure feed were 22.40%. Meanwhile, the feed content added with probiotics had a higher protein content of 24.82%.

The results of this test indicate that giving probiotics to crab feed is beneficial because it can increase protein content.

- The use of organic liquid fertilizer to reduce the use of AB Mix manufacturer's nutrients for Hydroponics Organic liquid fertilizer is made from fish waste, brown sugar, EM4, rice washing water, and old coconut water.

Based on the laboratory analysis of PT SUCOFINDO Semarang Branch, the organic liquid fertilizer made and used by the community contains C-Organic (5.39%), Total N (0.71%), P2O5 (0.41%), and K2O (0.18 %).

#### *4. Forming a Regulatory Framework or a New Organization*

This program has succeeded in encouraging the formation of new regulations, namely the Decree of the Head of the Bone Village, Selat Gelam District, Karimun Regency Number 23 of 2022 which regulates the Management of the Setunak Island Mangrove Ecosystem and the Letter of Appeal to the Administration of the Tulang Village regarding the Management of the Setunak Island Mangrove Ecosystem.

In addition, the program has succeeded in encouraging the formation of a new organization, namely the Setunak Bersatu Fish Farmers Group (POKDAKAN) by the Decree of the Head of the Bone Village, Karimun District, Karimun Regency Number 3A 2022 and the Women Farmer Group by the Decree of the Head of the Tulang Village, Karimun District, Karimun Regency No. 5A 2022.

#### **G. The benefits of implementing this project method for the community.**

Many communities have benefited from the application of methods in the form of observations, interviews, and forum group discussions from this project, such as:

##### *1. Setunak Bersatu POKDAKAN*

The engagement method has provided changes and benefits for this community, namely members of the Setunak Bersatu POKDAKAN who were initially unable to carry out crab cultivation and mangrove nurseries. Through this project, group members could carry out environmentally friendly crab cultivation.

##### *2. Setunak Jaya Women Farmers Group*

Setunak Jaya Women Farmers Group members initially needed help with hydroponics and waste management. Through this project, group members can do hydroponics and waste management.



### 3. Civil Society

Initially, the community had difficulty getting vegetables because they had to buy them outside Setunak Island. This program makes it easier for people to get vegetables at lower prices and can improve food security.

### 4. Government of Tulang Village

The government of Tulang Village is the provider of legality for group permits in developing project and is involved in achieving regional greenhouse gas emission reduction targets.

### H. Future Plans

There are development and sustainability plans for this project in 2023 and 2024. The following is a roadmap for this project.

#### 2023:

1. Project capacity strengthening for capacity building climateproof island.
2. Strengthening the marketing of crab, mangrove seeds and Setunak island vegetables.
3. Monitoring dan Evaluation
4. Renewable Energy
5. Rain Water Harvesting

#### 2024:

1. Project capacity strengthening for capacity building climateproof island.
2. Monitoring and Evaluation.





## PTT EXPLORATION & PRODUCTION PTTEP'S REFORESTATION PROJECT

### INTRODUCTION

PTTEP Reforestation Project has been inspired by PTTEP's employee volunteering activity called "reforestation in mind" in 2008 and the reforestation activities of the 35,720-rai-of-land program which helped to reduce 40,562 tons of CO<sub>2</sub> equivalent emissions in 2013.

PTTEP defined the Reforestation Project development plan with 2 objectives:

1. to reduce greenhouse gas by restoring Thailand's degraded forest
2. to create networking and awareness on forest protection and environmental conservation.

The project also targeted to create value for the local economy by creating job opportunities and generating income for the local community by hiring the locals for tree planting and maintenance of the reforestation areas.

PTTEP's Reforestation Project contributed to the absorption of carbon dioxide and reduced GHG emissions accumulatively by 446,500 tons of CO<sub>2</sub> equivalent or 5.94 tons of CO<sub>2</sub> equivalent per hectare per year.

The plantation survival rate reached 87% on average which is higher than the expected standard rate at 85%. The project helped create job opportunities for locals, working in both plantation and maintenance phases, contributing to 9,450 households, and creating a direct community income of 20.55 million USD for the locals throughout the project.

Organizing more than 30 training sessions on forest protection and environment conservation for 1,673 local people from communities surrounding the plantation areas helped create a positive social impact in terms of promoting and embedding the

green mindset in the locals while strengthening valuable cooperation and commitments to protecting and preserving natural resources among governmental agencies, the private sector, and local communities in a sustainable way.

### IN DETAIL

Global climate change is a significant issue at the national and global levels. Taking our part in alleviating climate change, PTTEP continues to conduct the Reforestation Project as one of several greenhouse gas emission reduction projects in Thailand since 2013.



The project covered an area of 16,800 hectares of land in 27 provinces from 77 provinces. In addition to absorbing carbon dioxide, the project helped create value for the local economy by creating job opportunities and generating income for the local community by hiring the locals for plantation and maintenance of the reforestation areas as well.

PTTEP implemented the project with both tree planting and maintenance before handing them over to the government agencies in charge for further maintenance. The land area owners are the Royal Forest Department, the Royal Forest Department for Community Forest, the Department of National Parks and Wildlife and Plant Conservation, and the Department of Marine and Coastal Resources in 8,553, 1,415, 6,544 and 288 hectares, respectively.

PTTEP gradually started handing over the completed plantation areas with more than 85% survival rate to the responsible government agencies during 2016-2020. In addition, the company in cooperation with the local government agencies have established a community network for forest and environment conservation in the communities near the project areas, providing knowledge, training, and equipment to ensure the community commitment to sustainable local forest conservation to protect and maintain the forest as their valuable resources.

### Strategic Process

PTTEP has initiated 4-step processes of a long-term strategic plan including stakeholder analysis,

development of strategic projects, implementation and monitoring, and evaluation of the amount of carbon absorption.

Realizing that the success of the project demands commitment and collaboration with various stakeholders, PTTEP has actively engaged concerned parties including governmental agencies, local communities, and academic institutions.

### Each party has the roles as follows:

- Governmental agencies: Royal Forest Department, the Department of National Parks, Wildlife and Plant Conservation, and the Department of Marine and Coastal Resources to support and approve the plantation area selection, to govern and acknowledge the handing over of the area after plantation.

In this regard, PTTEP has also signed the memorandum of understanding with the Royal Forest Department and the Department of National Parks, Wildlife and Plant Conservation.

- Local communities: Local communities surrounding the plantation area to be contractors for supporting tree plantation and maintenance.
- Academic institution: Kasetsart University's Faculty of Forestry to carry out the baseline survey for forest data collection and evaluate the amount of carbon absorption. Initiatives on the carbon emission reduction calculation

### Amount of greenhouse gas reduced from production process

(tonnes of CO<sub>2</sub> equivalent)



The initiative generated benefits from forestry research studies including biodiversity baseline research, shape file development, area selection and inspection on the survival rate of plantation and Thailand Voluntary Emission Reduction Program (T-VER).

As a result, PTTEP Reforestation Project is one of the pioneers in Thailand that successfully registered for the T-VER program and pushed the collaboration with companies of the PTT Group to develop an internal carbon pricing scheme in 2016.

As a guideline, the price of 6.7 USD per ton of CO<sub>2</sub> equivalent was referred to, as recommended by the Thailand Greenhouse Gas Management Organization (Public Organization), or a price in line with the relevant laws and regulations of our operating countries.

Calculating the amount of carbon storage from reforestation by utilizing the method of permanently tracking the tree growth (Permanent Sample Plot) with reference to the method for developing a voluntary greenhouse gas reduction project of T-VER, the research study shown that the carbon dioxide absorption of land is 5.94 tons of CO<sub>2</sub> equivalent per hectare per year.

Three-dimension impacts With PTTEP's investment of approximately 23 million USD in total, the distinctive impacts of this project are in many areas. In terms of environment, the 16,800 hectares of reforestation primarily ensured the restoration of the forest area in Thailand, in alignment with SDG15 and SDG13, aiming to conserve and restore the sustainable use of terrestrial ecosystems and Climate Action.

The project contributed to the absorption of carbon dioxide and reduced GHG emissions accumulatively by 446,500 tons of CO<sub>2</sub> equivalent or 5.94 tons of CO<sub>2</sub> equivalent per hectare per year. The plantation survival rate reached 87% on average which is higher than the expected standard rate at 85%.

After the forest plantation, the project in collaboration with the Royal Forest Department, the Department of National Parks, Wildlife and Plant Conservation, and the Department of Marine and Coastal Resources, organized more than 30 training sessions on forest protection and environment conservation for 1,673 local people from communities surrounding the plantation areas in 27 provinces.

This created a positive social impact in terms of promoting and embedding the green mindset in

In 2014 before plantation



In 2016 after plantation





the locals while strengthening valuable cooperation and commitments to protecting and preserving natural resources among governmental agencies, the private sector, and local communities in a sustainable way.

In terms of economics, during the project implementation, PTTEP signed 976 contracts for tree plantation with 2-year maintenance of 306 areas in 27 provinces. This helped create job opportunities for locals, working in both plantation and maintenance phases, contributing to 9,450 households, and creating a direct community income of 20.55 million USD to the locals throughout the project.

In terms of business, the project reflects PTTEP's commitment to business sustainability in which economic, environmental, and social factors are

integrated with both “in” and “after” processes. With regards to the company's target to reduce GHG emissions, PTTEP has adopted and implemented a variety of advanced technology as the “in-process” efforts, whilst the initiative of 16,800-hectare forest plantation project is one of the company's “after-process” efforts to compensate such GHG emission.

### **Production and planet in balance**

PTTEP strives to balance environmental protection and shared values for stakeholders for mutual and sustainable growth, through the 10-year planting and maintenance of terrestrial and mangrove forests that will increase the natural carbon sink with a target to absorb more than 2 million tonnes of CO<sub>2</sub> in 2050. It is estimated that the projects will create more than 18,750 jobs and reinforce PTTEP and the community's forest protection network.

# PTTEP Commits to Net Zero Greenhouse Gas Emissions by 2050

PTT Exploration and Production Public Company Limited (PTTEP) operates with consideration to create the right balance of business, social and environmental aspects. We take part in solving global warming issues and therefore set forth to achieve Net Zero Greenhouse Gas (GHG) Emissions by 2050 through our "EP Net Zero 2050" concept.

## Exploring for Lower Carbon E&P Portfolio

Our exploration and production portfolio is managed to transform PTTEP into a lower-carbon organization. New projects with an emphasis on natural gas and greenhouse gas intensity are factored into the investment decision-making process.

# EP

## Production and Planet in Balance

We pursue the development of technology to reduce GHG emissions, energy and production efficiency improvement, application of renewable energy in operations, as well as emissions offsetting through the planting of trees in forests and mangroves to increase the natural carbon sink.

# NET ZERO 2050



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## **PUBLIC WORKS AUTHORITY (ASHGHAL)**

### **PUBLIC WORKS AUTHORITY ENVIRONMENTAL INITIATIVES AND IMPROVEMENTS IN MANAGEMENT SYSTEM**

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#### **INTRODUCTION**

Public Works Authority 'Ashghal' was established in 2004 to be responsible for the planning, design, procurement, construction, delivery, and asset management of all infrastructure projects and public buildings in the State of Qatar.

Ashghal contributes to Qatar's sustainable environment, economic development, and social development by adhering to Qatar National Vision 2030. Quality and Safety Department (QSD) is a supportive department to all Ashghals' project departments, with the primary role of ensuring the conformity of the projects to the environmental regulations and standards, in addition, to developing an integrated environmental management system and monitoring its implementation by coordinating with the other departments.

With such a vast scope and several aspects, QSD has played a significant role in establishing and applying the Environmental Management System (EMS) to all project departments by obtaining the ISO 14001-2015 certification for Ashghal in 2020. This achievement was the driving force that initiated many initiatives and raised environmental and sustainability awareness across all Ashghals' projects.

Environmental site assessments were the first step that helped remarkably enhance the environmental practices in most construction projects through inspecting the compliance of the consultants and contractors with the environmental legislations. Additionally, QSD has established Environmental Management Performance Monitoring System (EPMS); this system is based on an environmental questionnaire that covers all environmental aspects





of Ashghals' projects. Furthermore, Ashghal Green Awards was a significant initiative that QSD has developed over the past four years.

Green Awards is a competition among all Ashghals' projects from the design stage to actual construction works, recognizing best practices and outstanding performances annually. Lastly, QSD is currently preparing an approved list of competent environmental service providers in the State of Qatar.

The aim is to reduce the risks associated with environmental permitting and management of all Ashghals' projects and standardize the service quality provided.

### IN DETAIL

According to the Emiri Decree of the State of Qatar No (34) of 2014, Public Works Authority 'Ashghal' was organized to be responsible for planning, design, procurement, construction, delivery and asset management of all infrastructure projects and public buildings in Qatar.

With such a vast scope and several aspects, Ashghal has employed a powerful model of delivering excellence and managing efficient, sustainable infrastructure.

Quality and Safety Department in Ashghal (QSD) has established several initiatives, procedures, and plans to meet one of its corporate strategic objectives, i.e., "Improve environmental and sustainability performance."

The foundation stone to advance the environmental plans was obtaining ISO 14001-2015 Environmental Management System Certificate for Ashghal in 2020. Accordingly, environmental site inspections were developed, which are achieved through regular construction site visits.

The site inspections aim to check the compliance of the consultants and contractors with the

environmental legislations, i.e. Qatar Environmental Protection Law No. 30 of 2002 and its executive articles.

In addition to construction requirement, the inspection also covers evaluating the contractual requirement of the supervision consultant. The inspection process starts with the contractor self-assessment, supervising consultant assessment, related department assessment, and finally QSD environmental assessment.

One of the critical roles of the QSD is to conduct environmental site inspections to all Ashghals' projects and assure the consistency in implementing the best environmental practices. All legal and technical aspects are covered in a checklist used for the site inspections, where the outcome of the site inspections is to issue a report to the supervision consultant that covers the non-conformity report (NCR) with the regulations and standards.

The supervision consultant shall work on the immediate correction of the NCR, present the root cause, and implement the relevant corrective actions to close the NCR within the agreed-planned date with the assurance of non-recurrence. Issuing the NCRs to the supervision consultant presented a positive impact on enhancing the environmental performance and reducing the impacts on the environment.

Applying the correction and corrective actions helped to reduce the number of NCRs, recurring of the same NCRs, and raise awareness. Moreover, enhancement in the response of the supervision consultant was noticeable, and they started to be more cooperative with QSD in terms of complying with the required regulations.

In 2021, QSD raised 623 NCRs, out of which 70% were closed within the planned closeout date. As a result, QSD identified the gaps associated with the delay in closing out the NCRs. One of the challenges was the absence of the qualified environmental specialist in the consultant/contractor's team.

Based on these outcomes, QSD is implementing further improvement plans for site inspections. Procedures include but are not limited to the mandatory allocation of environmental specialists in supervision consultants and contractors' teams, conducting interviews by QSD for the nominated environmental personnel, and increasing the number of environmental site inspections per year for each project.

Another initiative by QSD is the Environmental Management Performance Monitoring System (EPMS), an online platform developed in parallel with ISO 14001:2015 to monitor the environmental management performance of all Ashghals' projects in the construction stage. EPMS is a monthly questionnaire where the supervision consultant must submit information about a specific project for the whole project duration.

EPMS includes several categories which capture all environmental aspects related to construction activities, such as permits validation, GIS locations,

monitoring reporting (air emissions, noise levels, and water quality test report), waste management, recycling of construction waste, and carbon footprint related to energy consumption, etc.

In addition, EPMS also covers certifications, audit records, and environment staffing resources. Each category has its specific question to be responded to with necessary evidence. EPMS monitors the environmental management performance of the projects through an automated scoring function incorporated into the system.

QSD then reviews the initial score for final approval. Accordingly, EPMS allows the identification of gaps/weaknesses and highlights the opportunities for improvement. Since the establishment of EPMS in May 2022, high commitment from Ashghals' project supervision consultants was evident, i.e. more than 90% of the projects were involved within three months after launching.

In addition, EPMS has become one of the conditions



of the Construction Environment Management Plan (CEMP) approval that must be fulfilled. Acceptance of a CEMP is mandatory for all Ashghal projects before the commencement of construction activities.

Since the commitment to sustainability is embedded in all levels of Ashghal, EPMS submissions are reviewed monthly by the QSD environment team. The performance results are quarterly presented to managers, directors, and the president of Ashghal.

Implementing such an initiative was challenging for QSD as EPMS is a unique, online, centralized and user-friendly platform with one single format for all Ashghals' construction projects with different scales. Remarkable effort and time were invested in rolling out such an initiative, which is evident by the organization's circulars and workshops.

EPMS will change the business culture from working as part of an insular team/department to working as one team/organization. Furthermore, EPMS will assist QSD to evaluate the qualifications of the environmental specialist of contractor and consultant.

Thus, any new environmental specialist must be interviewed and approved by QSD before allocation. A future improvement plan is to link the EPMS database to Ashghal's Geographic Information System (GIS). This plan will assess overcoming the challenge that Qatar is limited with its resources (e.g., site offices, water discharge locations, material storage areas, etc.).

Another challenge that the GIS will simplify is the high number of infrastructure projects (i.e. more than 150) ongoing simultaneously. Linking EPMS to the GIS database will help oversee existing facilities in the vicinity of projects which will enhance sharing of information among all Ashghals' departments about the current and old site facilities.

In this regard, project departments will be able to consider utilizing the existing facilities for their

projects, which will save time and resources, as well as reduce transportation costs and carbon emissions associated with transportation and construction activities.

Ashghal Green Awards was a significant initiative that QSD had developed annually over the past four years. It is a competition among all Ashghals' projects from the design stage to the actual construction stage to promote and assess the contractor's environment and sustainability management on active construction sites, as well as recognize best practices and outstanding performances annually.

Ashghal Green Awards does not only review meeting the contractual and legal environmental requirements but also goes above and beyond, aiming for all pillars of Qatar National Vision 2030; human, social, economic, and environmental development.

This competition is a unique initiative created to increase awareness for sustainable practices in construction and assist in guiding Qatar's engineering industry to eliminate and reduce adverse impacts caused by construction projects.

The purpose of the Green Award is multifaceted and encourages various sustainability objectives detailed at national, institutional, and programmatic levels. The Green Award supports the implementation of the State of Qatar's National Vision 2030 development goals, Ashghals' strategic objectives, environmental and sustainability policies, and construction standards and specifications.

Moreover, this competition assists in enforcing sustainability initiatives and contractual requirements, in league with international best practices, to improve project's general performance. Furthermore, it ensures that contractors comply with their approved CEMP and any other applicable legislation and regulation stipulated by the Ministry of Environment and Climate Change (MOECC) and relevant stakeholders.



Ashghal Green Award was initiated in 2018, with 13 participants only from Ashghals' project contractors, but it has been evolving since. In 2022, the competitiveness was enhanced, and the award was open to all Projects Affairs Departments and Assets Affairs, which yielded a total of 43 participants.

The uniqueness of this year's awards was categorizing the competition entry, unlike the previous versions, where only one category was approved. In this year's competition, five categories were open for participation, i.e. Green Design, Green Project, Excellence in Waste Management, Excellence in Construction Materials, and Excellence in Energy Efficiency (Carbon Footprint Reduction).

The assessment method of the Green Awards has two main stages, i.e. application review and site assessment visits. First, the application review process considers several criteria such as environmental benefits, social benefits, innovation,

cost saving, and the possibility of being adopted by others etc.

Afterwards, the shortlisted projects are visited by QSD to ensure the implementation of best practices on sites. Finally, the top three projects that score the highest total scores in a specific category are recognized as the Ashghal Green Awards Winners.

Running this competition annually sheds light on the diverse environmental challenges associated with construction activities and the approach of each contractor to overcome them, considering the scope of each project.

Furthermore, the Green Award unlocked the contractor's potential and enhanced their critical thinking, problem-solving, and presenting innovative solutions in multiple areas, including water treatment units, energy reduction, cost reduction, and carbon footprint reduction. As a future plan, QSD will



prepare a report summarizing the outcomes of the Ashghal Green Awards to share the experience with all project departments.

The report will highlight the success points and the faced obstacles in each edition of the awards. Besides, QSD will develop a strategy for encouraging more projects to participate in the competition. Within the framework of QSD's policy to develop its mechanisms and programs, the department proposed establishing an approved list of company/service providers to work in environmental management and sustainability in Qatar (specifically in Ashghals' projects).

This list aims to select the most competent and qualified companies that can efficiently support Ashghals' projects by implementing the best environmental services.

Working with the most capable national and regional partners will enhance the performance of environmental and sustainability management in Qatar, which can be achieved by monitoring the technical qualifications of service providers, increasing the quality of services, and standardizing the service quality provided to all Ashghals' projects. Hence, this list will reduce project risks, which is reflected in a higher level of citizens' satisfaction and acceptance by the communities experiencing the projects, as well as opening the chance for local companies to participate in Ashghals' projects.

It is worth noting that this approach was applied in issuing a specialized list of highly qualified, neutral laboratories to work on Ashghals' projects. This approach had the most significant impact in the presence of an internationally referenced mechanism to conduct project examinations without Ashghal incurring any additional expenses.

Similarly, for the issuance of this list, a work plan has been developed that paves the way for the implementation and distribution of the list of companies working in environmental management and sustainability in the State of Qatar, through

which the management's vision and target of this initiative can be presented.

Moreover, QSD held a workshop to introduce the proposal and to clarify the process of selecting the list of companies. Since the announcements were published in the local newspapers and all social media platforms, several local and international companies have applied to be enrolled. The assessment stage started in October 2022, including multiple assessment steps, revising the submitted documents for completeness/compliance with the requirements, and visiting the companies' offices/facilities for further assessment.

According to the QSD plan, the first approved list is expected to be published by January 2023. The list will be exceptional as it's the only list in Qatar that includes all environmental management and sustainability service providers.

Furthermore, it will be an essential reference for all contractors to select the guaranteed service providers with the minimum qualifications to perform the related services in the state of Qatar (particularly Ashghals' projects).

Therefore, any services required for Ashghals' projects related to environmental management and sustainability are limited to this list. The approved list of companies can be reached through Ashghal's website page and will be updated regularly by QSD.

Furthermore, the application door is always open for interested companies to join this field. Thus, approved companies shall inform QSD about any significant changes in their management system, key staff, or changes in their accreditation scope.

Furthermore, the approved companies shall expect regular non-announced and announced assessments from the QSD to monitor their compliance with the requirements, which is an outstanding feature to maintain the required quality level of the provided services.



Qatar had witnessed a noticeable growth in the recent years due to the continuous social and economic development. The Public Works Authority 'Ashghal' plays a key role in promoting this economic and social growth in the country through the implementation of infrastructure projects in line with the State's objectives and the directives of its wise leadership.

Ashghal is working on the implementation of the Areas Infrastructure Programme which will provide several integrated infrastructure projects in local areas, as well as the implementation of the Highways Programme, in addition to drainage network, health, educational and public buildings projects. Ashghal also manages the operation and maintenance of all road and drainage networks.

The Public Works Authority contributes to the achievement of Qatar National Vision 2030 objectives through infrastructure development in the country, in accordance with the highest standards adopted to become one of the world's most advanced countries in this field.

And to fulfill  
our promises that

**Qatar  
deserves  
the best.**



## QATAR MUSEUMS

### NATIONAL MUSEUM OF QATAR- FIRST EVER GREEN KEY CERTIFIED SUSTAINABLE MUSEUM IN MIDDLE EAST

#### INTRODUCTION

National Museum of Qatar is a museum operated & owned by Qatar Museums which aims to be a sustainable leader in the region by implementing sustainable practices and achieve regional & international sustainability accolades.

The National Museum of Qatar (NMoQ) has received Green Key certification for its continuous efforts to implement sustainability best practices, becoming the first museum in the Middle East to achieve this certification.



Green Key is a leading standard of excellence in the field of environmental responsibility and sustainable operation within the tourism industry. This

prestigious eco-label represents a commitment by businesses that their tourism establishments adhere to the strict criteria as stipulated by the Foundation for Environmental Education.



NMoQ is the renowned museum which has achieved high sustainability ratings from multiple internationally recognized and independent bodies. Among these is the GSAS 4-Star rating for design and build certification, Gold for GSAS Operations. GSAS – which stands for ‘Global Sustainability Assessment System’ – is considered the gold standard in sustainability, and four stars is its highest award category. NMoQ has also received a LEED Gold certificate, among others.



## IN DETAIL

NMoQ Awarded Green Key Certification for Sustainability for the First Time in Middle East  
Posted by QatarAmerica on June 1, 2022 in Community, News On International Museum Day and in commemoration of QAIC's June theme for Environment and Sustainability, the National Museum of Qatar (NMoQ) was awarded the Green



Key certification for its constant endeavors in implementing sustainability best practices.

Through preserving and celebrating Qatar's heritage since its opening in 2019, NMoQ achieved a myriad of sustainability awards, including the first museum in the world to receive both a LEED (Leadership in Energy and Environment Design) Gold, a 4 Star GSAS (Global Sustainability Assessment System) sustainability rating and recognition in the International Beautiful Buildings Green Apple Awards 2022 organized by an international non-profit environmental group, the Green Organization.

Within the tourism industry, Green Key is a leading standard for excellence in the field of environmental responsibility and sustainable operations. This prestigious eco-label signifies businesses' commitment in their tourism establishments to comply to strict criteria set by the Foundation for Environmental Education.



A Green Key symbolizes the promise to its guests that the establishment helps make a difference on an environmental level. On the occasion of June's theme for Environment and Sustainability, QAIC congratulates NMoQ for this prestigious achievement. NMoQ first in ME to get Green Key certification

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### **National Museum of Qatar**

The National Museum of Qatar (NMoQ) has received Green Key certification for its continuous efforts to implement sustainability best practices, becoming the first museum in the Middle East to achieve this certification. Green Key is a leading standard of excellence in the field of environmental responsibility

and sustainable operation within the tourism industry.

This prestigious eco-label represents a commitment by businesses that their tourism establishments adhere to the strict criteria as stipulated by the Foundation for Environmental Education.

Since its unveiling in 2019, NMoQ has received several sustainability accolades, becoming the first national museum in the world to receive both a LEED (Leadership in Energy and Environmental Design) Gold, a 4 Star GSAS (Global Sustainability Assessment System) sustainability rating, as well as recognition in the International Beautiful Buildings Green Apple Awards 2022 organised by the Green Organisation, an international non-profit environment group.





## REGULAR CLEANING OFFICE BUILDING REFURBISHMENT

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### INTRODUCTION

We are a people and planet focused business and strive to operate sustainably in all that we do. Our purpose, to create better places for everyone every day, is supported by a sustainable business strategy consisting of four main strategic pillars.

Refurbishing our building supported two of these. - Protecting our planet – is the pillar associated with climate action. Reducing carbon emissions and saving energy are both key aims for us, our clients and service partners.

A key aim of this project was to improve the energy efficiency of the building as a working head office and contribute to our goal of NetZero by 2030, being carbon neutral by 2030 - Putting people first – concerns the wellbeing of our colleagues, and creating a culture of equality and progression. A key aim of this project was to improve the wellbeing of

our colleagues while working in the office creating a healthy and happy environment.

The project was a success in terms of achieving a positive impact in the areas we identified as our aims. Some major changes to the operation of the office included the way the building was heated and cooled, lit and designed.

These impacted the two major aims we had by improving energy efficiency and carbon emissions, and converting the building into a space designed for office working, from what was primarily a storage and operation facility previously. Our certification partner, Planet Mark, measures our energy and carbon footprint.

We achieved a decrease in carbon emissions at our office building of 5 tonnes CO2 emissions. The majority of this reduction was attributable to the refurbishment work carried out in early 2022. We also



effectively removed 82k KWH of gas accumulated 2020-Oct 2021 from the business, because of our change to fully electric heating and cooling.

We also transformed the look and feel of the interior through the refurbishment. The operation and storage facility was converted into office space to accommodate an expanded team of support colleagues providing a mix of functional spaces required for post Covid work patterns.

Our colleague survey showed 78% of colleagues giving a 5\* satisfaction rating.

### IN DETAIL

In future proofing the business for the post Covid economy requirements, the business committed to launching a new sustainable strategy – ‘Better Places’ – and a series of targets were set to support the delivery of this strategy.

To achieve some of these it was recognised that the business building required an overhaul. Working

with our sustainability partner, ‘Just One’, a list of building improvements works was created to deliver a sustainable building for the future in November 2021.

The cost was budgeted at £750K with the anticipation of off-setting that with reduced operating and talent recruitment costs through increased colleague retention levels.

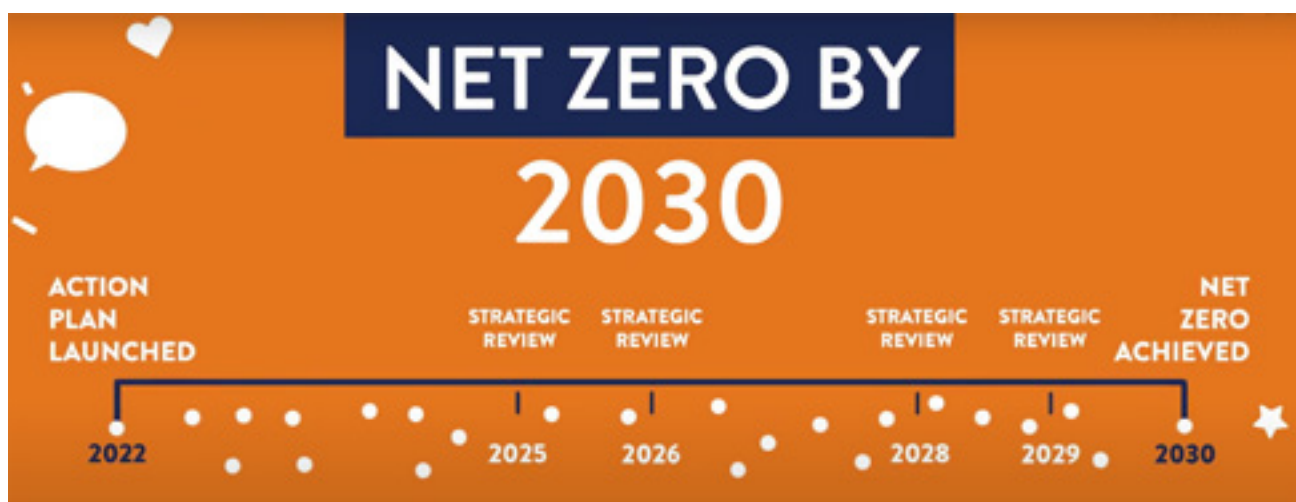
### The project involved: -

Removal of the old gas boiler

Installation of Heat recovery units – MVHR plays a significant role in making spaces more environmentally friendly, by avoiding large-scale heat loss, supporting our Better Places and ZeroBy30 objectives.

Like air conditioning systems, they deliver comfortable room temperatures, but significantly they retain up to 90% of the heat from the stale air which they replace, making them more energy efficient than normal a/c systems





## Applying new building insulation -

Insulating the building facilitated and unlocked potential energy savings, and increased temperature control therefore reducing our overheads costs especially with the increases in energy prices in addition to improving soundproofing and structural integrity

Installation of efficient lighting fixtures

Improved waste efficiency

The Heat Recovery system can save up to 70% of the energy being wasted during air changes in the building while maintaining a health and comfortable working environment for all colleagues. Our Energy Recovery Ventilation system provides business Synergy in terms of costs, health and wellbeing and productivity, which supports our Better Places and ZeroBy30 objectives

Conversion of fleet vehicles to 100% electric and installation of charging points

Interior design aligned to the brand and layout to accommodate remote working practices from a bigger team of support colleagues

## These changes achieved benefits of: -

Reduction in comparable gas usage

Achieving Plant Mark certification 2022

Improved quality of working environment

Implementation of a hybrid working policy improving colleague wellbeing

Local economy benefits by not having to move the office location

Extension of the building life by 10 years

Since re-opening, we have taken learnings on understanding the kind of space best suited to our working requirements, and have made small further adjustments to the interior layout, to create additional medium size meeting areas, which were not part of the initial design.

The building was re-inhabited in April 2022 by the workforce and a year on has proved a popular decision amongst colleagues.



## RINGWAY INFRASTRUCTURE SERVICES MILTON KEYNES WORKPLACE IN BLOOM, MILTON KEYNES DEPOT

### INTRODUCTION

The aim of the Workplace in Bloom competition was to create green spaces within our workplaces and to improve our outdoor environments, which in addition, can provide important habitat for pollinators.

As well as areas where our employees could relax or areas that improve the natural surroundings and promote biodiversity. The competition was open to offices, depots, worksites, manufacturing sites or projects and encouraged teamwork, innovative thinking and some friendly competition between the Business Units.

The importance of mental health and well-being is becoming well documented, and involvement with initiatives like this can greatly enhance our working environment. We are really proud of our entry and were delighted to have won the 2nd place Silver Award for the group competition considering how many other fantastic entries were submitted.

We have introduced an excellent mixture of bloom to attract insects and bees, produce to share with our staff and client and recycling and reusing items in line with our targets for circular economy, encouraging our teams to get out for some fresh air during breaks which will benefit mental health and it is fantastic to receive feedback from our operational colleagues as they pass on their way into the depot!

Our client, Milton Keynes Council are impressed with what we have done we were approached by the Portfolio Holder and Cabinet member with responsibility for Sustainability, Climate Action and Transport who visited the project to find out more and for a photo shoot to share what we have done with the wider council!

They were excited to see how we had repurposed items and were generally impressed that the company was running the competition to encourage us to create the area!

Our entry promotes a whole host of environmental and wellbeing benefits such as;

- Generally brightening up the work environment, improved outlook, lots of beautiful colours along with much needed tidy / weeding
- Educating us all on gardening, plants, flowers and veg & fruits



- Raising awareness of taking care of all pollinators
- Providing food, water and housing for birds
- Encouraging reduce, reuse and recycle, how items can be repurposed
- Having an outdoor area for meetings
- Encouraging our staff to bring their own lunches to eliminate visits to local shops reducing our carbon footprint and to make the most of their breaks
- Healthy eating, freshly picked fruit and veg for snacks, we have already benefited from chilli's, tomatoes and strawberries with many more growing every day
- Herbs which are being taken home for cooking, our staff have been sharing their favourite recipes
- Team building exercise – this campaign brought the team together, e.g., during making cushions from PPE during lunch
- Some innovative ideas e.g. for reusing items that could be adopted in our own gardens And lastly, collaborative working, demonstrating to our staff and client how important looking after our environment is along with the health and wellbeing of our staff.

The team have really enjoyed getting involved with watering / weeding / deadheading the plants to ensure they flourish.

### IN DETAIL

We introduced a garden area for our staff to tend to during lunch breaks and benefit from the produce



providing a healthy free snack, we have planted:

Herbs - mint, parsley, sage

Fruits - strawberries, various tomatoes, and chilli peppers

Vegetables - courgettes, lettuce and sugar snap peas

We also wanted to utilise the space at the front of the office so have introduced a seating area for outdoor meetings, we used a large, recycled drum for the table with four smaller drums for seating which is extremely effective and comfortable and is being regularly used! We had the idea to make cushions from recycled PPE which we stuffed using



plastics and bubble wrap from deliveries.

We have reused an old wheelbarrow as a planter with some lavender and petunias to attract bees, butterflies and insects as well as an old hard hat from the recycled PPE Bin in which we have planted some sweet peas.

We also used some cones which were going to be recycled; one as a planter, the other as a hanging basket and planted some marigolds which are vibrant orange.

We also wanted to include our branded colours at the entrance of the depot so we utilised some planters which were donated by Milton Keynes Council and planted a selection of red, white and blue bedding plants.

There are additional planters located around the depot with red petunias which look fantastic. This is also an area to attract birds, we have put up a bird feeder and a bird box as well as introduced a bird bath out of a recycled lighting globe.

We have a number of containers (which were donated by our Routine Contract Manager) one has been set up in the garden area to harvest rainwater, providing us with an environmentally friendly water supply for watering our plants around the depot so we can avoid using water from mains. The other has been set up as a compost bin with the introduction of food waste caddies situated in the three kitchen areas in the offices, all waste will be taken to the compost bin daily along with any waste from our plants e.g. weeds / dead heading.

MK Snap – (a local charity for vulnerable adults with learning difficulties) have made us a number of bug hotels.



This was an ideal opportunity for us to positively engage with the charity that we have recently built a relationship with – a win-win for both parties (and the insects!). We have displayed information about our 'In Bloom' Project in the reception area which describes everything we have introduced, including the information cards about the produce / plants to ensure all staff are made aware of how to care for them.





## SARGON EMPIRE LTD

### 4 DRAYTON ROAD

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#### INTRODUCTION

In 1899, the house at 4 Drayton Road was a proud, newly built Victorian townhouse. By 2022, the house was crumbling and heading for demolition and rebuilding.

It was derelict, forgotten, and unloved, with portions of the roof and ceilings missing, and knotted ivy sneaking into the house's broken windows. It was last owned by a WW2 soldier who, suffering from the horrors of war, allowed the house to slide into neglect.

Many developers were interested in the plot – but with unstable walls and crumbling brickwork, the obvious way forward was to rip out and rebuild the house.

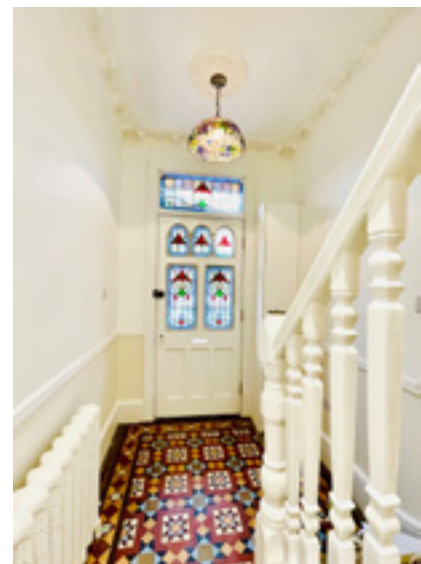
We believe that restoring buildings with proper expertise and correctly skilled tradesman can preserve history, and negates the unnecessary carbon footprint which would be created by a demolition and rebuilding job.



We bought the house. We were under time and money pressures, just as any developer would be. We had a three-month timeline and a tight budget.

We were also in our early 30s, recently moved to London from abroad, and had just started a fledgling property development company.

This would be our 3rd project. We employed a builder and a brick restoration specialist to stabilize the red-bricked fascia of the house. Over 250 bricks were replaced, and the replacement bricks were sourced from recovered bricks of a similarly aged building.



An expert in lime-plaster repointing completed a full restoration of the façade to its original beauty. Due to over a hundred years of rain and frost, every other house on the street had rendered over the original house façade.

This house was the last original Victorian red-brick and white stone façade, and it was now repaired. A stonemason repaired the damaged masonry work on the house's fascia, including re-creating a pointed star detail that was missing but could be seen from old photographs of the house.

The stained glass windows were already missing, so we scoured the local neighborhood to understand the style that was typical of the time of building this house – 1899, and then we re-created the design with a traditional stained glass maker.

Some aspects we completed ourselves, such as the cleaning and polishing of the traditional entrance hallway tiles. Additionally, we used plaster to repair sections of the original cornices and covings in a painstakingly time-consuming process.

In terms of sustainability, the roof was rebuilt using a breathable membrane and insulated with over 50cm of latest insulation technology. The brickwork was waterproofed using a modern breathable polymer to assist with preserving structural integrity and thermal insulation.

Windows were replaced in identical sash style, but with thick thermally insulating glass – this was critical as much of the front façade of the house comprised of huge windows.

The project was completed at the 3-month deadline – just. The stained glass paneling, delicate tiled entrances, and intricate stonemasonry on the face of the house are now enjoyed by a family who rent the house. It now stands proudly once more, as it did in 1899.





## SAUDI ARAMCO

### ABU ALI FISH HATCHERY AND MANGROVES LAGOON

#### INTRODUCTION

Saudi Aramco Oil Company is constructing advanced (utilizing latest technologies) Fish Hatchery that can serve also as Research & Development Center brood stocks genetics, Fish Health Programs, Nutrition's Studies (study for improvement of fish production by testing different ingredients).

Water quality assessment studies in Abu Ali Island, north of Jubail City. This Fish Hatchery is the first of its kind in-land in Saudi Arabia. This new Fish Hatchery will replicate Fish Natural Live cycle under controlled light and water temperature.

Abu Ali Fish Hatchery is an environmental offset project (falling under marine finfish aquaculture) initiated by Manifa causeway Projects Department of Saudi Arabian Oil Company. The Manifa project was one of the most challenging projects of Saudi Aramco as it involved construction of essential Company infrastructure in a unique natural environment.

The challenge consisted of simultaneously achieving industrial objectives and preservation of natural marine habitats and their associated ecosystems.

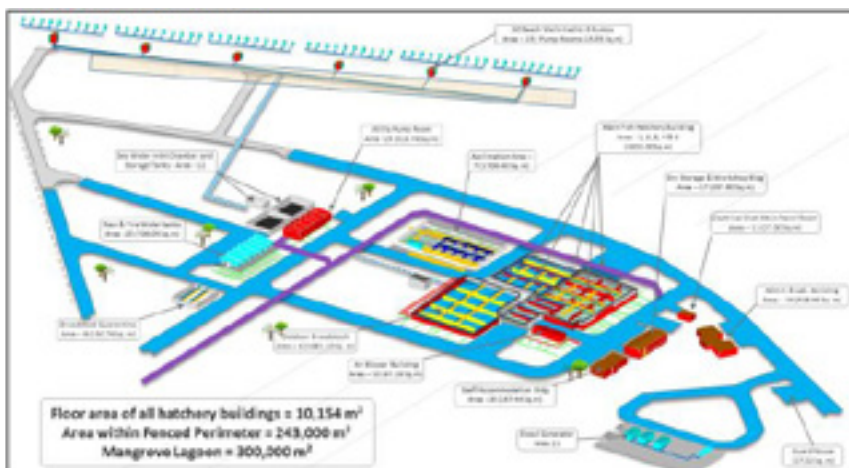


Aim of the Project is to produce/cultivate endemic fish species through a complete life-cycle process, starting with the wild caught brood stock and ending with the release of the juvenile marine fish in the Arabian Gulf waters.

Endemic fish that are in decline in the Gulf due to fishing pressure will be produced and released into open oceanic waters.

#### Objectives of the Project include:

- enhancing the population of native fish stocks
- preserving the Arabian Gulf biodiversity and
- supporting the local fisheries.



Construction of the facility is currently underway on the north shore of the island of Abu Ali which lies northeast of Al Jubail residential area, Kingdom of Saudi Arabia.

About the Project: The Fish Hatchery is planned to produce four different species at an annual production rate of approximately eight million juveniles.





### IN DETAIL

#### ABU ALI FISH HATCHERY MANGROVE LAGOON PROJECT Summary:

- **Supporting Strategic Environmental Stewardship initiatives of Saudi Aramco:**

In line with Saudi Aramco environmental stewardship strategies and to support the Corporate green initiative goals, a 200,000 Mangrove plantation activity in the constructed lagoon within the LUP (Land Use Permit) of Marine Fish Hatchery in Abu Ali Island, KSA, covering an area of 300,000 sq. m, was undertaken in the last quarter of 2014.

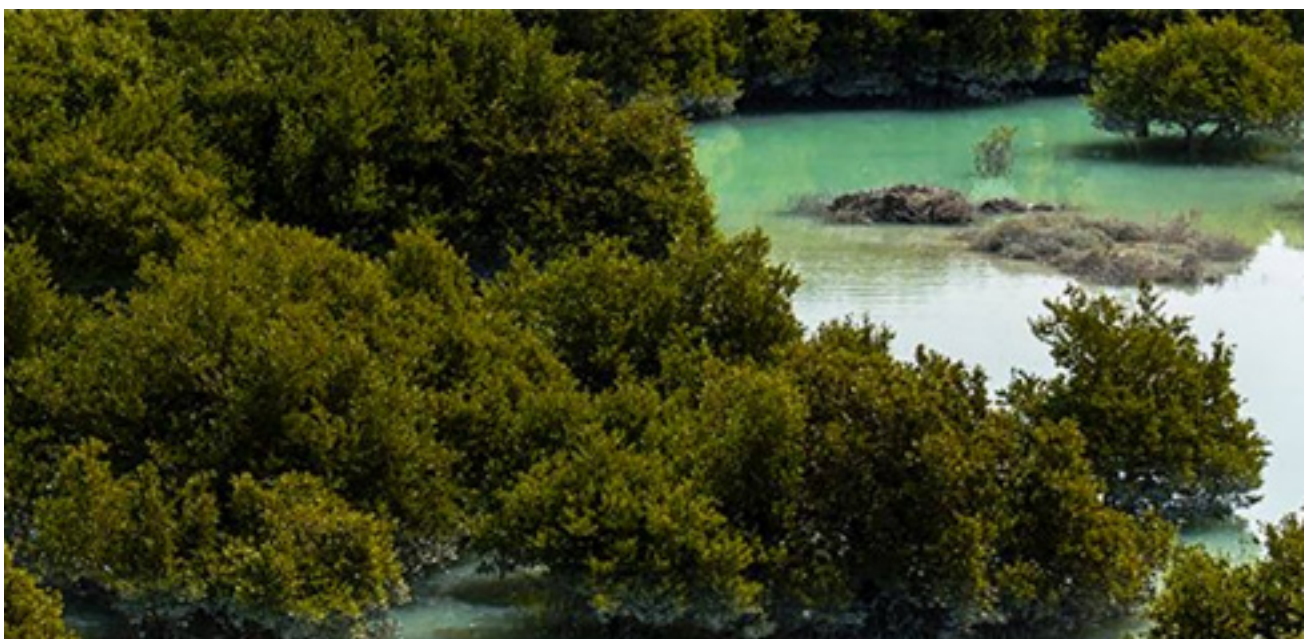
Construction of a lagoon within fish hatchery premises was the outcome of a preliminary scientific study which was aimed to evaluate different discharge options for managing the effluent sea water from the fish hatchery and those that offer minimal environmental foot print/impact to the Arabian Gulf waters.

- **Objective:**

The initiative was undertaken with an intent to achieve complementing benefits to the environment in terms of: a) enhancing native fisheries population and b) conservation (afforestation) of mangrove plants that had been a target of destruction by human interventions/construction activities.

- **Achievement:**

The achievement is creation of a sustainable growing mangrove conservation and biodiversity habitat (consisting of *Avicennia* species) within the lagoon of the Fish hatchery premises, that is not only serving as a “tidal sanctuary” to marine wild life but also is in a position to support sustainable seafood production and juvenile release activities of the Fish hatchery.



## SAUDI ARAMCO - MANIFA PRODUCING DEPARTMENT

### MANIFA PRODUCING DEPARTMENT'S ENVIRONMENTAL EFFORTS

#### INTRODUCTION

Manifa is the world's 5th largest oil field and the world's largest offshore crude oil project built in a single phase. It has a several manmade island that are fully integrated with energy power generation to articulate harmony of academia, technology, engineering and architects.

Elevation of performance and delivery of energy to the world is interlinked with the articulate adoption of IR4.0 and the interconnection of all infrastructure (production, processing, operation, stabilization and power generation, etc.).

Manifa field includes a broad spectrum of environmental conservation and protection of the marine life and coastal areas. The field development has been granted with a great number of first worldwide custom fit technologies that mitigate the complex and sophisticated development and reached various world records.

The world's 5th largest oilfield development has the most unconventional strategy of introducing man-made islands to preserve the environment with ZERO routine gas flaring and self-sufficiency in generating electricity.

Manifa's success and the team's meticulous steps taken in protecting the environment can be recognized from the fact that a prestigious organization like National Geographic made a movie about Manifa project.

Further details can be found in the Manifa Story and Manifa book where every grain of sand and every drop of water tells a story. The team did not stop at this level, where they deployed several initiatives recently in Manifa to enhance further the environment in line with its Manifa Green Strategy and Environmental Focus.





### IN DETAIL

Manifa is one of the kingdom's most biodiversity regions. It has a wide range of Eco-zones like desert, highlands, plains, grasslands and beach. It is a home to several mammalian, birds, reptilian, amphibian, fishes, coral reefs, and several flowering plant species.

The region is also heavily influenced by weather fluctuations that cause major seasonal changes in vegetation and habitat. Manifa Producing Department (MPD) has provided and implemented creative, innovative solutions and initiatives that balance social, economic and environmental concerns in a professional manner, using modern technologies and concepts.

#### **Here are some of MPD environmental initiatives:**

***1) Manifa Decarbonization initiatives: In line with MPD efforts to minimize the carbon footprint and reach the net-zero, MPD implemented several initiatives that will contribute positively in reducing the department Green House Gases***

#### ***(GHG) emission by the following:***

- a) MPD implemented a zero-flaring initiative at MPD offshore oil platforms. This initiative led to recover around 4,300 barrels and minimized the impact on the by reducing the yearly CO<sub>2</sub> emissions.
- b) In order to reduce the environmental impact of released emissions and to conserve the gas, the idea of The Flare Gas Recovery System was introduced.

The system consists of Compressors with a capacity of 3 MMSCFD. The gas is compressed and routed to a separator prior to sending the gas to the Suction of the Atmospheric Compressors. Currently, the system recovers 0.03-0.06 MMSCFD.

Manifa team didn't stop at this stage but went even further by evaluating the possibility to recover additional gas. And an opportunity was realized by the Team to utilize Nitrogen which is generated here in the facility as purge gas for the flare stack instead of Fuel Gas.



The additional recovered gas by utilizing Nitrogen instead of Fuel Gas is 0.1 MMSCFD which is equivalent to around 130,000 \$/year. The recovered volume during 2021; is 307 MMSCF, and 492MMSCF during 2022 YTD.

- c) MPD completed the development of steam system optimization model. This will help MPD to proactively monitor energy efficiency performance and evaluate potential savings in energy consumption through real time operational modifications.

The study shows a potential benefit exists through boilers load management, and excess steam reduction to improve systems thermal efficiency by 2.1 % and reduced the emitted CO2 emissions.

- d) MPD has deployed Advanced Process Control (APC) in collaboration with Process & Control Systems Department at Khursaniyah Producing Facility stabilizer column where it aims to minimize energy and maximize production.

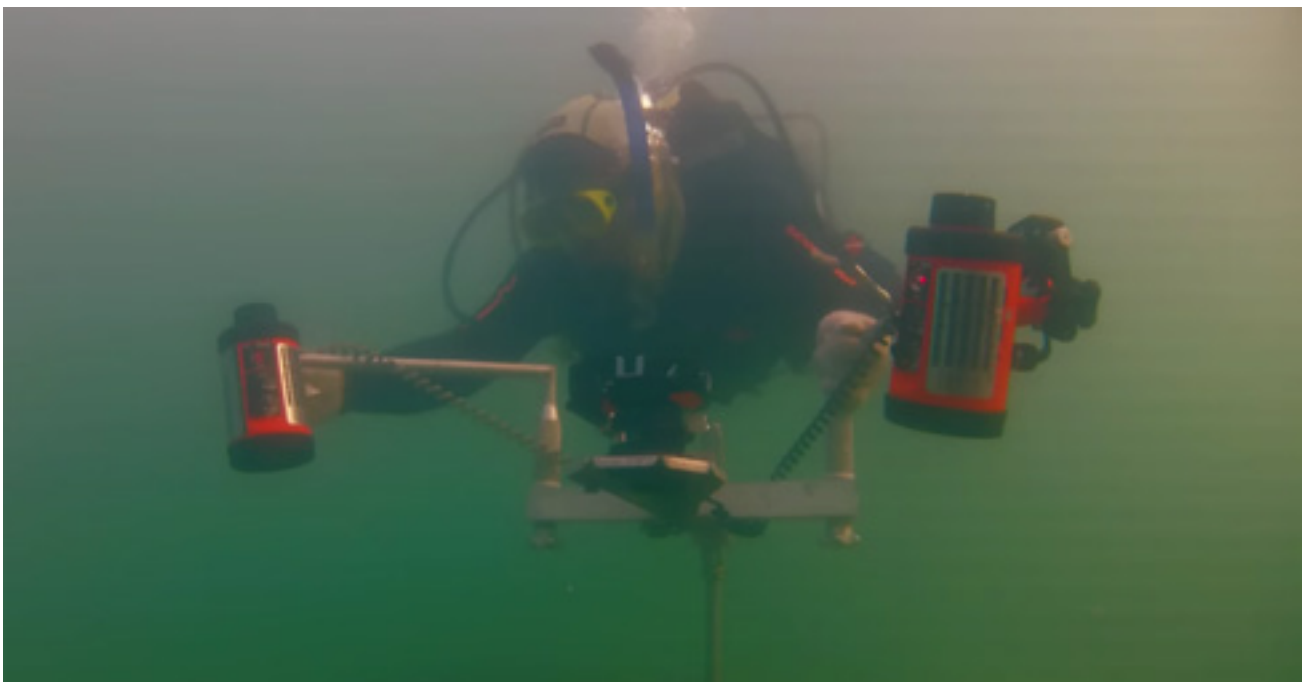
This initiative has a cost revenue of \$10.5 MM/year. And deployed the APC at Manifa field where it will enable MPD to reduce the power demand by 5.2 MW which reduced the CO2 yearly emissions.

- e) MPD is operating the entire offshore water injection platform (7 Platforms) by utilizing solar panels which reduced CO2 emissions.
- f) As part of MPD green strategy, the department planted mangroves and native trees to offset the emitted emission from MPD's facilities.

### **2) Manifa Biodiversity Protected Area:**

As part of MPD continuous efforts to preserve wild life in its operating areas, Manifa Fenced area which is about 82 square KM, is considered as a Nature Reserve due to the diversity of animals and vegetation species which are protected within.

Manifa Producing has borne the responsibility to protect this area and working hand in hand with EP to innovate environmental enhancement opportunities in the area. Fauna and flora scientists have conducted a baseline survey on Manifa biodiversity sanctuary and Manifa coastal reserve area to identify the kinds of animals and plants available in Manifa and provide the support on how to save these kinds and proper breeding approaches.



The team also conducted several site visits with EP/ Green Energy specialists to expand the biodiversity protected area and put proper action plan to improve and sustain the ecosystem.

### **3) Artificial Coral Reefs:**

In line with Saudi Aramco and government environmental regulations, and as a responsible department in Saudi Aramco, concern for the environment is a long-standing MPD commitment. Since design stage of Manifa facilities, the team considered an environmental protection plan, intended to monitor and control any possible pollution to air, groundwater, land and marine environments and ensured that the facilities are designed and operated in an environmentally responsible manner.

Rocks and boulders which were laid for the construction of the causeway have resulted in acting as an artificial reef for the coral recruitments. In many instances, divers have recorded rich and luxuriant growth of corals on these underwater structures.

Construction of causeway with several culverts has resulted in an increased flow of currents and flushing to the inner bays which forms the major source of food for the coral polyps. MPD did not stop at that, the department along with Environmental Protection Department deployed several artificial coral reefs in selected locations in the Arabian Gulf to support marine biodiversity and kingdom fisheries resources.

The coral reefs in the Arabian Gulf have suffered numerous impacts from marine and coastal activities such as dredging and reclamation. More recently increased sea surface temperatures impacted the remaining healthy reef systems in the Gulf.

The development of artificial stable reef systems within Aramco marine areas means that new hard grounds are developed increasing opportunities for new coral and reef development and additional new “reef” structure habitat is provided for those species

requiring these complex habitats.

The fact that Aramco areas are no fishing zone means that these reefs will act as protected areas providing stock replacement for other marine areas.

In addition, MPD in collaboration with Environmental Protection (EP) under the Green Energy Program (GEP) has been tasked to deploy Three (3) Mega artificial reefs, based on Saudi ARAMCO’s patented reef design.

Each mega artificial reef will consist of Seven Hundred and Fifty (750) concrete reef modules in three designated locations within and around Saudi Aramco’s Northern Area Oil Operation (NAOO) marine areas in the Arabian Gulf. The objective of this project is to increase coral growth which will result in the development of new blue carbon sinks to offset Company emissions and enhance marine biodiversity.

### **4) Marine Life Monitoring:**

As part of MPD continuous efforts to monitor the marine life growth, MPD in collaboration with EP & KFUPM deployed an underwater camera at Manifa field which will help the department to quantify the benefit of the implemented initiatives in the Arabian Gulf

In addition, to monitor the Undesired oil spill that could lead to an environmental crisis which might resulted to hit sensitive areas in no time, MPD team is in process to install High Frequency radar that can significantly help in mitigating and managing a spill incident.

The function of this technology is to provide a real-time measurement of the direction and magnitude of ocean currents with a range up to 70 km radius. It provides a 2 km grid resolution.

*This technology can be used:*

- a) As a fundamental tool to help building in-house

modeling capability as a part of an integrated system

- b) To backtrack the source of the pollution and spills,
- c) To support marine navigation by displaying the environmental conditions at the entrance of the ports and to the single mooring points during loading the fuel,
- d) As an indication for fishery zones,
- e) For many scientific researches regarding the relationship between the phytoplankton blooms and the spatial processes ruling their dynamics, and
- f) Research and rescue by providing a real-time of the current directions and magnitude.

***5) Mangrove and Trees Plantation: In line with the kingdom and company green vision, MPD inaugurated its GO GREEN strategy.***

The strategy aims to accelerates Manifa's transformation toward achieving the excellence level in Manifa environment stewardship. Moreover, MPD

commenced the trees plantation campaign on 2022 under the theme of "Manifa GO Green".

The campaign was inaugurated to reduce carbon emissions and contribute to global efforts for a healthier environment, halting desertification, and enhancing biodiversity. It is worth to mention that MPD is maintaining a biodiversity protected area or sanctuary of an area of 82 square KM, which enabled MPD to protect 41 different plant species and 85 animals' species.

Moreover, MPD planted a total of 5,000 mangroves in 2022 & 1,000 native trees, with an upcoming vision to plant 2 million mangroves by end of 2023.

Manifa since early stage placed a major focus on environmental during its facility early design stage, and it did not stop there.

Where Manifa shows high commitment by continuing its journey to sustain and improve its environment by deploying environmentally friendly technologies and initiatives.





## SEOCHO-GU DISTRICT OFFICE

### RESTORATION OF YANGJAECHEON STREAM TO ACHIEVE PEACEFUL COEXISTENCE WITH NATURE

#### INTRODUCTION

**To:**

- 1) undo the damages caused by an artificial, human-centric design by transforming Yangjaecheon Stream into a place that exists peacefully alongside/minimizes damages caused to nature and
- 2) consistently maintain the stream through conservation activities conducted jointly with locals.
  - Stream's water quality improved by planting flora that promote water purification, such as amur silvergrass and fountain grass, thus achieving coexistence with various fish and bird species (e.g. carp, crane, mallard, egret).
  - Raised awareness of the need for conservation and increased interest in the stream's ecology through interactive programs.
  - Restoration of stream to natural state minimized flooding-related damages and reduced the cost of installing artificial features.

damages to nature, including expert consultation on stream restoration, Seocho-gu District Office decided that the stream's artificial features were the primary cause and thus planted reeds (e.g. amur silvergrass, fountain grass) as a means of reducing flood damage while simultaneously restoring the stream's natural ecosystem.

Reeds absorb heavy metals such as copper, cadmium, and lead, preventing them from seeping out into and polluting the soil. Reeds also release oxygen into the soil, which oxidizes it. This promotes the breakdown of nearby microorganisms and strengthens the soil, which in turn helps prevent streambed erosion.

A total of 15,036 square meters' of reeds were planted as of this June, restoring the stream to its natural state and creating a pleasant environment in which locals can relax and enjoy nature inside the city. The stream's identity as a place of true human-nature coexistence was enhanced by the arrival of wild birds such as ducks and egrets.

#### IN DETAIL

Yangjaecheon Stream was initially operated with a focus on flowers (spring: rape blossoms; summer: great scarlet poppies, baby's breath; fall: Mexican aster) for locals to enjoy year-round.

In August 2022, intense flooding damaged the artificially-made flower beds and caused soil erosion.

Based on various research efforts to identify the cause of such



Furthermore, the expanded operation of the Slow Tour of Yangjaecheon Stream (STY), a resident-participatory environment education program, instilled in children and their parents the importance and value of environmental conservation by allowing them to explore Yangjaecheon Stream.

STY enables the consistent maintenance of the stream by allowing residents to directly participate in purification activities, including throwing EM (effective microorganism) mud balls; feeding ducks, which supply the fertilizer for aquatic plants; and releasing loaches, which cleanse the stream by releasing oxygen into the streambed—all of which improve Yangjaecheon Stream's water quality. Due to STY's popularity, operation of the tour was expanded to weekends and national holidays in addition to weekdays.

Efforts are still being made to create more opportunities for residents to participate in environmental conservation through STY.

### **\*WHAT DID THE PROJECT INVOLVE DOING?**

Expert advice and consensus among residents on necessity of stream restoration - Budget creation and construction work for stream restoration  
- Resident participation through operation of

interactive programs to maintain restored ecosystem

### **\*WHY DID YOU DO IT?**

To create an eco-friendly stream where humans and nature coexist by addressing damage caused to the stream's natural features by flooding in the summer of 2022 due to human-centric stream design.

### **\*WHAT DID IT COST AND WHERE DID THE MONEY COME FROM?**

Budget: KRW 977,703,000 (Restoration: KRW 905,203,000; Interactive education: KRW 72,500,000) - Budget acquired from Seocho-gu

### **\*IF QUANTIFIABLE, WHAT DID THE PROJECT ACHIEVE IN TERMS OF SUSTAINABLE DEVELOPMENT, ECONOMY, ENVIRONMENT AND/OR EQUITY?**

#### ***Environmental:***

Preserved natural surroundings and minimized flood damage by planting reed species that satisfy the stream's needs. The wild bird population (e.g. duck, heron) more than doubled due to water quality improvement achieved through the introduction of reed species and operation of interactive programs.

#### ***Financial:***

Reduced annual budget by approximately KRW 100 million (previously used to create flower beds).

#### ***Developmental:***

Improved residents' perception of environmental conservation through restoration of the stream's natural features and operation of STY. Achieved significant improvement in water quality and stream maintenance.



### \*WHO AND WHAT BENEFITED?

Stream's water quality was improved from Grade 5 to Grades 2 to 3 by removing pollutants through the planting of reeds and STY activities.

Provided residents a stream that is free of unpleasant odors and clean enough to serve as a habitat for diverse life forms.

### \*LONGER TERM BENEFITS?

Decrease in annual budget in several areas, including flower bed creation (approx. KRW 100 million) and restoration work after flooding (2022: approx. KRW 2 billion). - Creation of urban setting in which people and nature can coexist in a healthy manner via restoration of the stream's water quality.

Establishment of culture that is conducive to environmental preservation through the operation of interactive programs that teach children about the environment's importance and value.

### \*WAS THERE ANYTHING INNOVATIVE ABOUT THE PROJECT?

Created an eco-friendly stream and a clean natural environment for residents in a short timeframe through timely response to stream damages (e.g. expert consultation) and a generous budget. Gave a home to wild animals that had lost their habitat due to human development.

Spread awareness of environmental conservation among young people through water purification activities (e.g. throwing EM mud balls, releasing

loaches) and provision of education in an urban setting in which participants can fully experience nature.

### \*CAN OTHER ORGANISATIONS/COMMUNITIES BENEFIT FROM IMPLEMENTING YOUR METHODS?

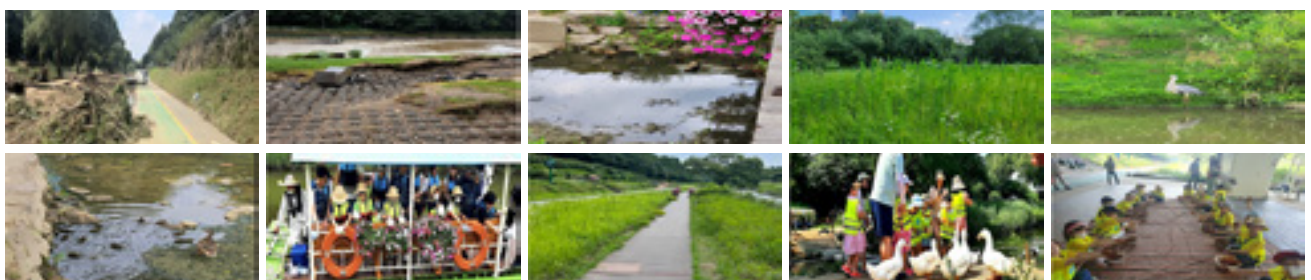
#### *If replicated by other districts:*

- 1) Inner-city stream can be turned into an eco-friendly one that suffers only minimally from natural disasters.
- 2) Children who have little opportunity to experience nature can be offered the chance to receive environmental education and understand the value of nature.

### \*WHAT DID YOU LEARN FROM THE PROJECT AND ARE YOU PLANNING ANY FURTHER DEVELOPMENT?

Severe flooding in 2022 made it clear that Yangjaecheon Stream needed to be turned into an eco-friendly space through plants that satisfy the stream's needs as well as a place where people and nature can truly coexist through efforts to improve water quality and minimize potential flooding damages.

These maintenance and restorative efforts will be accompanied by long-term education (STY) on nature and the importance of human-nature coexistence. Ultimately, the goal is for Yangjaecheon Stream to become known as an eco-friendly stream not only in Seoul and Korea but internationally as well.





## SIEMENS MOBILITY

### EAST COAST DIGITAL PROGRAMME - NORTHERN CITY LINE

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#### INTRODUCTION

The aim of this project was to deliver environmental enhancement to the local ecology centre to restore their natural meadow land. This was very important as the centre neighboured our depot site and were instrumental throughout the project.

Providing support was a way to give back and to also act responsibly by meeting our biodiversity net gain objectives. Through this project, we were able to surpass our target of 20% net gain biodiversity and actually achieved a biodiversity net gain of 31.5%.

#### IN DETAIL

##### What did the project involve?

On Monday 6th –7th June, our Northern City Line (NCL) project team completed an environmental enhancement project at Gillespie Park LNR. Despite the lack of staff and pressures from other projects, the team worked very hard to ensure an action plan

was in place for the works.

This included appropriate health and safety paperwork and the logistical arrangements around resources, which were all considered with constant consultation with the ecology centre.

Time constraints meant that we had no choice but to complete the works during bird nesting season.

However, the qualified staff at the ecology centre closely monitored the area leading up to the works, ensuring there was no evidence of nesting birds, slow worms or amphibians. The team also followed a cautious approach during the devegetation under the watching brief of the ecologist. The public footpath was closed, and the vegetation was cleared at metre intervals giving any wildlife present time to disperse.

Once the initial strimming of vegetation was complete, the team used a digger to uproot the remaining brambles to reduce the chance of regrowth. The area was then fenced off to protect the sensitive habitat and allow natural regeneration.





Meanwhile, we also arranged a volunteering Day the following week to continue the enhancement works elsewhere in the park. The day was attended by our project managers and other office-based colleagues, which was a great opportunity for them to get out and do something different. Using tree poppers loaned from Nature Conservation Services, we removed an area of blackthorn that had become dominant to encourage the regrowth of the natural meadow habitat.

### **Why did we do it?**

Siemens has a long-standing relationship with the ecology centre at Gillespie Park, sharing an access road to our Drayton Park depot. The centre was often hired during weekend works and was instrumental to key milestones of the project. These activities enabled Siemens to give back to the ecology centre, while also providing an opportunity to increase biodiversity units.

Due to the 97% decline in UK wildflower meadows since the 1930s, this project was also important from an environmental perspective.

As part of the wider programme, we have an objective to leave a legacy in the areas where we operate. From previously participating in STEM

events at local Schools, these activities also helped to maintain and strengthen our ties with this community.

### **What did it cost and where did the money come from?**

Siemens donated around £5,000 in materials, manpower and machinery to deliver this enhancement project. Wastewise also provided a free waste collection service for the works and RJC Plant Hire Ltd also saved us £2,000 by offering equipment, fuel and transport (delivery and collection) free of charge.

### **What did the project achieve?**

With ongoing land management from the eco-centre ensured, we were able to surpass our target of 20% net gain biodiversity and achieved a biodiversity net gain of 31.5%.

### **Who and what benefitted?**

The Islington Ecology Centre or Gillespie Park Nature Reserve relies on income from public use to fund ongoing maintenance works. These were severely impacted by COVID 19 and without our involvement, the works would not have taken place.



From the decline of meadow habitats previously mentioned, these works will also help to retain the diversity of habitats at the park. This is crucial to the 244 species of plants, 94 species of birds and 24 types of butterflies that live there.

Biodiversity conservation not only benefits the local fauna and flora, but it also provides social benefits to community members of all ages. Through our donations and interaction with the local Garden Classroom scheme, we know that communities use and enjoy the reserve both recreational and as an educational facility.



Our involvement has ensured this continues and is even more significant due to the scarcity of green space in this London borough.

### **Can other organisations/ communities benefit from implementing your methods?**

Thanks to our involvement, the centre now has links to services that offer the tree popper tools for ongoing land management. This would not have been viable previously, as the tools are very expensive.

### **What did you learn and how will you apply this?**

This was my first time delivering a major environmental enhancement project and I learnt a great deal from the experience. Involving the key stakeholders was key to the success of the project. I did this by arranging site visits to the area and encouraging collaboration between my project team and the staff at the ecology centre.

The role of the ecology centre in the delivery of the Northern City Line project made this easier,

as relationships were already established by the time we came to arrange the environmental enhancements.

This is something I will take into other projects. Meanwhile, another key learning was understanding the barriers to delivering these kinds of projects. Unfortunately, I encountered a lot of obstacles that made the experience frustrating at times, but I now notice these earlier and have found ways to overcome them.

For example, environmental enhancements opportunities have already been identified on another project of mine, but these have a clearer scope and so is easier to commit to. From the patience of our ecologist, I also understand biodiversity units a lot more and how biodiversity accounting works.

I was able to calculate the habitat units that was attributed to our works and how this reflected on our project. This is invaluable for my involvement in future projects, and I can better judge what needs to be done to achieve our biodiversity net gain targets.



## **SOBHA REALTY**

### **DRIVING SUSTAINABILITY AND CLIMATE ACTION IN THE BUILT ENVIRONMENT THROUGH A HIGHLY EFFICIENT BACKWARD INTEGRATED MODEL**

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#### **INTRODUCTION**

Sustainability of the built environment has gained enormous significance largely fuelled by the climate change crisis that threatens the very existence of the planet.



The fact that it is responsible for over a third of emissions have sounded the alarm bell for serious global actions. Nations are setting net-zero goals to bring Paris climate deal to fruition and major businesses are following suit to decarbonize their sectors. Sobha realty a leading player in the real estate development in the region is taking momentous steps in this direction through its vision, passion, leadership, commitment, and conviction to sustainability.

Sobha Realty's unique and extremely innovative "Backward Integrated Model" encompassing all the facets from design to operations has generated a spectacular sustainability synergy so much so that the topic was taken at a Harvard study.

This resulted in the best resources efficiency at the best price, quality and time. Sobha's leadership is fully conscious of the need to combine mitigation and adaptation to effectively fight climate change, and its long-term sustainability programs are well complimented by several time bound emission reduction strategies and adaptation programs.

Sobha believes that sustainability is no longer an option but a necessity for businesses to be in business and is committed to support UAE with its 2050 Net Zero Strategic initiative. Its vision is to leave behind a legacy that promotes a safe and

clean environment for future generations.

Sobha had recently signed up to support the TCFD thereby becoming the 8th company in UAE and the 3rd company in Real Estate development to do so. By supporting the TCFD, Sobha has joined a cohort of leading companies committed to acting against climate change

#### **IN DETAIL**

Sobha at a glance. Sobha Group was founded in 1976 by a first-generation visionary entrepreneur, Mr. PNC Menon, Chairman & Founder, and is a multinational Developer with developments and investments in UAE and India.

With exposure of over 45 years in Middle East, the Group has land holding of over 22 million sqft. and 29 million sqft. of Gross Floor Area (GFA) in Dubai. As an international luxury property developer, it is committed to redefining the art of living through sustainable communities.

From its humble beginnings as an interior decoration firm, the company has grown its presence with developments and investments in the UAE, Oman, Bahrain, Brunei and India.

Over the last four decades, it has also redefined the real estate value chain by leveraging its inherent in-house capabilities of conceptualisation, design and development including its flagship development Sobha Hartland, a luxurious freehold community spread across eight million square feet in the heart of Dubai.

### Objectives

Sobha's objective is to be the most trusted and respected real estate organisation both regionally and globally, in terms of quality, craftsmanship, delivery and sustainability. It aims to a developer that judiciously blends sustainability and luxury in order to drive resilience across its portfolios. It has succeeded in this endeavour by developing portfolios that excels in sustainability pertaining to energy efficiency, water savings, circularity principles, nature-based solutions, and resource consumptions to name of few.

As the adage “proof of the pudding is in the eating” goes, Sobha has relentlessly advocated “performing buildings” that ensures that a built asset truly

delivers what was committed in the design, lest there would be a loss of credibility.

Sobha has witnessed significant environmental benefits in several of its verticals which are listed in the attached documents.

### Sustainability & Sobha's Philosophy

Sustainability requires a multi-disciplinary integrated approach that broadly underscores the need to plan the developments in such a manner that it addresses the needs of the current generation, without compromising the ability of the future generations to meet their needs. This has gained a huge significance largely fuelled by the climate change crisis that threatens the very existence of the planet.

Anthropogenic (man-made) greenhouse gas emissions driven by unprecedented fuel consumption and unsustainable growth are largely blamed for the climate change that has resulted in global warming.





This phenomenon is well reflected in erratic climate scenarios including flooding, hurricanes, droughts, forest fires, sea level rises, melting of glaciers etc not to mention the havoc it is wreaking on vulnerable communities, food security and health.

Put in a nutshell, climate change has manifested into an existential risk that cannot be neglected by nations and businesses. Nations have woken up to this grim reality and have come to a broad consensus through Paris climate agreement, to undertake phase wise carbon emission reductions and to reach net zero by 2050 so as to avoid the temperature rise beyond 2 deg C by 2100.

Major businesses are following suit to decarbonize their sectors – be it power, transportation, industries, real estate or finance.

A net zero journey has already begun and is gaining momentum globally. Built environment occupies a unique position in that they are responsible for over a third of global emissions. We at Sobha are fully conscious of our responsibility in this sensitive sector and are committed to addressing it and leaving behind a legacy when it comes to sustainability of the built environment. Sobha Realty has also redefined the real estate value chain through “Backward Integration”, which is a case study at Harvard Business School, by leveraging its inherent in-house capabilities of conceptualisation, design and development.

Sustainability is deeply ingrained into Sobha’s philosophy which is well reflected in its masterplans and developments contained within. The company strongly believes in taking a highly holistic and inclusive approach whereby key environmental

and social metrics such as energy, water, waste, wellness, community development, climate resilience, open spaces and several others are adequately embraced right at conceptual phases and well governed.

This vision and approach are articulated with full efficacy across its business verticals right from the leadership to its personnel on field.

### Achievements

1. One of the greatest achievements of Sobha is the conceptualising, structuring and establishing of a highly innovative and forward-looking unique business model of “backward integration” comprising a healthy ecosystem from development to community management.

Being the foremost backward integrated company in the world has greatly assisted Sobha to achieve high growths consistently and further sustain it. Sobha Group stands apart from the rest of the real estate developers by having all the key competencies and inhouse resources to deliver a project from conceptualization to completion.

Our design consultancy arm, PNC Architects, boasts over 200 professionals from the fields of interior design, architecture, structural, MEP engineering & landscaping who continually explore the finest of trends from across the globe and incorporate it into our projects.

This studio is like brain of the organization where creativity and pioneering thought processes germinates.



Our contracting arm, Sobha Constructions LLC's primary capability areas encompass - foundation, formwork, masonry, concreting and roofing works. This ensures that we do not rely on outsourcing to third party contractors and eliminates the likelihood of contractor defaulting which is known to plague many real estate projects.

The secondary capability areas include the MEP division (mechanical, electrical and plumbing) which takes care of all lighting, air conditioning, plumbing needs.

In addition to the above, Sobha has its own façade design and manufacturing firm, 'Sobha Facades', our facilities management organization, 'Latinem Facilities Management' and our own furniture and joinery company, 'Sobha Furniture'.

These companies, just to name a few, comprise of the entire backward integrated ideology of the company that has allowed Sobha to become a renowned name in real estate. - Quality has always been the ethos at Sobha at every level. By having a backward integrated model, it has able to control the design to limit defects at the design stage.

An autonomous quality control cell works to ensure that even the remotest of defects that might have crept in despite the rigor, are weeded out before the product is presented to our customers. - Sobha has witnessed significant environmental benefits in several of its backward integrated model which are listed as one of the supporting documents.

2. Sustainability is deeply ingrained into Sobha's philosophy which is well reflected in its masterplans and developments contained within. The company strongly believes in taking a highly holistic and inclusive approach whereby key environmental and social metrics such as energy, water, waste, wellness, community development, climate resilience, open spaces and several others are adequately embraced right at conceptual phases and well governed.

This vision and approach are articulated with full efficacy across its business verticals right from the leadership to its personnel on field.

- a. Master plan: Sustainability has always been at the forefront, during the development of Sobha Hartland. Thirty percent (30%) of the total plot area has been allocated to green and open spaces within the community.
- b. Energy savings: As a policy, Sobha ensures that it uses only the most energy efficient and long-lasting light fixtures available in the market. The double glazed thermal and acoustically insulated windows and Rockwool insulated walls act as climate control and result in over 60 percent reduction in solar heat gain.
- c. Renewable Energy: Sobha Realty has a customised safe and energy efficient solar hot water system while recycling stations are situated at the community and recycling bins are provided outside every home.
- d. Water savings: All New projects embed the highest level of water efficiency through high efficiency aerators, low flow / flush products. The existing offices achieved over 70% reduction in water consumption through such measures.
- e. Waste management: Sobha's inhouse FM entity undertakes waste segregation across the community and ensures that recyclable wastes are not dumped to the landfill thereby thwarting potential contamination and landfill strains.

The innovative single stack system has brought in enormous benefits in terms of reduced material consumption, reduced wastage, reduced strain on landfill and in the process reduced overall GHG emissions by an average of 50%.

- f. Community development. Sobha's philosophy on sustainability is at a very holistic level going beyond the built environments.

Accordingly, it has ensured that its actions bring in benefits to the wider society in terms of

developing promoting community development / capacity development, social benefits, Sobha Group is committed in working in a clean and sustainable way that is reflected in all aspects of our work.

Its sustainability approach takes into account the needs of the surrounding community while it strives to conserve natural resource and prevent environmental pollution and taking

- g. Circular economy: Sobha is committed to moving away from Take-Make-Use-Throw linear concept towards circularity and has consciously taken steps to assess its material streams and promote reduce, reuse, recycle, reuse philosophy.

*Few milestones are as below:*

- i. Elimination of paper towels and replacing with continuous cloth roll
  - ii. Streamlining and strengthening construction waste recycling.
  - iii. Exploring kitchen waste recycling.
  - iv. Digitalization to reduce the usage of paper within offices.
- h. Climate Action. Sobha has committed to supporting the governments in achieving net zero and achieving the sustainable development goals (SDGs). Accordingly, it has recently signed up to support the TCFD i. It has completed its ESG (Environmental, Social & Governance) report which would be published very shortly.

#### **Economic benefits:**

- a. In the year 2021, Sobha hit a record sale of USD 1 billion (AED 3.6 billion). For the year

2022, the sales revenue targets have been set to AED 8 billion, and Sobha is well on track to meet those targets.

- b. Owing to the sales momentum and targets, along with major expansion in terms of manpower and organization, Sobha has been able to design and release off-plan units to meet the market demands on time. All current under-construction projects are running ahead of schedule with respect to customer commitments.
- c. Sobha has acquired land parcels with over 16 million sqft. of GFA in the past year. It intends to develop them in a sustainable & environmentally friendly manner, keeping in mind the Dubai Urban Master Plan 2040, and its own plans for a sustainable future Sobha's forward-looking vision coupled with its conviction and commitment has helped it to scale great heights and deliver true benefits (quantifiable as well as non-quantifiable) not only for the organization but far beyond to the society.

True leadership and development of a sustainability,



quality and innovation centric culture have remained central in this journey. These efforts have helped Sobha to become a benchmark for other entities to emulate and implement the best practices.

### Future plans

As the adage “the proof of the pudding is in the eating” goes, Sobha is committed to walking the talk and showing stewardship in sustainability. It strongly believes that long term strategic climate action and goals should be supported and complimented with short- and medium-term sustainability commitments.

As a trusted and respected developer, owner and manager of real estate, Sobha is fully conscious of our responsibility to protect the planet, its precious resources and the people. Sobha strongly believes in value creation all across its stakeholder communities while pursuing its business objectives.

Such a belief has been successfully transformed into true deliverables as a result of which it has earned the reputation of being a trustworthy and respectable entity in the real estate landscape. It plans to intensify it further by outlining several ESG goals which would result in significant benefits.

### Broad elements are as under:

1. Incorporation of clean energy within the community and developments.



2. Optimizing energy and water consumption within its portfolio.
3. Steering circularity through various initiatives.
4. Establishing an innovative sustainability kiosk for driving awareness and building the capacity.
5. Exploring green concrete to decarbonize this sector.
6. Expanding sustainability to its supply chain.
7. Comprehensive GHG gas assessment to help it to measure , monitor and manage the emissions.
8. Sustainability Roadmap with Net zero as part of its core pillar
9. ESG reporting. Necessary supporting documents have been attached as part of the submissions.





## **SWAN CENTRE**

### **REDUCING ENERGY CONSUMPTION**

#### **INTRODUCTION**

This project aimed to reduce total energy consumption onsite through changes to the heating and cooling strategy and a complete review of BMS controls and timer settings. The project focused on both electric and gas consumption in addition to minimising the potential impact on the service charge of the significant increases in the energy market.

The Swan Centres energy reduction project resulted in a 29.7% saving in energy consumption. This equates to a saving of 678,068 kWh and an annual monetary saving of over £130,000. Reductions in energy usage were split over both electric and gas.

Electric usage was reduced by 17.1% saving 201,563 kWh. Gas usage was reduced by 43.3% saving 476,505 kWh.

#### **IN DETAIL**

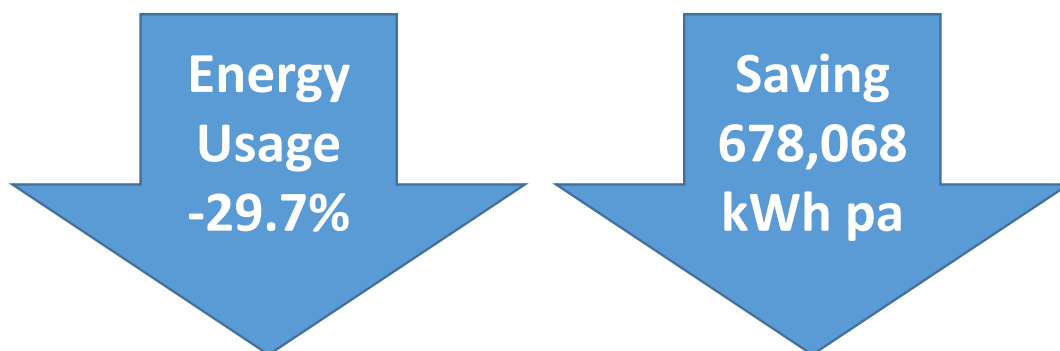
Between May 2022 and April 2023, the Swan Centre reduced its total energy consumption by 678,068 kWh. This equates to an annual monetary saving of £130,490.

The Swan Centre is always looking for ways to reduce its energy consumption. With the ever-increasing pressures on service charge budgets and crisis in the energy markets this year's challenge was to reduce energy consumption without the need for financial investment.



### Swan Centre - Energy Consumption (kWh)

Year	2021/22	2022/23	Variance kWh	Variance %
Electric	1,179,987	978,424	-201,563	-17.1%
Gas	1,099,288	622,783	-476,505	-43.3%
<b>Total</b>	<b>2,279,275</b>	<b>1,601,207</b>	<b>-678,068</b>	<b>-29.7%</b>



To achieve this challenge the team focused on reviewing the Centre's heating and cooling strategy and completing a complete review of the BMS settings and timers.

#### 1) NEW HEATING AND COOLING STRATEGY IMPLEMENTED – MALL AREAS

The Swan Centre was built in 1989 and the heating and cooling strategy is based on an old chilled water system serving 3 large AHUs in Mall 1, Mall 2 and the Octagon.

Chilled water is generated by two Hitachi RCEU 200W G2 condenser less heat pump units, operating in cooling mode.

The circuit incorporates a pair of circulated pumps, expansion vessel and a plate heat exchanger providing heat reclaim rejection to a Versatemp circuit. In addition, the LPHW heating system operates through 2 large Stokvis Type R3405.

Reviewing our energy data, it was clear the mechanical heating and cooling system above accounted for a big percentage of the Centre's

energy consumption. The decision was made to stop using the chilled water system to feed the Mall AHU's.

The AHU controls were updated to optimise fresh air recirculation and night-time purging is used to assist in controlling the mall temperature. In addition, the timers on the AHU's were updated to reduce the run time of the system and maximise energy savings.

#### 2) BMS SETTING AND TIMERS

To support the change to the heating and cooling strategy the links to the chilled water system were updated to stop the mechanical heating and cooling feeding the AHU's.

The AHU settings were reviewed to optimise fresh air recirculation and ensure night-time purging is used to maintain a comfortable temperature in the mall areas. In addition, timer settings for the boilers and cooling towers that feed the tenants Versatemp system were reviewed to significantly reduce run times whilst ensuring we maintained the centres obligation to our tenants with regards to this critical system.

The BMS system was previously upgraded to add daylight sensors to lighting as part of a previous project. This was tested to ensure it was continuing to operate effectively. A number of faulty sensors were identified and replaced to ensure we continued to maximise savings on the lighting system.

### MOVING FORWARDS

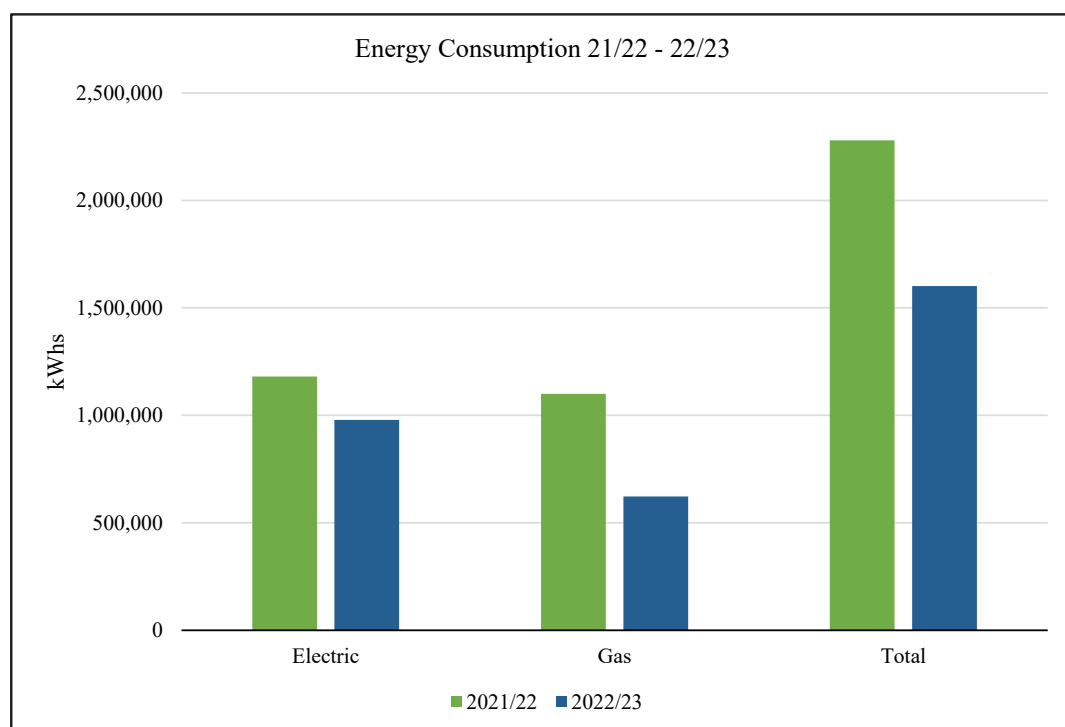
The Swan Centre is always looking for the next initiative to improve its carbon footprint and reduce its overall energy consumption. We have recently instructed a feasibility study to review the tenants heat loop system which is now one of the biggest draws on our total energy consumption. In the next 12 months we will also be instructing a new M&E PPM which will be designed to further reduce energy consumption through a phased approach to plant replacement as well as improving operational reliability.

### SHARING BEST PRACTICE

As well as delivering our reductions in energy consumption, we have also worked with a number of our tenants to improve their energy consumption e.g. approval of unit modernisations and new unit shop fit plans.

EPC ratings continue to improve as our tenants also focus on this shared goal. A case study summarising the Swan Centre's reduction in energy consumption has been put together to enable Ellandi to share this best practice with its portfolio of 28 shopping centres throughout the UK.

The Centre will also continue to engage with the local community, our customers, tenants and suppliers to ensure we work together to achieve our sustainability goals.





## **TCI CO., LTD.**

### **ESTABLISH SUSTAINABILITY DNA FROM THE INSIDE OUT**

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#### **INTRODUCTION**

TCI creates a “green operating system” through corporate governance, product development, manufacturing, marketing, and supply chain.



#### **R&D for Green products:**

TCI develops products such as Clean Beauty Product, Double Nutri Encapsulation Technology, and biomimetic collagen without animal ingredients to reduce climate impact through green product development and manufacturing.

- i. Clean Beauty: Combining 100% traceable plant stem cell culture raw material technology and committing to packaging material innovation.
- ii. Double Nutri Encapsulation Technology: TCI’s encapsulation technology encapsulates all the active ingredients in the liposome has clinically proven to improve absorption efficiency by more than two times.

That is, the product achieves the same effect, as well as fewer ingredients consumed, directly reducing the carbon footprint of the product life cycle.

#### **Green Manufacturing:**

TCI was the 1st Taiwan based company joining the RE100 initiative in 2018 ; joined the EP100 initiative in 2019; and passed the SBTi target audit in 2021.

Currently, TCI installed 1,362kw of solar panels at its Precise iManufacturing Center (Rock Park) and expects to reach 50% green power usage by 2025; also, TCI plans to build its solar power plant and expects to generate more than 7 million kilowatts of electricity by 2024 and achieve 30% green power usage.

#### **Green Marketing:**

TCI invested in digital printing and trackable marketing technology. Digital printing is more energy-efficient and carbon-reducing than traditional printing.

Brand customers can invite consumers to scan QR codes on packaging and hold marketing campaigns on the platform, helping customers go paperless and reducing the carbon footprint of traffic generated by marketing campaigns.

#### **I Green Governance:**

The Chairman of the Board of Directors serves as the ESG Committee Chairperson who convenes meetings quarterly and reports to the Board of Directors at least once a year. The Chairman appoints the top supervisors of each department to participate in the committee.

The professional competencies of the members cover finance and accounting, legal affairs, business, information technology, sustainable development, corporate governance, and human resources.

To conduct comprehensive risk management, TCI also developed a Risk Management Measures in 2021 and conducted risk and opportunity identification based on the TCFD framework

### IN DETAIL

What did the project involve doing?

TCI creates a “green operating system” through corporate governance, product development, manufacturing, marketing, and supply chain.

#### R&D for Green products:

TCI develops products such as Clean Beauty Product, Double Nutri Encapsulation Technology, and biomimetic collagen without animal ingredients to reduce climate impact through green product development and manufacturing.

- i. Clean Beauty: Combining 100% traceable plant stem cell culture raw material technology and committing to packaging material innovation, TCI collaborated with packaging material suppliers to develop 100% biodegradable mask sheets and liners that completely decompose within two months.

The outer packaging utilizes Post-Consumer Recycled Plastic (PCR) from sources that meet the Global Recycle Standard (GRS) or the

German Blue Angel certification and is FDA food contact approved.

- ii. Double Nutri Encapsulation Technology:

Liposome encapsulation technology that breaks away from the traditional liposome, which is expensive and can only add up to 10% of the formula. TCI's encapsulation technology encapsulates all the active ingredients in the liposome, which the National Taiwan University Hospital has clinically proven to improve absorption efficiency by more than two times.

This also means that the dosage of active ingredients to these products becomes more economical and uses much fewer resources - the product packaged from 50ml to 25ml achieves the same effect, as well as fewer ingredients consumed, directly reducing the carbon footprint of the product life cycle.

#### Green Manufacturing:

TCI was the 1st Taiwan based company joining the RE100 initiative in 2018, targeting 100% renewable energy by 2030; joined the EP100 initiative in 2019, targeting a 35% increase in energy productivity by 2040, using 2016 as the base year; and passed the SBTi target audit in 2021, targeting a 51% reduction in absolute emissions in greenhouse gas Scope 1 and 2 and a 15% reduction in purchased goods

and services in Scope 3 by 2030, using 2018 as the base year. Currently, TCI installed 1,362kw of solar panels at its Precise iManufacturing Center (Rock Park) and expects to reach 50% green power usage by 2025; also, TCI plans to build its solar power plant and expects to generate more than 7 million kilowatts of electricity by 2024 and achieve 30% green power usage.



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### Why did you do it?

TCI considers itself a company that “lives in the future,” and the “future” coexists with sustainable development - sustainable development creates value for the entire industry ecosystem. The Company’s internal meetings constantly reaffirm this mindset.

As the first company in Taiwan to join the RE100, TCI provides green products to our brand customers and takes corporate governance, green products, and green marketing as our main strategies.

We also actively refer to several international sustainability rating and disclosure frameworks,



including CDP, DJSI, TCFD, SASB, and others, as our key sustainability guidelines.

### What did it cost?

The project cost approximately NT\$871,196,350 from 2019 to 2021. I Implement ISO certification: ISO14064 greenhouse gas inventory, ISO50001 energy management system, ISO14001 environmental management system, and others, for a stable implementation period from 2019 to 2021, at a total cost of approximately NTD\$1 million. I Cost of MES and supplier platform system integration:

The system integration helps the Company optimize overall management, and the total cost is about 18 million.

Join the International Climate Initiative: SBTi, RE100, EP100 membership fees, and consultancy costs totaled about NTD\$1.5 million.

R&D costs + R&D personnel salaries: R&D costs of NT\$1,580,449,000 and R&D man-days of NTD\$16,041,850.

Environmental protection expenditures: NT\$44,430,000, including the implementation of six energy conservation projects, construction of wastewater treatment equipment and factory wastewater treatment, exhaust gas treatment equipment for the digital printing line, and regular inspections related to environmental pollution prevention.



If quantifiable, what did the project achieve in terms of sustainable development, economy, environment and/or equity?

### Economy

- i. TCI's revenue amounted to \$8.55 billion in 2021; the revenue contribution of green products reached 35%. The featured green product is biomimetic collagen containing no animal ingredients and does not consume marine biological resources. The portion of procurement volume grew to approximately 358% compared to 2020.
- ii. The introduction of the MES system improved production efficiency, reduced waste from abnormalities, and created NTD \$ 44.5 million benefits.

### Environment

- i. Clean Beauty development commits to minimizing the environmental footprint, by using eco-friendly packaging innovation and uses Post-Consumer Recycled Plastic for the outer packaging of the mask, reducing the overall CO2 emissions of the mask bag by 38.5% compared to general manufacturing processes.

Regarding the main ingredients of skincare products, TCI uses plant stem cell technology to extract high purity, high-quality ingredients that are harmless to the environment and human body, significantly reducing dependence on chemical raw materials. It has been formally commercialized and sold to Southeast Asia and Europe.

- ii. Double Nutri Encapsulation Technology is clinically proven to that the active ingredients absorption reached around 233% times after Double Nutri Encapsulation compared

to without Double Nutri. It means drinking a bottle of Double Nutri Encapsulated liquid supplement's effect is similar to drinking 2.33 bottles of the same product dose.

Double Nutri products significantly reduced water use and are reflected in carbon emissions derived from shipping weight; approximately 84.17 g of carbon emissions were reduced per 1000 kilometers for a 30-day serving. In addition, the products are packaged in 70% recycled glass bottles, reducing plastic use by approximately 3.47 tons in 2021. n Equity: 60% of TCI's revenue comes from collagen products.

We significantly increased purchases of Marine Stewardship Council (MSC)-certified sustainable marine raw materials in 2021, such as using sustainable fish collagen ingredient certified by MSC, TCI increased purchasing volume by approximately 358%

### What is the long-term benefit to different parties?

#### 1. Customers:

Under the impact of COVID-19, consumers are becoming more and more health-conscious. The global market for healthcare nutrition products will exceed USD 150 billion in 2021, and the annual compound growth rate is estimated to be 8.9% from 2022 to 2030.





With the trend of European and American countries paying more attention to green manufacturing, the competitiveness of green products is gradually increasing, and the green products made by TCI have brought NTD\$240 billion revenue for our branded customers in 2021.

### 2. Suppliers:

Sustainable supply chain is the source of TCI's business competitiveness. Since 2021, we have provided ESG self-assessment forms to our suppliers and collected 108 responses, with a 100% recall rate from new suppliers.

We recognize suppliers with excellent ESG performance at the Supplier Conference and link their ESG scores to future procurement decisions. We also advocate that suppliers conduct greenhouse gas inventories and climate pledges to enhance their competitiveness in the market through long-term cooperation with sustainable strategies.

### 3. Shareholders:

COVID-19 caused the global supply chain in difficult situations, and sales activities were restricted, resulting in a decline in TCI's revenue in 2021. However, TCI still generated NTD\$160 million of net profit and distributed a cash dividend of NTD\$8.88

per share in 2021, higher than the cash dividend of NTD\$8.84 in 2020.

Was there anything innovative about the project?

### Green manufacturing:

TCI strengthened automation and digitization and built a full range of automated production lines, from filling to packaging, which can be produced unmanned - give the orders in the MES system, materials are discharged from the automated warehouse

in series, and then connected by automation guided vehicles; the combination of AI automated management platform and cloud system streaming data is beneficial to analyze possible deficiencies and achieve goals such as improving production efficiency and in the long-term can help reduce electricity consumption intensity.

For products produced in 2021, the energy consumption intensity was reduced by 37 (from 809 to 772).

### Packaging innovation:

Clean Beauty skincare products are made from naturally fermented 100% biodegradable bio-cellulose mask, and the supporting fabric is also 100% compostable and biodegradable, both of which can be decomposed entirely within two months.

This won the bronze award at the Paris International Concours Lépine 2022.

**Green products:** Double Nutri Encapsulation breaks through the problem of incomplete mixing of water phase and oil phase nutrition in the past, regulate the best ratio of the oil phase and water phase, and has various advantages such as homogenization



stability, and particle size distribution stability, which allows the development of diversified products.

This technology won the silver medal at the 32nd World Genius Convention & Education Expo and the recognition of the 16th National Innovation Award (Taiwan).

What did you learn from the project? Are you planning any further development?

1. Strengthen corporate governance/management resilience through risk management:

TCI conducts risk and opportunity identification per the TCFD framework in 2021 and formulates the Risk Management Regulations to manage the seven major risks at the enterprise level. Through the simulation exercise, we strengthened the company-wide

agile response mechanism and the standard procedures for crisis management at each production site.

2. Building solar power plant, balancing by ecological investigation and restoration:

TCI commits to use 100% green electricity by 2030 and is currently building a water surface type solar photovoltaic (with a capacity of 5MW, expected to be completed between 2024 and 2025) for self-generation by the factory.

To balance the ecology of land and water areas with the development of green power, we expect to use buoyancy devices made of recycled plastic. In addition, we plan ecological surveys and restoration measures around the power plant, hoping further to bring a positive impact on the overall ecology.





## TRUSTGREEN

### BUILDING COMMUNITIES ROOTED IN NATURE

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#### INTRODUCTION

Trustgreen aims to help establish new communities that are rooted in nature, by giving residents the tools they need to build the all-important foundations. We are dedicated to promoting sustainable living and environmental stewardship.

Our focus is on safeguarding and improving native habitats to help combat the biodiversity crisis and allow communities to develop an understanding and appreciation for the wildlife that's on their doorstep.

This in turn brings people together and fosters a community spirit rooted in nature. Communities are hugely important to each and every one of us. It's about feeling connected, having a voice and being part of something which generates a sense of purpose and togetherness.

Our approach provides a greater community awareness of the unique habitats on our resident's doorstep, through community events that support

our goal of safeguarding and improving native habitats to help combat the biodiversity crisis.

#### IN DETAIL

Trustgreen aims to help establish new communities organically by giving residents the tools they need to build the all-important foundations. We are dedicated to promoting sustainable living and environmental stewardship.

In April 2023, we hosted a community day at Prince of Wales, Pontefract in partnership with Haworth Group. Our

community engagement event aimed to foster community cohesion and inspire residents to engage with nature.

We recognise the importance of creating sustainable communities that not only prioritise environmental conservation but also foster strong social connections among residents. With this objective in mind, we organised a community engagement event that focused on promoting environmental best practices and inspiring residents to connect with nature. Our main objective was to build community cohesion by bringing residents together.

We aimed to strengthen community bonds and encourage collaboration in creating a sustainable living environment. We focused on raising awareness and sought to increase residents' understanding of the importance of environmental conservation and the role they can play in protecting and enhancing their local ecosystem.

Encouraging and fostering an interest in nature



was also a key objective. Our goal was to inspire residents' curiosity about the natural world around them, encouraging them to explore and appreciate the local flora and fauna.

### ***The event highlights included:***

#### **Interactive Activities**

We organised activities led by our team of environmental experts, covering topics such as sustainable gardening, wildlife conservation, and biodiversity. These activities provided practical knowledge and inspired residents to adopt sustainable practices in their everyday lives.

#### **Nature Scavenger Hunt**

Families had the opportunity to interact with their surrounding area, encouraging them to discover the diverse plant and animal species that call the public open space home. The nature themed scavenger hunt went down well with both adults and children. Following the completion of the scavenger hunt, children were given a goodie bag filled with eco-friendly prizes!

#### **Seed Planting**

Residents participated in the planting activity, where they planted sunflower seeds in compostable pots, ready to plant in their garden once they got home. This initiative aims to help residents discover a love for gardening and in turn enhancing the local biodiversity - one garden at a time!

#### **Informational Posters**

We set up informative posters showcasing the wildlife that calls the development their home. We created a quiz where children

and their parents could read all about the different species in their local environment and answer questions on them.

#### **Engaging Children**

Recognising the importance of instilling a love for nature from a young age, we organised activities specifically for children, such as nature themed arts and crafts, interactive games, and the scavenger hunt. These activities aimed to educate and inspire the younger members of the community, fostering a sense of environmental responsibility.

Over 50 adults and 60 children were in attendance. The event provided a platform for residents to connect with Trustgreen, their resident association and their neighbours. This helps to foster collaboration and partnerships for future initiatives.

Representatives from Trustgreen were present to share information, answer questions, and provide guidance on sustainable practices. We also ensured that the event's impact would extend beyond the day itself.



We distributed informational materials and resources to residents, including RSPB guides, bespoke bird spotting book and wildflower seeds.

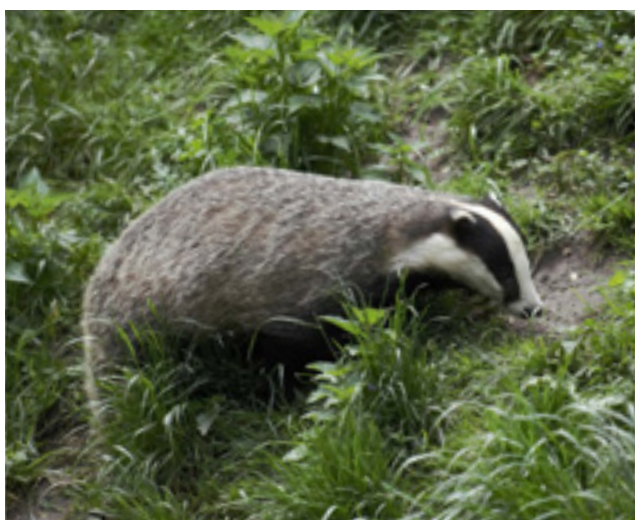
Following the event, Trustgreen received feedback from residents and the resident association. The response was overwhelmingly positive, with residents expressing increased knowledge and enthusiasm for their community. Many residents reported feeling more connected to their community and the natural environment, fostering a sense of pride and ownership in their development.

We believe that Trustgreen's community engagement event on the Prince of Wales development not only promoted the benefits of a community rooted in nature, but also fostered community cohesion and inspired residents to engage with and appreciate nature.

### Testimonial

*"I would just like to update the new committee following our recent POWRA AGM and also pass on thanks again to Rebecca and team at Trustgreen for putting on an excellent community event for residents which was well attended. We have had a lot of really positive comments from residents about it!"*

**—Angela Jarratt - Secretary, Prince of Wales Resident Association**





# Trustgreen

## Open space management rooted in nature

We specialise in delivering a sustainable industry-leading **open space management** service for residential housebuilders and independent developers.

From improving habitats for the benefit of the local community and the wildlife it supports to building a greener, more sustainable future – we maintain the highest level of social responsibility.

We are proud to have been awarded a Green Apple Award for Helping the Environment and to be named a Green World Ambassador by the Green Organisation.

Web [trustgreen.com](https://trustgreen.com)

Phone **01829 708 457**

Email [enquiries@trustgreen.com](mailto:enquiries@trustgreen.com)



## TUSKER UK

### THE GREEN CAR BENEFIT SCHEME

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#### INTRODUCTION

Tusker have gone from being a carbon neutral organisation, to a net-positive contributor to the environment following recognition of our need and ability to do more to negate the impact of our business operations, mindful of the impact that travel emissions has on the world.

Having now offset more than 250,000 tonnes of carbon through a variety of worldwide initiatives, Tusker continues to identify opportunities to do more. We continue to support accredited carbon offsetting, and in addition have undertaken tree planting, as well as protecting the Amazon rainforest.

Supporting our customers to achieve their own net-zero targets remains at the forefront of our objectives and in just 3 years we have reduced our emissions from an average of over 100g/Km CO<sub>2</sub>, to just 32g/Km CO<sub>2</sub> which is testament to our commitment to promoting electric vehicles with our customers.



We are on target to achieve net zero in 2023, seven full years ahead of our original targets and our commitment as part of our EV100 pledge, of which we are a founding member.

#### IN DETAIL

In 2021, Tusker went one step further than “just” being carbon neutral, as we have dramatically increased our focus on electric vehicles, reducing our fleet to just 32g/CO<sub>2</sub> on average. Furthermore, we have offset more than 10% additional emissions

than we are responsible for, to achieve the position of net-positive contributor to the environment through accredited carbon offsetting scheme.

Finally, we are supporting a tree planting and protection scheme where we are planting trees in the UK while at the same time protecting valuable trees and plants in the Amazon rainforest. We continue to review initiatives which will benefit the world as a whole, particularly as business







operations change, we continue to ask ourselves what more we can do.

To celebrate 10 years of carbon neutrality, we planted 200 trees at a local school where we also spoke to young people to make them aware of how their choices can impact their environment as they will be making the decisions of the future.

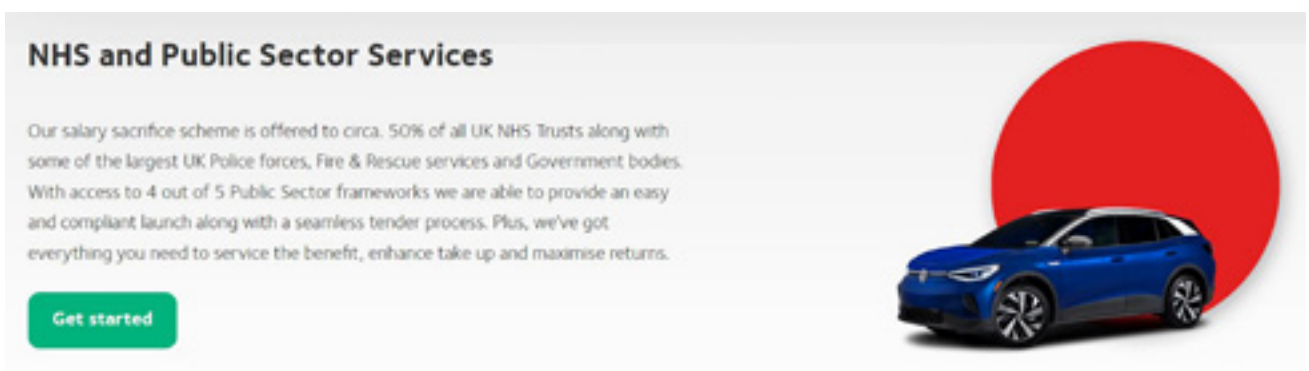
Tusker have always been committed to minimising our impact on the environment but with this new initiative, we feel we are not only offsetting our impact, but actually having a positive impact to improve our environment.

We recognise that travel is a very big contributor to the world's emissions and are actively looking at our activities in order to minimise our impact. We had previously moved to zero-emission offices and modified our working practices to minimise our travel and waste as an organisation, and we are now supporting our customers with our new position as a net-positive contributor to the environment.

Many of our customers are aiming to reduce their carbon footprint, and their transport fleet is one way they can do that. We're proud to be a provider of choice for hundreds of companies in the UK who now benefit from a carbon-neutral fleet as a result of our services.

We are a founding member of the EV100 which is a group of companies worldwide, committed to reducing our impact on the environment and lobbying governments to continue to support companies in their transition to net zero. We have now offset more than 250,000 tonnes of carbon through these initiatives, removing thousands of petrol and diesel polluting vehicles from the UK's roads and have swapped them for 0-emission or low emission vehicles which are having a substantially lower impact on our environment.

This means, we are now aiming to achieve net-zero in 2023, 7 years ahead of our original target of 2030. Uniquely, we are the only net-positive contributor to the environment within our industry, having



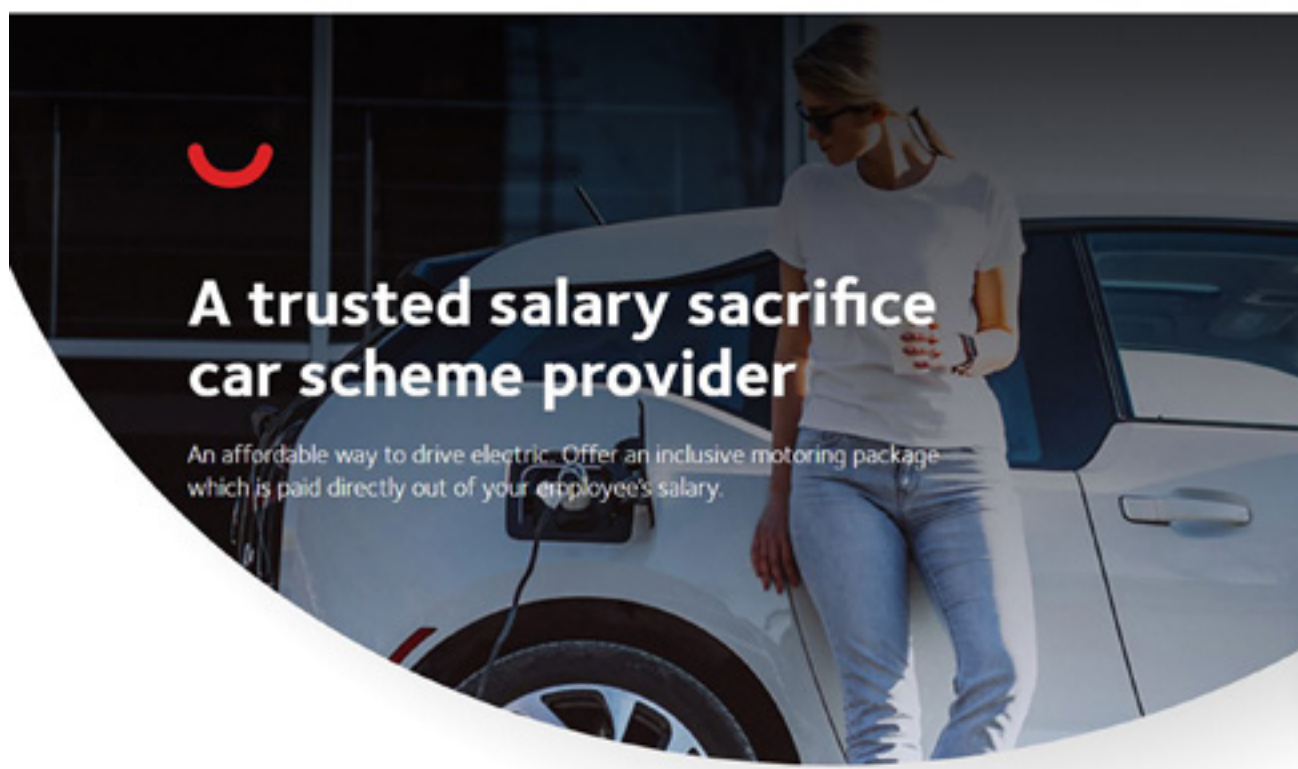


achieved more than 10 years as the only carbon-neutral leasing company in the industry. Our project would be easily adopted by other companies in the industry if they were to work with an accredited offsetting provider.

We have been a part of the EV100 for the past 5 years, which has, through world EV day (9th September) brought to the subject of electric vehicles to the forefront of the agenda for hundreds of organisations. We have also been chosen to support our industry body, the BVRLA, in lobbying government to fix benefit in kind rates sufficiently to continue to encourage drivers to make the switch to low or zero emission vehicles.

Dr Wendy Buckley, co-founder of Carbon Footprint Ltd, said

*“Tusker has been leading the way in their market as a highly innovative and responsible car provider; electric vehicle lease popularity has greatly increased due to salary sacrifice schemes making economic (as well as environmental sense). Tusker has realised that – although zero emission at the tailpipe – EVs still have charging emissions and have responsibly chosen to offset these, rendering their entire fleet driving to be carbon neutral.”*



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## UDC QATAR PEARL ISLAND

### WHAT IS DIFFERENT ABOUT THIS SUBMISSION IF PREVIOUSLY BEEN NOMINATED FOR A GREEN APPLE AWARD?

United Development Company (UDC), the master developer of The Pearl Island and Gewan Island, has been previously announced that its headquarters UDC Tower won the Green Apple Environment Awards for Beautiful Buildings 2023, a prestigious international award from the Green Organization that recognizes organizations that adopt the best environmental practices around the world.

UDC Tower received the silver Green Apple Environment Award for beautiful buildings within the category of “mixed-use buildings” due to its distinct design features and eco-friendly practices, such as maintaining a carbon neutral footprint, use of recycled materials, solar panels, and regeneration.

This new submittal will showcase UDC with its Best Environmental Practices in Construction within the Pearl Island as a leading Real Estate and Developer in the State of Qatar. UDC’s efforts towards sustainability include the focus on various areas which includes appropriate management and recycling of waste, environmentally friendly processes and packaging, optimization of energy consumption in all company’s operated and managed projects and developments, including the use of environmentally friendly technologies such as district cooling, regular training and events designed to highlight environmental issues and initiatives, and constant awareness campaigns promoting activities to reduce environmental impacts and use

natural resources efficiently through innovation and performance monitoring.

### PROJECT AIM

United Development Company (UDC) is a leading Qatari public shareholding company with a mission to identify and invest in long-term projects contributing to the growth of the State of Qatar and providing good shareholder value.

From day one, the Company actively contributed to the development of the State of Qatar, rapidly evolving into a leading Qatari Public Shareholding Company, and successfully establishing a group of various good performing investments.

Through a combination of project activities and commercial enterprise, UDC and its subsidiaries have accumulated a large amount of experience and detailed knowledge in real estate development, property management, hospitality and maritime, district cooling, and infrastructure and utilities.

As part of its five-year business plan, UDC is leveraging its leading market position to achieve





sustainable financial performance and maintain profitability targets by focusing on the core business activities and investing in new and viable real estate developments.

UDC's flagship project is The Pearl Island, an urban mixed- use, man-made island and one of the largest real estate developments in the Gulf.

UDC is also in the process of developing Gewan Island located adjacent to The Pearl Island, into the Company's latest world class residential, commercial and entertainment project. This development has the potential of becoming a magnificent destination that will maintain UDC's future growth.



### PROJECT ACHIEVEMENTS

In 2023, several key projects were accomplished in terms of Environmental & Sustainability Key Programs. As stated, and part of UDC Corporate Responsibility towards the Community and the Environment towards achieving Environmental Best Practice in Building and Construction.

Below is a list of some selected key achievements in 2023:

1. UDC announced a significant sponsorship agreement with the Autism Parents Platform, a prominent organization dedicated to raising awareness about people with autism and supporting their families in Qatar.
2. UDC announced the deployment of seven cutting-edge electric vehicle (EV) chargers at The Pearl Island, coupled with the introduction of the first-of-its-kind electric security patrolling vehicles in Qatar.
3. Announce the inauguration of the Hamad bin Jassim bin Jaber Al Thani Mosque, marking a significant milestone in the architectural landscape of Qatar.
4. UDC announced as winner of the Sustainable Energy Management Award during Tarsheed Energy Efficiency Forum 2023.
5. UDC has been honoured with five prestigious international environment and sustainability awards from The Green Apple Organization, which promotes the best environmental practices worldwide.
6. Spearheaded a comprehensive Seabed Cleaning Campaign at Porto Arabia on The Pearl Island.
7. Celebrated the 8th edition of 'Qatar Sustainability Week' through a series of community events and activations.
8. UDC has been awarded the highest Gold Certification by CSR Accreditation, a leading UK-based organization associated with Buckinghamshire New University that delivers a global standard of social responsibility.
9. UDC has been announced winner of the Communitas Award 2023 - Community Services Excellence Award concurrently with winning the SEAL Environmental Initiatives Award 2023 for the second consecutive year.
10. UDC has announced that its headquarters

UDC Tower won the Green Apple Environment Awards for Beautiful Buildings 2023.

11. UDC has been honoured with the prestigious International Safety Award 2023 by the British Safety Council.
12. UDC has been honoured with four prestigious awards at the 11th edition of the Golden Globe Tigers Awards for Excellence and Leadership 2023.
13. UDC has been honoured with the prestigious “Best in Corporate Social Responsibility (CSR)” award at Qatar CSR Summit 2023.
14. UDC was honoured with four international environment and sustainability awards by The Green Apple Organization, in recognition of its significant achievements in the areas of pollution control, energy efficiency, water management and carbon reduction, all of which are crucial in advancing environmental improvement and sustainable development.
15. UDC has won the 2023 SEAL Sustainability Leader Award honoring President, CEO and Member of The Board, Mr. Ibrahim Jassim Al-Othman, for his role in leadership, innovation, and commitment to sustainable business practices.
16. UDC Contact Centre (Ittisal) was awarded the most prestigious award for customer experience and excellence at the 17th annual Stevie Awards for Sales & Customer Service.
17. UDC held two campaigns aimed at protecting the marine environment; Beach Cleanup Drive at Bahri Villas South beach, and World Water Day awareness campaign.
18. UDC launched to plant trees for every new employee who joins the company and successively for every five years spent at UDC.
19. UDC has achieved five certifications demonstrating its services and operations are aligned with internationally recognized standards set by the International Organization

for Standardization (ISO) including ISO 9001 (Quality Management), ISO 14001 (Environmental Management), ISO 45001 (Occupational Health & Safety Management), ISO 27001 (Information Security Management) and ISO 22301 (Business Continuity Management).

### EVIDENCE TO SUPPORT OR SUBSTANCE CLAIMS IS ALWAYS USEFUL

UDC contributes to the economic and social well-being of the people of Qatar and, by extension, the GCC, because it recognizes the deep interdependence that healthy businesses share with healthy societies. The Company has invested substantial financial resources to fund initiatives that foster economic, social, educational, health and environmental stability, thereby improving the quality of life in Qatar.

On this ambitious milestone, the developed UDC island-wide Pearl Island Sustainability Strategy for energy efficiency, optimization, and resource utilization aimed at greenhouse gas mitigation aims to build capacities and raise public awareness on issues relating to climate change. The objectives and building blocks reflect the current national sectoral emission profiles and the potential for win-win sustainable development which includes but not limited to the following;

- Increased energy efficiency and reduce energy consumption and wastage per unit of output through improved technology
- Established policies and regulations to manage energy conservation throughout the process of energy production, transport, processing, and utilization
- Improved efficiency for conservation of water and power
- Established energy efficient green buildings
- Implementation of energy auditing and energy management in enterprises

- Raised public awareness to the community of energy conservation initiatives

In continuous effort of the company to connect to the community, UDC the master developer of The Pearl and Gewan Islands, has celebrated National Sport Day in participation with the General Retirement & Social Insurance Authority (GRSIA), Qatar District Cooling Company (Qatar Cool), Ronautica Middle East (RME) and Corinthia Group.

Each year, UDC regularly hosts public sports-related events across The Pearl Island to encourage residents and visitors to partake in sports activities. The Pearl Island remains an ideal location to lead a healthy lifestyle with plenty of green spaces, public parks, sea-facing facades, and various amenities and gym facilities that support a broad range of indoor and outdoor recreational activities across the Island.

UDC was chosen to receive the award in the presence of over 400 professionals from all over the world at Las Vegas, Nevada, USA the most prestigious award for customer experience and excellence at the 17th annual Stevie Awards for Sales & Customer Service. The amazing feat was given to UDC amongst 2,300 nominees from various organizations and in almost every industry, across 49 nations and territories and competed against 170 professionals worldwide on seven specialized judging committees.

As an organization established to play a key role in the development of Qatar, United Development Company's (UDC) business practices are closely aligned with the wider goals of sustainable economic and social development that the State of Qatar has set forth in its vision for 2030.

Accordingly, the Company employs the highest standards of corporate social responsibility across its entire portfolio of activities and investments. These standards cover the welfare of its employees, the environmental consequences of its activities, community services and volunteer work, as well as

responsible and transparent corporate governance, based on the following guidelines:

- Making choices that will sustain the businesses for the long term.
- Acting in ways that respect people and protect the environment.
- Expressing character through words and demonstrating character through actions.

UDC recently launched and announced the deployment of seven cutting-edge electric vehicle (EV) chargers at The Pearl Island, coupled with the introduction of the first-of-its-kind electric security patrolling vehicles in Qatar. This marks a significant stride towards realizing UDC's commitment to sustainability, particularly in the realm of eco-friendly transportation.

In 2023, UDC was honored with four international environment and sustainability awards by The Green Apple Organization, in recognition of its significant achievements in the areas of pollution control, energy efficiency, water management and carbon reduction, all of which are crucial in advancing environmental improvement and sustainable development.

Lastly, UDC was also the first listed real estate company to release its ESG report in 2022 to Qatar Stock Exchange. The report officially discloses UDC strategies and achievements in the areas of environmental governance and sustainability.

Throughout 2022 and early 2023, UDC has achieved remarkable milestones in the realm of environmental conservation. These accomplishments include obtaining international accreditation certificates and receiving prestigious awards, which underscore UDC's unwavering dedication to embracing cutting-edge sustainable practices

In this regard, UDC has been honored with the prestigious "Best in Corporate Social Responsibility (CSR)" award at Qatar CSR Summit 2023. The



announcement was made during the official gala dinner and awards ceremony held at the Sheraton Resort & Convention Center, organized by Qatar University.

In 2023, UDC continuously address key sustainability and environment challenges, by implementing its environment strategy and initiatives, and embedding sustainability considerations in all new company projects. On the community level, a continued focus on the customer journey, will help enhance engagement through more system upgradations, family events and new entertainment projects.

UDC continually strives to develop and manage sustainable city projects, thereby contributing to the attainment of sustainable development goals, particularly Sustainable Development Goal 11, which focuses on building inclusive, safe, resilient, and sustainable cities.”

This was proven as UDC has been awarded the highest Gold Certification by CSR Accreditation, a leading UK-based organization associated with Buckinghamshire New University that delivers a global standard of social responsibility.

Some of UDC’s recent sustainability and environmental achievements at The Pearl Island, include:

- Issuance of UDC’s first report on Environmental, Social, and Corporate Governance (ESG) to Qatar Stock Exchange as the first real estate company in Qatar to officially disclose its sustainability and governance practices and achievements.
- Inauguration of new public facilities and attractions at The Pearl Island including Beach Centrale, The Pearl Fountain, Duck Lake, The Pearl Photo Walk, The Pearl and Isola Clocks as well as new community gardens and a pets park.
- Beautification of various building facades with green landscape.
- Enhancement of residents’ beach experience and facilities by installing showers, kayak racks, children’s play area, boundary buoys as well as providing musical entertainment.
- Enhancement of traffic safety by adding new roads and pedestrian crossings around The Pearl Island and using Pulsa lights and crossing controller and other several traffic calming measures.
- Lighting beautification projects using energy saving fixtures, such as the installation of The Pearl backlit sign at the main roundabout taking customer journey and sustainability to a whole new level.
- Four new air-conditioned bus stops and 17 laybys bringing the total to 25 bus stops around the Island in line with the introduction of The Pearl Bus and additional limousines as complimentary transportation.
- Enhancement of wayfinding around the Island through new and updated signs.
- Launch of state-of-the-art squash court facility for residents.
- Celebration of Qatar Sustainability Week with a series of community events at The Pearl Island to raise environmental awareness.
- Recycling of more than 34% of community waste with an increase of 12% from 2021 figures.
- Planting of more than 9,500 mature trees (more than 10 years old) and more than 90-football field size of soft landscape which contributes to carbon reduction/sequestration.
- Launch of employee carbon offset initiative to contribute to carbon footprint reduction and sequestering the carbon emitted by employees.
- UDC received the international Green Apple award in Gold category for The Pearl Island’s carbon reduction initiatives and Silver category for waste management initiatives.

- The Pearl Island received the SEAL business award for environmental initiatives among top 50 companies from around the world.
- The Pearl Island ranked among top 5 companies in environmental marine initiatives by North American Marine Environment Protection Association (NAMEPA).
- UDC received 5 ISO certifications for services offered at The Pearl Island and Gewan Islands ISO 9001: 2015, 14001:2015, 45001: 2018, 27001:2015, and 22301:2019 by BSI – UK.
- UDC received the International Safety award for The Pearl Island and Gewan Island in the Merit category by the British Safety Council in recognition of its commitment to safeguarding the health and safety of its community.

- UDC Tower received GSAS Gold Operations certification, becoming the first building on The Pearl Island to receive the highest regional sustainability rating for implementing sustainability best practices.

The remarkable impact of UDC's sustainability initiatives and responsible business practices within the community is truly inspiring. This achievement solidifies UDC's standing as a

trailblazer in the realm of responsible and sustainable development within the region, and it sets an exemplary standard for others to aspire to.



## UNIPER UK (previously NOVATI) EMPOWER ENERGY EVOLUTION

### INTRODUCTION

Every year Uniper uses circa 40,000 single-use air filters at its power stations in the UK, and for many years the filters have been treated as general waste. Under our contractual agreement with our waste partner, we have been sending them for energy recovery rather than dumping them in a landfill site.

This project was created to explore better solutions that improve our position on the waste hierarchy. Our goal was to become the first UK energy provider to implement a solution that would see these single-use items being cleaned, refurbished and reused. If a viable solution could be found, we would need to test the operational efficiency of the refurbished

filters to ensure they perform in a similar manner to new products.

The aim would be to roll out the solution at one UK power station and monitor its success. If successful, the project could then be scaled up and implemented across more UK power stations. Our waste partner identified a small Nottinghamshire based company who believed they've developed technology making it possible to clean, refurbish, and reuse these so-called "single-use" air filters.

However the technology had never been used in the UK energy sector. The project has been trialed at Cottam Power Station with great success. **1,152 SINGLE-USE AIR FILTERS HAVE BEEN REFURBISHED AND REUSED TWICE.**





### Filter Cleaning Solution



This means that we've reduced consumption by no less than 2,304 filters so far. Engineer's reports suggest that the filters are capable of being refurbished in 1-2 more circular economy cycles. This means that the refurbishment of so-called "single-use" filters results in us reducing our consumption by a whopping 4,608 units.

Not viewing the filters as waste means we're avoiding circa £3K in disposal costs and £6K to purchase new filters.

#### IN DETAIL

More than 8,000,000 filters currently go to landfill, with less than 10% being sent for energy recovery. Whilst Uniper ensures our circa 40,000 air filters are all disposed of via recovery, this project focused on improving our position within the waste hierarchy. Our waste partner identified a small business called FilterClean UK who are the only filter refurbishment company operating in the UK.

Following introductions, sample used filters were collected from our power generation site in Cottam, Nottinghamshire, and were sent to FilterClean for processing. Upon return, engineers scrutinised the filters to ensure they retained a high operational

efficiency rating.

What makes this project unique is that Uniper are the only energy company in the UK sending filters for refurbishment. The partnership approach shows that terms like "waste" and "single-use" don't have to be a barrier to sustainability.

#### WHY WE DID IT

This project reduces our carbon footprint and takes us a step closer to achieving our goal of being a carbon neutral business by 2035. Everything that happens stands under the motto "Empower energy evolution". We strive to ensure the security of supply, and to develop technologies that could be important for decarbonizing the energy business, and other industries. Shikha Mittal, Senior Sustainability Adviser says "The world around us is changing continuously. Therefore, sustainability is more important than ever".

#### PROJECT COSTS

We're often told that innovation and sustainability come with negative financial implications. That's not the case with this project. Not viewing the filters as waste means we're avoiding circa £3K in disposal

costs and £6K to purchase new filters. The fact is that the project is entirely self-sustaining and saves money.

### ENVIRONMENTAL BENEFITS

The statistics provided in the “project achievements” section of this application show how successful this project has been.

When considering the environmental benefits it can be summarised as:

- **REDUCING** our carbon footprint by removing the need to constantly buy new filters.
- **REUSING** filters twice so far, with 1-2 more cycles of the circular economy still expected.
- **RECYCLING** filters failing tests or inspections, with plastic and metal components being separated.
- **RECOVERY** of filter material and media that isn't recyclable.
- Nothing goes to waste via **LANDFILL**, because materials are viewed as a resource. 1,152 so-called single-use air filters have been refurbished twice so far (maintaining 98% operational efficiency), and we believe they will remain usable after another 1-2 cycles of refurbishment means that we're able to avoid the purchase of more than 4,600 new filters.

### BUY-IN & COMMITMENT

Buy-in for this project is evident through the following feedback.

**Ben White**, CDCPK Performance and Reliability Engineer, Uniper -

*“The results are impressive, and are a very good starting point for us. We're optimistic that using this method won't impact the amount of running hours we can achieve on this set of filters.” “We're confident this will*

*be something we can do moving forward, it's simply a question of how many times the filters can be reused before they have to be exchanged for new ones.”*

**Chris Giscombe**, Managing Director, FilterClean UK -

*“We always believed we had a solution that could revolutionise the world of sustainability, but as a small business, getting major companies to stand up and take notice isn't easy. Working with Uniper and Novati has given us an amazing opportunity to show how we can make a positive impact on the environment.”*

**Darren Andrew**, Senior Corporate Sustainability Manager, Novati

*“It would have been easy and very profitable for us to continue treating this material as waste. But our relationship with Uniper has always been about pushing boundaries, and looking for the best solutions rather than quick solutions. I'm incredibly proud of how everybody came together to deliver our ambitions for such a unique project.”*

### AN INNOVATIVE SOLUTION

The UK Government Resources & Waste Strategy for England sets forth the need for us to think differently about waste. It's a call to action for industry and asks us to look for new and innovative ways to reduce the impact we're having on the environment. We believe that this project is the perfect example of innovation in action.

By working together and adopting a partnership approach we delivered against the ambitious aims of the project. FilterClean are the only filter refurbishment company operating in the UK and we are the UK's first and only energy provider to utilise this solution.

### THE REFURBISHMENT PROCESS

- 1) A trial load assessment is completed to determine which types of filters are suitable for refurbishment.
- 2) Uniper stores filters that are deemed as suitable for refurbishment in a dry, safe area ready for FilterClean to collect.
- 3) FilterClean's workshop team carry out the initial inspection to check the filter condition.
- 4) The filters go through numerous pneumatic & liquid cleaning processes.
- 5) Refurbished filters are dried at 28°C for 10 days.
- 6) The team conduct a final inspection to check the media thickness & differential pressure.
- 7) filters are packed & labelled ready for despatch.
- 8) FilterClean's team mark the filters with a permanent stamp when delivered or collected which helps track their reusable lifecycle.

### THE NEXT STEP

Following the successful implementation of this solution, the project has now progressed to include several hundred additional filters at Uniper Grain (Kent), and all station managers across the UK are now reviewing filter viability for their sites.

Our aim is to implement this across all sites in 2024 where the solution is proven to be viable.

### REPLICABILITY

This project is exponentially scalable, because the solution is viable for all types of filters, whether it's an engine filter, DPF, compressor, blower filter dust cartridges and more. That means that it's not only viable for the energy sector, but for any UK business that uses filtration systems.







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## **VIRIDOR**

### **REVOLUTIONISING PLASTIC RECYCLING**

#### **INTRODUCTION**

Plastics are a necessity in modern society and contribute to many of the manufacturing, agricultural, medical and information technology advances that underpin our way of life. But if not managed properly, they have the potential to cause great harm to our environment – as we have witnessed with the tide of plastics emerging in our oceans. This has prompted global concern and a call to action.

As one of the UK's largest waste management companies, Viridor is leading the way in plastics recycling, having developed the most sophisticated plastics processing facilities of their kind in the country.

We convert plastic waste into plastics feedstock which is then reused by manufacturers across the UK and Europe in the creation of recycled bottles, tubs and trays, substituting the need for virgin plastic.

This, in turn, significantly reduces greenhouse gas emissions in extraction, manufacturing and disposal, making an invaluable contribution towards the UK's commitment to reaching Net Zero. It also reduces waste that goes to landfill. But with the amount of plastic packaging collected for recycling expected to increase by 45% by 2035, more needs to be done – and quickly. Viridor has been leading the drive to reduce pollution and waste through plastics recycling for around a decade, with the opening of our first polymers recycling facility in Rochester, Kent, in 2014, at a cost of £12.5m. In 2018, we became a founding member of the UK Plastics Pact,



bringing together business from across the entire plastics value chain with UK government and NGO's pledging to create a circular economy for plastics.

In 2021, we launched our report "Closing the Loop: Viridor's roadmap to a truly circular plastics economy", which was endorsed by the Minister for Waste and Resources, highlighting the vital role that the sector has in delivering Net Zero. In March 2022, our £317m Avonmouth Resource Recovery Centre (RRC) near Bristol was formally opened by Resources and Waste Minister Jo Churchill MP, cutting UK plastic waste exports by 8% and saving 126,000 tonnes of CO<sub>2</sub>e emissions/year.

In May 2023, Viridor became a major shareholder in Quantafuel in Norway in a £90m deal, reflecting our ambition to lead innovation in the plastics recycling sector and deliver full circularity in all four major plastics by 2025: 'Building a world where nothing goes to waste.'



### IN DETAIL

#### Introduction

Currently, only half of the UK's plastic waste is recycled, with the rest sent to landfill or overseas for recycling. Viridor, one of the UK's leading waste management companies, aims to revolutionise plastic recycling by creating a circular economy where plastic waste is viewed as a valuable resource rather than a disposal issue.

Viridor's commitment As well as investing in plastics recycling facilities (£12.5m Rochester plant, £317m Avonmouth co-located Energy Recovery Facility and



plastics recycling plant, £90m in Quantafuels plastics recycling in Norway), we have become a critical lead for the industry, working with the Government to do more. In 2018, we became a founding member of the UK Plastics Pact, uniting businesses from across the entire plastics value chain with the UK government and NGOs to create a circular economy for plastics.

In 2021, we launched our report "Closing the Loop: Viridor's roadmap to a truly circular plastics economy", highlighting the sector's vital role in delivering Net Zero.

In it, we recommended the use of only four types of plastics by industry, especially in food and packaging: drinks bottles (polypropylene terephthalate - PET), milk cartons (high-density polyethylene - HDPE) bottle caps/tops (polypropylene - PP) and films (low-density polyethylene - LDPE).

This will make plastic recycling and reprocessing easier for the recycling industry, waste management/ collection companies and consumers. We also called for a plastic waste export ban and policy reforms to unlock investment opportunities to build the new plastics sorting and reprocessing facilities needed to increase domestic recycling capabilities.

In 2022 we commissioned research conducted by Anthesis, which revealed that £1bn of new infrastructure with a total capacity of 1.5-1.6 metric tonnes will be required for the UK to meet Government recycling targets.

A need echoed by the EFRA committee five months later when it called for the Government to work with industry to unlock private investment in domestic plastics reprocessing infrastructure. Innovation

We are leading new infrastructure investment with our state-of-the-art Resource Recovery Centre at Avonmouth near Bristol, which opened in March 2022. It is the UK's first co-located plastics reprocessing and Energy from Waste (EfW) facility



and the largest multi-line reprocessing facility in Europe.

It is also completely off grid because the recycling process is fully powered by the EfW. Later this year, we will introduce a process that will eliminate the plant's use of diesel fired boilers to heat water for the plastics' pre-wash process.

Following our Quantafuel acquisition, we are also currently testing the viability of commercial chemical recycling deployment in the UK.

### Environmental benefits

Our Avonmouth facility processes c80,000 tonnes of plastic a year; the equivalent of c1.6bn bottles, tubs and trays, which are converted into new plastic products by UK and European manufacturers, reducing virgin plastic use.

This reduces harmful CO<sub>2</sub> emissions because while virgin plastic production creates 2.4 tCO<sub>2</sub>e/tonne of product, recycled plastic produces just 0.4 tCO<sub>2</sub>e. The process also significantly reduces carbon emissions in extraction, manufacturing and disposal, making an invaluable contribution towards the UK's commitment to reaching Net Zero.

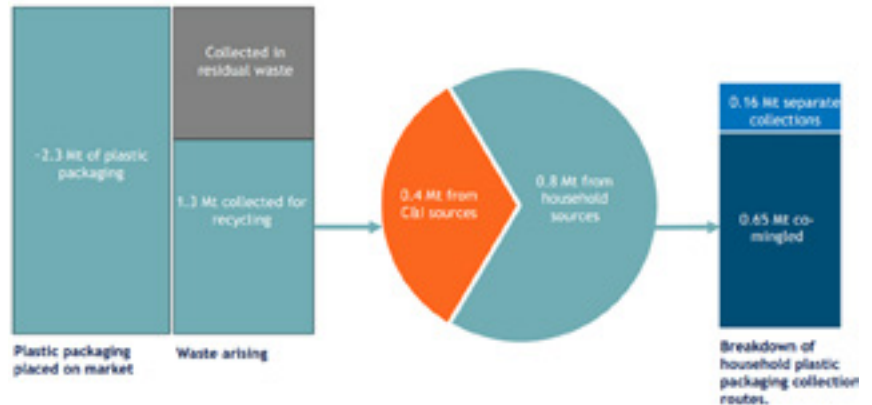
It also reduces waste export and landfill use. Overall, the facility's plastic recycling avoids 126,000 tCO<sub>2</sub>e emissions per year - the equivalent of taking c67,000 diesel and petrol cars off the road.

### Economic benefits

Avonmouth created 125 permanent new jobs and over 500 people were employed at the peak of its construction.

Twenty principal contractors were engaged during the build, with 40% of offers placed with firms

Plastic packaging collected for recycling in the UK 2019



from Southwest England and Wales. Avonmouth continues to create employment opportunities, contributing to the wider local economy. Our investment in new infrastructure also contributes to the Government's Levelling Up agenda.

### Social benefits

Avonmouth offers interactive on-site educational visits for students, community groups and the wider public to raise awareness of the need for improvements in current recycling practices and to convey best practice in waste reduction, reuse, recycling, recovery, resource management and sustainability.

### Adoption by others

Avonmouth demonstrates the economic and environmental benefits that other waste management companies could achieve by deploying the same technology. It also illustrates the cost savings and synergies that can be achieved when the process is co-located with EfW facilities.

This is vital because just five more state-of-the-art plastic recycling plants like Avonmouth would end plastic waste exports from the UK and attract investment of up to £1.5billion.

Project cost To date, we have invested £12.5m in our Rochester plant, £317m in Avonmouth (both



the EfW and the co-located plastics recycling facility) and £90m to acquire Quantafuel to progress essential plastics chemical recycling to help drive up the recycling rates and decarbonise the EfW sector.

We have also invested in our wider sustainability programme and will continue to work with the Government and regulators to achieve a recognised 'end of waste' status for the process.

### Future development plans

We are developing ways to convert pots, tubs and trays back into food-grade materials and aim to include polyester reprocessing at all our reprocessing plants, once we have persuaded the Government to alter current policies that prevent full circularity.

We are also expanding our operations to cover low-density polyethylene (LDPE) film and promote the inclusion of plastic films in consistent collections from the start, to drive up the current 7% collection rate.

We aim to completely remove CO<sub>2</sub> emissions from our EfW plants to decarbonise our co-located plastics recycling facilities. In 2023 we decided to channel significant investment to accelerate

advanced chemical recycling and circularity of plastics and polymers through the acquisition of Quantafuel, one of the leading innovators and technology providers in the field of chemical recycling, which has been testing, refining, and producing material at its commercial scale Plastics-to-Liquids (PtL) infeed pyrolysis plant at Skive and Denmark.

We are working with Quantafuel to further optimise their process and develop opportunities for investment in facilities on an international basis.

In addition to our commitment to becoming a fully circular plastics recycling and reprocessing business by 2025, we have also pledged to become a Net Zero business by 2040 and Climate Positive by 2045.







**Building a world where  
nothing goes to waste!**



At Viridor, we're on a mission to redefine the future of plastics, transforming waste into opportunity and paving the way for a circular economy. Through our state-of-the-art mechanical and chemical reprocessing facilities, we breathe new life into discarded plastics, closing the loop to minimise waste and maximise resource efficiency. Learn about our initiatives at [www.viridor.co.uk](http://www.viridor.co.uk) and share our mission to achieve the most circular, low-carbon recycled plastic as possible!

**Together, let's end plastic waste and  
pave the way for a greener tomorrow!**





## WASTE TO WONDER WORLDWIDE CHALLENGING THE PERCEPTION OF WASTE

### INTRODUCTION

Waste to Wonder was established more than two decades ago with a clear aim – to challenge the perception of waste. We do this by removing unwanted office furniture and equipment from our customers' workplaces and redistributing it to schools, hospitals, and charities both here in the UK and abroad.

Every year, thousands of tonnes of desks, chairs, storage solutions, and IT equipment become redundant because of offices moves, rebrands, upgrades, or mergers and acquisitions. Finding a new home for large amounts of furniture can be challenging so it often goes straight to recycling, or worse, ends up in skip.

We manage the clearance process for our customers and use the furniture and equipment we've removed to change people's lives for the better. (We call our approach 'ethical clearance'.) We redistribute

the items through our innovative School in a Box programme. We've been able to reach 1,300 schools in 30 countries so far.

We've also provided vital supplies to people in need of support following natural and humanitarian disasters. Project achievements: In 2022, we delivered 141 School in a Box containers. That means we prevented 2,500 tonnes of unwanted furniture and equipment from entering the waste stream and items with a fair market value of £3.64m went to communities in need.

On average, 97% of the goods we cleared were reused, 3% were recycled, and nothing went to landfill. We only recycle items if they're broken, damaged, or not fit for purpose, which means we can't donate them.

Our process also reduces carbon, when the benefits of reusing furniture rather than manufacturing new products are considered.





**Jane Muir-Sands** from technology company, IBM, highlights the difference our partnership with them has made: -

*“... we have seen over 1.2 million Kgs of our serviceable, but no longer needed equipment, diverted from waste. This reuse approach has realised over 3m Kg of CO2 savings in the process and as importantly we are delighted that we are delivering enormous social impact for disadvantaged communities around the world ...”*

The three leading logistics companies in the UK that offer an ethical clearance service jointly donate approximately 200 tonnes of unwanted items to good causes each year. In 2022, we donated more than 10 times that amount.

## IN DETAIL

What we do and why we do it

When companies rationalise their property portfolios, relocate or upgrade offices, they often have furniture and equipment that no longer meets their needs. The UK Government’s reduce, reuse, recycle

guidance promotes reuse before recycling but this can be challenging when there’s hundreds of desks, chairs, or storage cabinets to remove.

When we established Waste to Wonder, we knew we could help ensure the items wouldn’t go to waste. As part of our first major office clearance, we supported a university professor who wanted to help young women in Morocco who were missing out on education.

We sent enough furniture and equipment to his in-country charity to equip 17 schools and help fulfil his ambition. That’s how our School in a Box programme began. Since then, it’s been at the heart of our approach to office clearances.

We remove unwanted items and send them to charities that support people in some of the most disadvantaged communities in the world.

Our Managing Director, **Michael Amos** explains, -

*“Repurposing unwanted furniture saves significant amounts of energy and carbon. It’s far more sustainable than manufacturing new items. Just as importantly, if we discard*

*the goods, we'd be overlooking an incredible opportunity to enhance someone's life and be a catalyst for generational change."*

### What it costs

We're a specialist project management company – we earn an income by managing the ethical clearance of furniture and equipment. But we're also a certified social enterprise. That means we're purpose-led and that we invest at least 50% of our profits in our environmental and social mission.

Last year, we made a profit of just under £500,000 and redistributed £3.64m worth of items. Our School in a Box programme is run through the Waste to Wonder Trust, the charitable part of our organisation, which enables us to redistribute the goods to communities worldwide. Last year, we contributed £141,000 to shipping costs.

### Our achievements

Through School in a Box, we have supported 1,300 schools in 30 countries so far. In the past year alone, we delivered 141 containers to communities in need. It means that, together with our partners, we prevented 2,500 tonnes of unwanted furniture and equipment from entering the waste stream and donated items with a fair market value of £3.64m.

On average, 97% of the goods we cleared were reused, 3% were recycled, and nothing went to

landfill. We only recycle items if we can't donate them because they're broken, damaged, or not fit for purpose.

Our process also reduces carbon when the benefits of reuse over buying new furniture is considered. This is important to our collective attempt to address climate change. One customer, IBM, has saved three million kilograms of CO2 through its partnership with us.

Another, CBRE, has saved 1,560 tonnes of CO2 in the past year by enabling items to be reused. Short- and long-term benefits We also deliver sustainable economic and social benefits.

In February, together with our partners, we delivered School in a Box containers to a college in The Gambia. It's widely recognised that education can lift people out of poverty, and the desks, chairs, computers, and cabinets we provided help school leaders improve the learning environment.

They also drive wider change. If the school doesn't have to buy new equipment, leaders can spend more in the classrooms or fund other projects that benefit students and the community. In The Gambia, budget was allocated to building wells so people don't have to walk a mile to access fresh water, which will make a difference for years to come.

The FAST charity in Romania uses some of the furniture it receives to teach young people new skills.





**Daniel Hristea** says, -

*"Some large desks for example, had to be modified and adapted to fit specific purposes and we were able to teach our apprentices valuable skills in the process. We now have local people and businesses who are buying furniture from us..."*

### Innovation

The difference we're making drives our team forward. We encourage them to focus on the benefits they can provide to communities and be innovative in achieving them. To foster this culture, we give every team member the chance to visit the schools, hospitals, or charities we support.

We're also making a difference because of the changes we've made to our business model over the past eight years.

We'd been working directly with companies that had unwanted items, but we realised we could deliver greater impact if we worked in partnership to change the practices of larger enterprises. We now work with facilities management companies, design, and build organisations, and furniture manufacturers to provide large-scale clearance services to multinational companies and to promote the ethical reuse of furniture and equipment.

It's better for the planet and the companies involved – it's cost-effective and it supports their environmental, social, and governance ambitions. Wider benefits More businesses understand the impact they have on the environment and are working to minimise it.

Redistributing furniture through our School in a Box



programme helps them reduce waste, and energy and resource consumption.

Companies are also obliged to have diverse, equitable and inclusive supply chains and want partners that support those social and environmental aspirations. Our social enterprise status helps assure them that our business model and ways of working are in line with their goals. Further development However, we're always striving to do more.

We're working with a carbon measurement company to minimise our carbon footprint and we're on track to attain the highest level of accreditation.

Our brand is evolving in line with the changes to our organisation too. This year, we've added 'worldwide' to our name to reflect our extended reach.

We also believe we can transform the corporate landscape so reusing items becomes standard procedure not an example of best practice. We're doing this by speaking often and proudly about its social and sustainability benefits.



WASTE TO  
WONDER  
WORLDWIDE

# Turning Office furniture into Educational Futures



ncz  
certified  
platinum

Waste to Wonder Worldwide are market leaders in providing an award winning ethical office clearance service. Through our flagship 'School in a Box' Programme we are able to strengthen and support both the ESG and carbon reduction aspirations of some of the largest companies in the world.

As a certified Social Enterprise we proudly promote the eco-friendly reuse of redundant office furniture, steering it away from landfill and into the hands of those schools and charities around the world that need it most. As winners of the Green Apple Champion of Champions award 2023 and having our ethical office clearance process certified 'Better than Carbon Neutral' we want to share the journey with you.



£34m

FMV of items  
donated



1400

Schools  
Supported



40

Countries  
Supported

Our 'School in a Box' programme has been at the heart of our mission, taking redundant office furniture items and redistributing them to enhance educational opportunities in 40 countries and empowering over 1,400 schools. Over £34 million worth of redundant office furniture has been redistributed so far to equip schools and charities in places like Ghana, Cameroon, Romania and India.

You won't be just reducing carbon by using our ethical office clearance process, you will also be creating better environments for young people to learn and for charities to work from.

**Waste to Wonder Worldwide:**  
where every piece of furniture  
tells a story of change.



[info@wastetowonder.com](mailto:info@wastetowonder.com)  
[www.wastetowonder.com](http://www.wastetowonder.com)

**0844 809 4928**



## WATERPLUS

### ACTIONS FOR A CLEANER CLIMATE – WATER PLUS BUILDS PARTNERSHIPS TO BOOST WATER EFFICIENCY AND REDUCE CARBON EMISSIONS IN THE UK

Green World Ambassadors and 9 times Green Apple Environment Award winners Water Plus outline how water can power progress towards lower carbon futures - and sustainability goals - at organisations. Water-saving cuts carbon emissions linked to businesses and can save energy, where less hot water is used, or less water is moved. Water Plus, the UK's largest business water retailer is helping organisations tap into more opportunities with water, alongside highlighting the carbon and energy linked to water use at sites.

#### **Actions to engage organisations more with their water**

Water's seen as a lower priority, compared to energy, for organisations and always there. We wanted to drive action around water-saving to help reduce carbon emissions and help businesses to reduce risks from water interruptions due to leaks on site pipes.





### We:

- Created new graphic (and animated gif) showing carbon emissions and energy linked to water and wastewater, in its journey from reservoir to sites – and new water efficiency poster - for messaging, including with employees.
- Alerted 50 sites to water issues, after the Water Plus Advanced Services team monitored data logger information and contacted customers to highlight increases in use, in December 2022. One site's use increased from 200 litres, to 2,000 litres an hour (48,000 litres a day). In February 2022, a council-owned site saved 36,000 litres a day, after Water Plus found and stopped leak.

Data loggers on water meters, providing daily updates to an online portal through Water Plus, allows businesses to easily see opportunities for savings. Water meters are not always in easy-to-access locations where people can take readings safely, so technology that helps to track readings can be useful there too, particularly if you have a number of sites.

- Helped a rugby club cut water use by 36.4%, in 2022, at peak times, boosting efficiency through water-saving devices won through a competition Water Plus ran, as part of external messaging. Water-saving devices installed included flow controllers, water efficient taps and showerheads. The result: flow rates dropped significantly for showers and taps at the club, including from 10 litres a minute for cold and 9 litres a minute hot water in the men's shower room to 6 litres a minute for both. Push taps and aerators also cut water use in other places from 20 litres a minute for cold water to 4 litres a minute.

Water use dropped by 600 litres, on peak use days, measured by the site's water meter.

- Launched Cycle to Work scheme, funding bicycles and e-bikes for employees and an

electric car scheme, to reduce emissions from journeys during work and commutes. In 2023, this saw two employees saving around 0.1 tonnes CO<sub>2</sub>e on work commutes every week, including a diesel car swapped for an EV, with further data being gathered in 2023 around the impact of the other electric vehicles that started to arrive.

Our multi-channel approach saw Water Plus join two national webinars, in the UK, raising awareness amongst larger water users. We also provided leak checklists for schools, hospitals, an NHS Trust and 227-litre water butt for a school.

Water Plus works to cut down on water waste – and make water that's used go further amongst organisations each year.

Work between technical water experts in the Water Plus Advanced Services team and UK organisations, including installing data loggers on water meters, feeding into an online portal, resulted in an estimated 976 million litres of water, equalling 397 tonnes of CO<sub>2</sub>e of additional water waste being stopped in 12 months (1st January 2022 to 31st December 2022, based on water meter readings for water loss).

As part of tracking savings businesses and the public sector were seeing, through looking closer at water, data collected showed:

- 26.9% of customers responding to a survey Water Plus issued said they'd saved water from looking at their water use more regularly and submitting meter reads online – and 39.7% said it was helping them budget. Some of the 78 who responded, also said it'd saved them energy (by using less hot water). 70% had also seen a benefit of looking at use, in the responses to the survey in February and March 2023 - up from 43% who said they'd seen a benefit in a February 2022 survey Water Plus issued.
- Of 130 people answering a poll at our All People Update on Teams (10th November,

# Waterplus

2022), 56.1% were doing more to limit impacts on the environment (every day) at work and at home (like recycling more, using reusable drinks bottles and cups more etc) and 13.8% were planning to do more for the environment in 2022 and 2023 (like recycling more, using reusable drinks bottles and cups more etc).

## **Growing green canopies and supporting scientific exploration of carbon capture**

### ***Water Plus is the only business water retailer to:***

- Support 25 NHS Forest trees, to help support biodiversity, along with providing benefits for human health and wellbeing by providing green spaces. These were planted at an ambulance trust site. The NHS Forest is an initiative coordinated by the charity, the Centre for Sustainable Healthcare.
- Partner with the Scottish Association for Marine Science (SAMS) helping them further a brand-new opportunity to maximise their work on blue carbon, with the long-term aim of creating a pioneering science-based system for verifying the effectiveness of seaweed in marine carbon capture, alongside delivering nature-based solutions in coastal environments. Water Plus was the first sign-up to their new Corporate Supporter programme, in April 2023, helping SAMS explore more about the potential around blue carbon capture and storage and to complete feasibility work in this area, to help future scientific approaches and research.

## **Partnerships to help progress and action**

### ***We also:***

- Started work with the Food and Drink Federation, the UK's largest manufacturing sector, with additional communications for their members, including sharing water efficiency messaging (September 2022). The Sustainable Packaging Award 2022 and the Environmental Leadership Award 2023 were supported by Water Plus, to increase awareness.

We started working with UK-based Carbon Footprint Ltd and, in recognition of our emissions (2019-2022), we prevented 502 tonnes of CO<sub>2</sub>e carbon emissions, by supporting renewable energy projects – alongside 500 extra UK trees.

Projects preventing 925 tonnes of CO<sub>2</sub>e were also supported in 2023, including clean drinking water wells and gaining power from wastewater, solar and wind - plus 250 additional UK trees. The trees are native broadleaf varieties and are provided to sites as tree saplings during the planting seasons.

The projects in 2022 and 2023 also support Sustainable Development Goals (SDGs), including SDGs 3, 4, 6, 7 on clean energy and 13, climate action, along with SDG 5 Life on Land and SDG 9 around industry, innovation and infrastructure.

Through work with Carbon Footprint, we've supported the prize fund (in 2022 and 2023) for the first carbon-free commercial flight, powered by 100% renewable energy, from London to New York, encouraging further innovation and quicker progress for the planet.

Carbon prevention projects supported follow best practice: with criteria around additionality, permanence of carbon capture and carbon emissions prevention.

**Small changes with water can add up to wider results:**

Water Plus is encouraging the efficient use of water across the private sector and public sector in England and Scotland – and cutting water waste through the actions it’s taking, to help organisations towards Net Zero and targets linked to the Sustainable Development Goals.

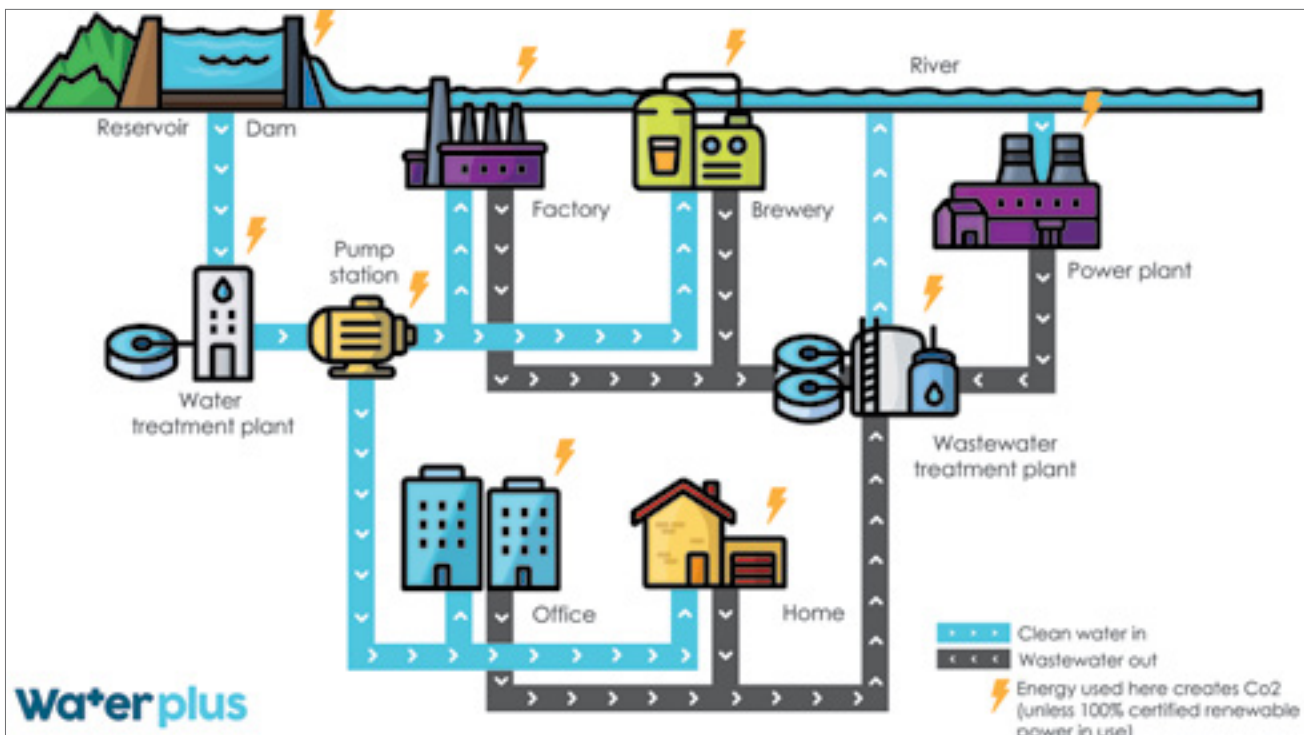
Mark Taylor, Advanced Services Operations Manager in England, at Water Plus, said: “Small changes in a business can lead to big water savings and reduce energy use and carbon emissions – all helping towards sustainability targets and goals and helping reduce impact on the environment. There are carbon emissions linked to all water that’s used at UK sites - and the wider benefits from making what’s used go further can be tracked through a number of ways.

*“Where less hot water is used, or less moved across sites, then there are energy savings too. Engaging employees will help drive additional benefits. Employees can be a great source to suggest changes and different approaches to improve efficiency with water and processes even further, along with flagging areas where water waste may occur, such as a leak.”*

Water Plus won a Gold for Carbon Reduction and a Water Management award, for work with organisations around water use - and increasing water efficiency - at the Green Apple Environment Awards in November 2023.

More tips around water-saving and wider benefits from tracking use more, during a year, are available at: [www.water-plus.co.uk/better-ways-with-water](http://www.water-plus.co.uk/better-ways-with-water). The web page also includes more information around the services Water Plus can provide.

To partner with Water Plus, email [hello@water-plus.co.uk](mailto:hello@water-plus.co.uk) (and mention Green Book, in the subject heading).





# Your Sustainable Water Partner

Save Water, Save Money - and **carbon emissions too.**

Join the hundreds of organisations we've helped save with our expert **water efficiency services.**

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## **WINVIC**

### **THE APPLICATION OF ENVIRONMENTAL NOISE MONITORING AND ARTIFICIAL INTELLIGENCE TO WINVIC CONSTRUCTION LIMITED (WCL) SITES TO MITIGATE ENVIRONMENTAL NOISE IMPACTS**

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#### **INTRODUCTION**

This project aims to reduce environmental noise nuisance impacts upon our neighbours during construction works by using novel environmental noise monitoring technology with integrated artificial intelligence.

This new monitoring technology allows for an accurate, streamlined, 24/7 noise interpretation process that does not require staff interpretation. Use of this technology allows WCL to take appropriate, project specific measures to address any excessive recorded environmental noise nuisance impacts from our sites.

The successful implementation of this technology across five (5) WCL construction sites, is an industry first i.e., the use of this revolutionary noise monitoring technology has not been previously used in the UK construction sector.

Through use of this technology, we have seen a reduction in environmental noise related complaints from our neighbours in comparison to sites utilising conventional noise monitoring equipment.

Additionally, we have noted a significant reduction in time spent by our operational teams in the identification of sources of reported environmental noise.

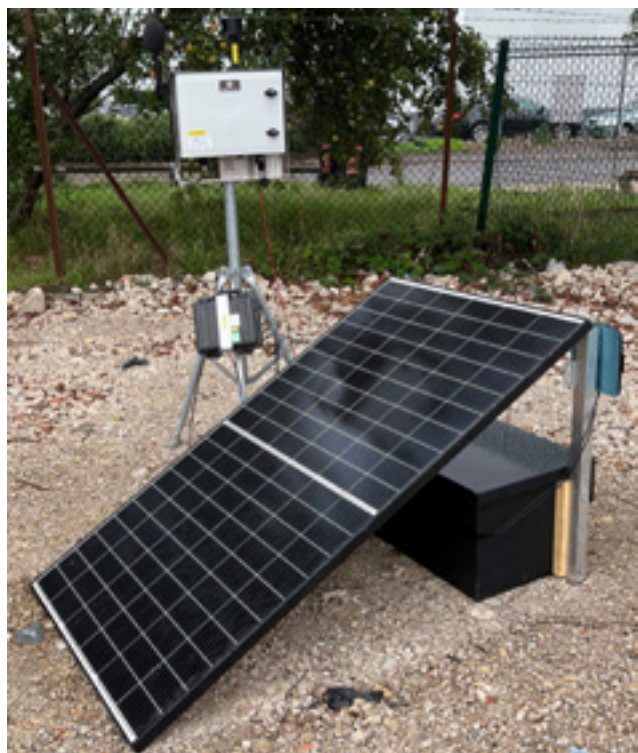
#### **IN DETAIL**

##### **What did the project involve doing and why?**

The project involved implementing this novel environmental noise monitoring technology to

sensitive WCL construction sites to increase the effectiveness of environmental noise monitoring and management. Exposure to environmental noise can lead to complaints from our neighbours due to potential adverse human health effects and increased stress levels, which can lead to potential regulatory action and poor community relationships.

As part of our 'Doing it Right' initiative and as a member of the Considerate Constructor's Scheme (CCS), WCL is committed to ensuring that we are at the forefront of ethical construction practices and minimising our impact to the wider community and environment during our projects. Throughout the construction process and in certain locations, there is potential for the generation of environmental noise that may impact the surrounding community and



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<input type="checkbox"/>	04-01-2023	17:14:32	85 dB(A)	▶ 0:00 / 0:10	Vehicles	Download Delete
<input type="checkbox"/>	04-01-2023	16:21:15	85 dB(A)	▶ 0:00 / 0:10	Vehicles	Download Delete
<input type="checkbox"/>	04-01-2023	10:04:20	85 dB(A)	▶ 0:00 / 0:10	Construction/Factory tools	Download Delete
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environment; consequently, it is important that WCL takes effective measures to minimise these potential impacts.

***The environmental noise monitoring technology adopted on WCL construction projects:***

- Identifies different sources of noise (e.g., from sirens, vehicles, birds, motorbikes) that are then, by use of the artificial intelligence, automatically analysed and categorised as noise being from: — Construction activities — Impact sounds — Music — Vehicles
- Captures audio clips of the recorded environmental noise incident that are automatically stored on a cloud-based system, which is accessible to WCL operational teams for playback and investigation.
- Reduces the likelihood of human error from individual interpretation of environmental

noise measurements. Identifying the source of potential environmental noise impacts has previously been difficult and time consuming through conventional analyses of noise monitoring data.

The use of the artificial intelligence system within the environmental noise monitoring technology allows WCL sites to differentiate between construction environmental noise sources and other non-construction environmental noise sources consistently and accurately. If a noise exceeds a set level, an alert accompanied with the corresponding sound recording is issued to site teams and managers located remotely.

This system facilitates a greater degree of proactive and reactive noise management on site. Furthermore, the application of the artificial intelligence managed categorisation system allows WCL sites to track construction generated



environmental noise impacts across a working day to ensure that implemented noise mitigation measures are effective and regulatory requirements are being achieved.

The system retains an archive of categorised recordings, allowing for long term trend analysis and thus more effective management solutions tailored to each site based on observed trends.

### **What did it cost and where did the money come from?**

The use of this novel environmental noise monitoring technology was approved by senior WCL management and funded exclusively by WCL to provide environmental benefit to the wider community throughout the construction phase of our projects.

The exact costs are commercially sensitive so are not able to be disclosed.

### **If quantifiable, what did the project achieve in terms of sustainable development, economy, environment and/or equity?**

Whilst not directly quantifiable, reducing environmental noise nuisance impacts through use of this novel environmental noise monitoring technology and subsequent data collection has achieved the following:

- Improved vigilance of potential environmental noise nuisance impacts and the effectiveness implemented mitigation measures has reduced the potential impact of our construction related environmental noise impacts upon surrounding communities, which is to the benefit of their health

and wellbeing.

- Identification of alternative environmental noise mitigation strategies and construction processes based on real-time data has reduced the potential for complaints from surrounding communities that improves working community and regulatory relationships and perceptions of the construction industry.

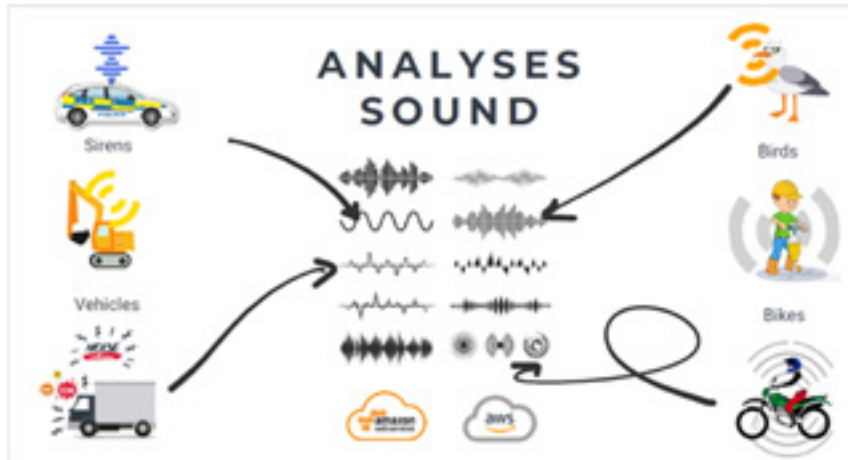
### **Who and What Benefited?**

Local communities in the vicinity of our construction projects are the primary beneficiary of this novel environmental noise monitoring technology. With better noise detection and categorisation measures in place, our operational teams can understand which construction activities create the most environmental noise and adopt alternative construction practices and / or environmental noise mitigation measures to avoid or reduce potential environmental noise impacts upon local communities.

### **Long Term Benefits**

As WCL is a member of the CCS, improving the public's perception of the construction industry is





to 'raise the bar' concerning the effective management of environmental noise nuisance impacts upon local communities that, if adopted by other construction companies, will serve to make this technology 'standard practice', which will be to the benefit of further local communities in areas where WCL do not currently operate.

a key goal. Consequently, reducing the potential for environmental noise nuisance impacts upon local communities will, over time, help to improve community relationships and perceptions of the construction industry.

Additionally, the adoption and promotion of this novel environmental noise monitoring technology by one of the UK's leading construction companies will help to 'raise the bar' concerning the effective management of environmental noise nuisance impacts upon local communities that, if adopted by other construction companies, will serve to make this technology 'standard practice', which will be to the benefit of further local communities in areas where WCL do not currently operate.

### Was there anything innovative about the project?

The implementation of this novel environmental noise monitoring technology using an artificial intelligence system is innovative within the construction sector i.e., the use of this revolutionary technology has not been previously used in the UK construction sector.

### Can other organisations/communities benefit from implementing these methods?

The adoption and promotion of this novel environmental noise monitoring technology by one of the UK's leading construction companies will help

### What did you learn from the project and is any further development planned?

The adoption of this novel environmental noise monitoring technology has highlighted that proactive measures are possible to reduce and mitigate potential environmental noise nuisance impacts from construction works upon local communities i.e., the construction industry does continually seek novel solutions for improving environmental performance and that maintaining the 'status quo' is not conducive to continual improvement.

### In terms of future development, WCL will be working with our supply chain partners to:

- Promote the use of this novel environmental noise monitoring technology to encourage other construction companies to adopt this technology for the betterment of more local communities.
- Develop a further sound categorisation range that could produce a more specific breakdown of environmental noise recordings.
- Expand the use of this novel environmental noise monitoring technology to avoid impacts to terrestrial and marine fauna i.e., to determine if construction activity is impacting sensitive ecology and subsequently develop mitigation measures to further protect ecological resources during construction.

## WJ GROUP

### THE WJ DRIVER BEHAVIOUR SCHEME

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#### INTRODUCTION

The WJ Driver Behaviour Scheme was designed with the overarching goals of increasing safety and delivering sustainability benefits. Working in the highways industry, driving is a substantial part of our operations with a fleet of roughly 400 vehicles including approximately 300 specialist HGVs, plant, vans and other equipment.

Consequently, fuel and the associated emissions form a large part of both our operational costs and carbon footprint. However, due to the specialised nature of our machinery, we are not currently able to switch to zero-emission fuels.

Therefore, we recognised that a key way we could reduce our fuel consumption and emissions, in addition to improving safety for both our workforce and other road users was to implement a scheme to improve our drivers' behaviour.

To do this we harnessed the capabilities of telematics technology, to understand and monitor various aspects of our drivers' behaviour. Following this we could then encourage safer driving practices by categorising drivers based on their performance and providing incentives for positive driving behaviour.

This forms an ongoing system where every month drivers are rewarded, with additional yearly bonuses.





We can then also offer training and guidance for underperforming drivers. The WJ Driver Behaviour Scheme has proven to be a significant success.

From an environmental perspective, our initiatives resulted in a 7.75% reduction in driving-related emissions and a 12% increase in MPG. We are particularly proud of this many of our operations take place at slow speeds or stationary, making it more difficult to increase MPG.



This is to ensure the smooth running of the equipment whilst we are installing road markings, road studs and other highway maintenance products.

We also observed significant safety benefits, including a 40% reduction in incidents and a 44.87% decrease in costs associated with these accidents. The improvement in driving behaviour further led to a 23% reduction in maintenance requirements for key vehicle components, driving further economic efficiencies.

Beyond the tangible benefits, the scheme has fostered a safety-first culture within our organisation, strengthening our commitment to our workforce's well-being and sustainability. The innovative nature of our project has also created opportunities for us to share our methodologies with the broader industry, potentially enhancing safety and sustainability on a larger scale.

### IN DETAIL

#### What did the project involve doing?

The WJ Driver Behaviour Scheme, at its core, involved reimagining our approach to driver safety and sustainability. The project required using our

telematics system across our entire fleet of vehicles to capture a wealth of data relating to the driving behaviours of our employees, such as acceleration, speed, braking, driving style, fuel consumption, and compliance with daily vehicle checks.

From this data, we then developed a grading system, where drivers were classified into three performance bands: underperforming, Satisfactory, and Excellent. To encourage better driving habits, we introduced a comprehensive reward system to recognise top performers and those who had made significant improvements in their driving behaviour, both on a monthly and yearly basis.

#### Why did you do it?

Working within the highways industry and travelling extensively across the country, we recognised the inherent risks associated with driving. We realised that improving driver behaviour would significantly enhance the safety of our employees and other road users and minimise our environmental impact.

The project's aim was not just to fulfil our safety obligation, but also to align our operations with sustainable development goals and improve cost-efficiency by reducing maintenance costs and accident-related expenses.

decrease in costs associated with accidents and a 23% decrease in maintenance costs.

From an equity perspective, the project has contributed to a safer and more secure working environment, with a 40% reduction in incidents reported.

The benefits of the Driver Behaviour Scheme have been extensive.

Firstly, our employees, who are now safer on the road, have benefited immensely. The reduction in accidents has mitigated the human cost associated with road accidents.

Secondly, the environment has benefited from reduced emissions and waste generation from less maintenance.

Thirdly, the company has financially benefited from the scheme, with substantial reductions in accident-related and maintenance costs.

Furthermore, the general public and other road users have also benefited indirectly from the safer driving practices of our employees.

Driving style longer table for WJ North-Korea January 2022												
	Driver	Speed Index	Acceleration Index	Braking Index	Driving style Index	PCN (Pass)	RJC Compliance	Fuel-Acceleration-Vehicle Damage	Speed Score	Acceleration Score	Braking Score	Driving style score
1		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
2		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
3		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
4		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
5		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
6		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
7		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
8		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
9		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
10		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
11		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
12		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
13		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
14		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
15		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
16		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
17		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
18		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
19		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
20		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
21		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
22		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
23		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
24		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
25		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
26		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
27		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
28		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
29		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99
30		100.00	0.50	0.50	99.99	1.00.000	100.00	100.00	99.99	99.99	99.99	99.99

### Longer-term benefits?

In the long term, we expect to see further improvements in driver safety, efficiency, and environmental impact. The scheme will continue to promote safer driving habits among our drivers, leading to sustained reductions in accident rates.

With lower accident rates, we foresee continual savings in accident-related costs. The reduced emissions and better fuel efficiency will contribute to our long-term sustainability goals.

Finally, the continued reduction in maintenance requirements will result in less waste and further financial savings.

### Was there anything innovative about the project?

Our project stands out for its innovative approach to improving driver behaviour. By leveraging technology and behavioural economics, we created a unique framework that addresses both safety and sustainability.

The integration of data-driven insights with a reward-based system to promote safer and more fuel-efficient driving is, to the best of our knowledge, a novel concept within our industry.

### Can other organisations/communities benefit from implementing your methods?

The principles underpinning our scheme - monitoring, grading, and incentivising - are not specific to our industry and can indeed be replicated by other organisations and communities.

In fact, we have already begun sharing our practices with industry partners and have received positive feedback on their potential applicability.

We know of one company that following a presentation on the scheme from our team has implemented an almost identical one.

### What did you learn from the project and are you planning any further development?

The Driver Behaviour Scheme has reinforced our belief that positive reinforcement can bring about significant behavioural change. It has taught us the value of data-driven decision-making in operational management. The project's success has prompted us to consider other areas within our operations where similar strategies can be applied.

We plan to further fine-tune our grading and reward system based on ongoing feedback and the results we continue to see. In addition, we are exploring opportunities to share our findings and methodologies on a wider scale within the industry.

WJ Group has been awarded 2 awards based on this scheme, one from the UK Fleet Champions for Fleet Safety Innovation Award and one from National Highways in excellence in safety learning and culture.

They highlighted how despite being a very specific area it demonstrated the significant benefits that can be brought about.





# CSR World Leaders Volume 28

## **A Work of Reference**

A selection of International CSR Excellence Award-winning papers, demonstrating corporate social responsibility programmes at their best.

**[www.csrawards.co.uk](http://www.csrawards.co.uk)**



**THE INTERNATIONAL  
CSR EXCELLENCE AWARDS**

for companies that have a heart

First published: 2024

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for companies that have a heart

## Setting the standard...

The CSR Yearbook is a comprehensive global resource on corporate social responsibility best practices.

It is published by The Green Organisation in tribute to the environmental endeavours and generosity of our CSR World Leaders.

These are the companies, councils and communities who have won the International CSR Excellence Awards for their environmental efforts, and who have taken their commitment to the next level by helping others to help the environment.

They are assisting us in publishing their award-winning papers in The CSR Yearbook, and we distribute this

valuable work of reference free of charge to environment professionals all over the world.

By helping others to follow their environmental lead and learn from their experiences and successes, they fully deserve the title of CSR World Leaders.

Not only do they allow us to publish their case histories, but they welcome any followup inquiries. Each CSR World Leader has a contact name and number shown in the Index, and any of them will do all they can to help others help the environment.



### Editor's Note

In the interests of accuracy, these International CSR Excellence Award-winning papers are published here in their original form – basically as provided by the entrants.

As many of the papers are of a technical or specialist nature, it was decided that the experience and expert knowledge of the contenders should not be compromised by the grammatical priorities and

consistency of style that usually dominate the editing process.

Our priority is to communicate the aims, methods and achievements of our winners as they wish them to be presented. To this end, the contents have been only lightly edited and we ask for your tolerance of any grammatical shortcomings that might result.

**The International CSR Excellence Awards**

**[www.csrawards.co.uk](http://www.csrawards.co.uk)**



# INDEX

## A

### **ABM FACILITIES**

**Victoria Leeds Environmental and Sustainability Journey**

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ABM and Victoria Gate in Leeds have visions beyond naked capitalism and see their role at the heart of their community as a serious responsibility. They have combined environmental improvements with work opportunities for people struggling to gain employment and have created a win-win ecosystem locally.

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### **ACCORD HEALTHCARE**

**Working Together to Drive Health Equity and Save Lives**

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Amid the COVID-19 pandemic and Ukraine War, Accord Healthcare partnered with International Health Partners to provide vital medicines to vulnerable communities. Accord's CSR commitment drives swift donations and aid efforts during these crises.

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**A**

**AD PORTS GROUP**

**Corporate Social Responsibility (CSR) at AD Ports Group**

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AD Ports Group excels in Corporate Social Responsibility (CSR), focusing on universal human rights and community well-being. Through initiatives aligned with Sustainable Development Goals, their CSR department positively impacts 100,000+ lives. Internationally recognized, they earned the Gold Trophy at the Corporate Engagement Awards in 2022 and were the first Middle Eastern company to achieve Gold Accreditation Excellence in CSR from CSR Accreditation (CSRA) in 2020.

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**ALMOIZ INDUSTRIES LIMITED**

**Community Uplift**

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Almoiz has gained respect in the community through sustainable practices and dedication. They prioritise stakeholders such as employees, suppliers, and the environment. AIL supports farmers with interest-free loans, operates a quality school, offers scholarships, promotes farmers' literacy, and ensures employee well-being through a comfortable work environment and healthcare facilities.

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B

**BALFOUR BEATTY**

**Southampton Highways Service Partnership  
- CSR Programme with Goal 17 and Saint  
Foundation**

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The Southampton Highways Partnership (HSP) team, in collaboration with Goal 17 and Southampton Football Club's "Saints Foundation," has successfully launched two groundbreaking employment skills and mentoring programs, supported by local businesses and the HSP supply chain. Benefiting 26 at-risk youth, the initiatives have delivered over £200,000 in social value, preventing unemployment and homelessness. The programs' triumph has led to plans for a third initiative, with partner organizations replicating the model.

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**BALFOUR BEATTY**

**Balfour Beatty's SCAPE Team Prevent City's  
Foreshore Erosion**

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The Weston Foreshore Coastal Erosion team, operating within a SCAPE framework for Southampton City Council, successfully constructed a £1m, 140m rock revetment in just 12 weeks. Overcoming challenges of tidal schedules and bird seasons, the team, along with the supply chain, volunteered 121 hours, added £545,327 in social value, supported STEM education, and donated £4442.45 in equipment.

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B

**BIN DASMAL CONTRACTING**

**INITIATIVES (for communities, customers, employees, environment)**

**Page 53**

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BDC is a leading sustainability firm in UAE, known for retrofit projects, energy audits, and system upgrades in mixed-use buildings. Partnering with LOYTEC, they focus on Green Building regulations and address climate change through recycling, reducing food waste, and implementing sustainable farming solutions.

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**BIRMINGHAM AIRPORT**

**Being a Responsible Neighbour**

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Birmingham Airport prioritises community well-being and mitigating negative impacts. Over four years, they have supported 11 charities, funded 50 local projects, and donated £110,000 to good causes. Their sustainability strategy aligns with the UN Sustainable Development Goals, showcasing their commitment.

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C

## **CARIDON PROPERTY**

### **CSR Accreditation**

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Over the last 13 years, The Caridon Group have built, procured and supplied good quality affordable homes in over 30 boroughs across London and the South of England. They are committed to being socially responsible organisation. They believe that their vision of being a socially responsible and legally compliant organisation helps to safeguard society and the planet for our future generations.

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## **CITYWATCH**

### **Citywatch the Capable Guardians of Southampton**

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Balfour Beatty's Citywatch service, operating for Southampton City Council, diligently safeguards the city around the clock. Staffed by Security Industry Authority accredited professionals, they monitor over 1,000 CCTV cameras across the city, contributing to a safer environment for residents, businesses and visitors. Their vigilance covers approximately 12 square miles and plays a pivotal role in ensuring public safety in Southampton..

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C

**COLAS**

**CSR Accreditation**

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Colas have gone above and beyond when it comes the CSR-A Four pillars of environment, workplace, community and philanthropy. Like the CSR Pillars, ACT includes 8 Pillars with corresponding targets. This is supported by their Social Value Policy, Environmental/Energy Policy, and their team of experts who work with the workforce, supply chain, and communities/organisations to deliver meaningful impacts.

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D

**DUBAI HEALTH AUTHORITY**

**RASED “The virtual healthcare facilities  
inspection Framework**

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Following the Covid outbreak, DHA introduced the region’s first virtual inspection framework for healthcare facilities. It increased productivity enormously, with the average 1-2 visits a day tripling up to 5-6 visits a day. Cost reductions were equally impressive, saving on fleet acquisition, fuel, maintenance time, parking fees, etc – amounting to a 45% saving.

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**DUBAI POLICE**

**Smart Awareness Games**

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To address behavioural issues in schools and prevent negative outcomes, the UAE launched effective initiatives with a focus on youth engagement. Dubai Police initiated a “Security Education” program covering all schools and universities, utilising various methods such as military training, awareness exhibitions, and educational video games to build a conscious and self-immune generation.

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E

**EIZO**

**EIZO International Excellence Awards 2023**

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EIZO UK, committed to meeting future EIZO Group needs, prioritizes corporate social responsibility (CSR). The entire leadership team underwent a comprehensive CSR training day in 2021 and subsequently committed to CSR Accreditation for ongoing enhancement, guidance, and external validation. Acknowledging the significance of staff engagement, talent retention, environmental protection, community contribution, and future work prospects, their dedication reflects a holistic approach.

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**GINEBRA SAN MIGUEL Inc**

**Ginebra San Miguel Inc - Tesda Partnership**

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Ginebra San Miguel, Inc. (GSMI) prioritizes sustainable social responsibility through its “Ginebra San Miguel Bar Academy.” As the world’s top gin producer and a leader in the Philippine liquor market, GSMI’s program originated in 2014, providing cocktail mixing and entrepreneurial training with a vision to benefit 100 students annually, focusing on education, livelihood, and community development.

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**GREEN MOTION**

**Green Motion - Leading Sustainable Travel**

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Green Motion provides eco-friendly rental vehicles without compromising affordability. They prioritise sustainability through reduced energy consumption, water conservation, effective recycling, and partnerships with manufacturers for low-emission technologies. Their goal is to become the world’s first fully zero-emission rental brand.

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**H**

**HAYAT/MOLFIX**

**Molfix Bond With Love**

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The Molfix Bond With Love Project helps premature and unhealthy babies in critical conditions to survive. It raises awareness about preventable infant deaths and emphasises the importance of mother/infant bonding. The project provides training and vital equipment support to newborn intensive care units - saving more lives.

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K

**KINGDOM HOUSING ASSOCIATION**

**CSR Accreditation**

**Page 110**

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Kingdom Housing Association, acknowledging the diverse activities beyond housing provision in its Corporate plan, recently earned a Gold International CSR Excellence Award and CSR World Leader Status for fostering strong, sustainable communities. Despite challenges posed by the COVID-19 pandemic, Kingdom's commitment to Corporate Social Responsibility has intensified, aligning with its mission to create resilient communities beyond just housing.

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**LEARN CORPORATION PUBLIC Co., Ltd.**

**Life Changing Program**

**Page 118**

**L**

“Life Changing Programme” by Learn Corporation offers quality education and scholarships to combat educational inequity in Thailand. With over 10,000 online courses provided to 5,000+ students, it promotes leadership skills, community building, and global citizenship, -empowering students to pursue their dreams and create a brighter future.

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M

**MEON UK**

**CSR Accreditation**

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Meon was founded in February 1994 and began as an import export agency. With their roots shaped by traditional family values, they have evolved by developing a truly sustainable business. Meon has embraced environmental and social responsibility to build purpose and value for their staff and customers.

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N

**NATIONAL GRID**

**The Hinkley Connection Project**

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National Grid's Hinkley Connection Project (HCP) combines clean energy construction with a community support programme. It engages diverse youth in Science, Technology, Engineering and Mathematics subjects, provides resources for educators, supports local employment, and funds community projects benefiting thousands of children and adults along the HCP route.

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P

**PARC TROSTRE RETAIL PARK - CBRE**

Encouraging Wildlife through Nature

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Parc Trostre, a sustainable retail park in Llanelli, South Wales, attracts 5 million customers annually. It fosters wildlife habitats and offers serene spaces near the scenic coastline. The park actively engages the community, promotes ecofriendly areas, and uses recycled materials to enhance sustainability efforts.

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**PT PLN (Persero)**

PLN's New CSR Strategy : Best Case Practice for Large-Scale Social Programs

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PLN, Indonesia's leading electricity company with 82 million customers nationwide, adopts a comprehensive CSR strategy aligned with state regulations and sustainable development goals. Their universal implementation approach serves as a model for companies, especially in the energy sector. Transparent data sharing and international awards enhance CSR program credibility, facilitating collaborations.

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**S**

**SABANCI HOLDING**

**Sabancı Republic Day Campaign**

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This campaign represents Sabancı Group's commitment to protecting the Republic. Their top priority is sharing the benefits derived from the land with its people. Safeguarding the Republic's values is crucial for the Group as they strive towards future goals and the continuous progress envisioned through the journey of modernisation.

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T

### **THREE SNOWHILL CBRE**

#### **Three Snowhill CSR Program**

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CBRE takes its leadership role in the real estate industry seriously by prioritising responsible practices. They actively manage waste, emissions, and natural resource consumption; create an inclusive workplace, minimise environmental impacts, and contribute positively to communities through volunteering, skills matching, and fundraising.

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### **TILLEY & BARRETT**

#### **Grosvenor Gardens**

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Grosvenor Gardens, located in Westminster, London, underwent sensitive redevelopment to transform the Grade-II listed building into high-quality residential apartments and retail units. Noise concerns were addressed during the deconstruction phase to minimise impacts on residents and businesses in the sheltered areas.

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T

**TRUSTGREEN**

**Community Champion Rooted in Nature**

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In 2022, the company introduced the role of the Community Champion, represented by Emma Hills. Emma's primary responsibility is to foster a sense of community and improve social coordination and cohesion in the Gaydon, Warwickshire development. Through her efforts, residents are encouraged to participate in activities that contribute to their health, wellbeing, and safety, while also emphasising the importance of nature and green spaces in creating a thriving community.

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## ABM FACILITIES

### VICTORIA LEEDS ENVIRONMENTAL AND SUSTAINABILITY JOURNEY

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#### SUMMARY

Before and since the pandemic, we have had a single goal, which is to make our centre as Sustainable and ESG centric as possible.

We understand that there are no magic bullets, however if we combine all the little things that we have achieved and aim to do, then we can make this centre a centre of excellence in Sustainability

#### IN DETAIL

Let us share our journey at Victoria Leeds In 2018 we installed 2 large renewable energy installations

on the roofs of Victoria Gate, and the Car park (Solar panels).

Since commissioning we have now generated 210,493kwh since acquisition - generated electricity has offset same CO2 as planting 464 trees - and so far, saved 34.9 tonnes of CO2 eq emissions

We then have our waste Coffee grounds initiative, that has now been running for 6 years - in this time we have diverted over 23 tonnes away from our waste streams by utilising the waste coffee across our external planting areas to be used as a soil enricher - this has also now been adopted across the portfolio at other sites. this also over time increased our recycling figure by around 4% and



lowered our waste costs due to less contamination.

We also removed our food digester 24 months ago as it was classed as recovered, not recycled - in favour of Food bins, which are supplied by Forge recycling, who then use the food waste as fertiliser across local farmland

We have over this period now saved just over £11,000 on operating costs per annum taking out Maintenance/water and labour costs, in addition our food waste is now 100% recycled, with the savings going back to the service charge.

Also, over year due to the cost-of-living crisis, we have adopted a new strategy to support local businesses wherever we can.

First, we have now partnered with Forge recycling, who have reviewed our last 12months of collections, and implemented a new schedule that has lowered the amount of collections we have per week by around 15% - lowering our carbon footprint and lowering costs at the same time.

Our collections are also carbon neutral through several of Forge's Carbon Offsetting Schemes, We also have our waste champion, who for the last 6 years has had one task of checking each bin daily for contamination, and then correctly segregating the waste into the correct stream.

He is also there to challenge and educate the retailers of how to identify the correct waste bins for each stream. This has had a very positive effect on less contamination, and again lowered our operating costs year on year

Landscaping – we historically handed this to a sub-contractor. To lower our carbon footprint,



save costs, and to further upskill our onsite teams, we have now brought this inhouse. A massive achievement and innovative approach were to first upskill the cleaning team to plant/maintain/source and continue to self-deliver our own landscaping.

We committed new funds to this venture, an increase of 20% on existing budget so that we could enhance the centres offering, as it was a 50/50 split on real and fake plants.

We have since transformed Victoria Quarter, which is now 100% real plants, and our next task was to do the same at Victoria Gate, which as of Sept 2022 has also now had all fake plants removed and replaced with real plants/flowers.

We also initially had a quote to revamp VQ, which came in at £7000 from a national supplier. We looked at this and decided that we should be supporting local businesses, so we approached a flower stall in Leeds market (Brian's flowers) and together the ABM team alongside the Knight Frank management team designed our own displays, installed them and also maintain them without using an external supplier, and the icing on the cake – we did all this for just under £700 a massive saving of 90%. And supporting the local economy at the same time.



After a visit by our new owners – Redical/Rivington Hark, who were all massively impressed with what we had achieved We also have a pride of place Bespoke bug hotel that can be seen by all our visitors as they drive into our Car park.

This great piece of biodiversity is now a focal point for all to see. We also had an amazing piece of mutual collaboration that has further enhanced our offering at the bug hotel. We made contact with an award-winning flower designer (Sonja KalkSmidt). Who had heard about our bug hotel, and had asked if she could donate her Award-winning array of flowers to have a forever home for all to be enjoyed?

We immediately said yes, and her only requirement was that she could take a photo of the finished result. At zero cost to the site, she has now installed her 2021 Duchess of Rutland cup Best in Show flowers Belvoir Castle July 2021.

We have also made her a brass plaque that now takes pride of place in-between the arrangement. A great collaboration to ensure that our Bug Hotel can attract all the local wildlife insects to visit and thrive.

In addition, we have also enhanced our offering of landscaping at no extra cost Our charity support work has also been amazing over the last 18 months, where we sponsored a guide dog trust £10,000. In July 2021 she was born, and officially now called Victoria at just over 1.5 years old she is nearly a fully fledged guide dog, that will make an amazing difference to someone's life, in addition we have also held McMillan coffee

mornings and raised over £700 each time

We also partnered with a local employment charity to help people in the community. We took on a 42-year-old male in late 2019, who was homeless at the time, and had been unemployed for most of his adult life. Nearly 4 years later he is now a valuable member of our team and had turned his life around.

Proving we support our Diversity Equality & inclusion Policies, and committed to supporting local people that have found it hard to find work Just this week we have also partnered with one of our retailers, who had asked if would host her 15 year old son





for work experience at site, where he spent a whole week with each department – Cleaning/technical/ management team & security to better ready him for a career once he leaves school, a great example of helping young people

Also as part of the ABM Junior engineering and engagement programme - where myself and colleagues attended and supported a school in Manchester over a few month say visiting and encouraging young females to enter into a career in facilities management including numerous workshops and team building exercises. this is now the 3rd year that the ABM team at Victoria Leeds have supported schools in our area in this great initiative

Like we said – lots of little environmental stories that together show that we are committed to change and improvement within our environment

Our achievements over the last few years include -

Green apple award winners - 2019- silver, 2021- silver & 2022 Gold for Property management

CSR award - 2021 for waste managements

Abm Annual awards -Team of the year 2020

Abm Annual awards - 2021 I was awarded winner Environment and sustainability Award

ABM Annual awards - 2022 My team was again winner of the Environment and Sustainability Award 2022 -

Kimberley Clark Golden service awards - team was awarded highly commended for our sustainability work and cleaning standards



## ACCORD HEALTHCARE

### WORKING TOGETHER TO DRIVE HEALTH EQUITY AND SAVE LIVES

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#### SUMMARY

In the last three years, the world has changed dramatically. The impact of the COVID-19 Pandemic, coupled with the devastating ongoing Ukraine War, has affected access to vital life-saving medicines to thousands of patients living in some of the most vulnerable countries in the world. Accord Healthcare one of the leading pharmaceutical companies in Europe ([www.accord-healthcare.com](http://www.accord-healthcare.com)) believes that patients should have access to vital medicines at the point of need, and this approach underlines our commitment to working with our global charity partner - IHP. International Health Partners (IHP; [www.ihpuk.org](http://www.ihpuk.org)) is a charity that helps people in hard-to-reach, vulnerable and disaster-hit communities get better access to medicine, without which many of the people living in these communities would not be able to access essential medications.

The Pandemic has had a devastating impact on medical aid charities such as IHP, with reports across the medical aid charity sector after year one of COVID-19 showing a loss in the funding of around 292m.

Coupled with the lack of funding is the significant impact of a fall in donations of essential medicines as pharmaceutical manufacturers grappled to deal with the Pandemic with supply shortages, freight disruption and essential manufacturer worker shortages. At the centre of this disruption were thousands of patients in some of the most vulnerable areas of the world desperate to access life-saving medicines.

Accord has been in partnership with IHP for more than ten years, and this partnership is an important part of our overall CSR strategy which is simply that we work together with our team of 32 CSR ambassadors across Accord to actively engage our employees with our mission to make it better for those who do not have regular access to essential medicines.

During COVID-19, we worked very closely with IHP, at the start of the Pandemic we uncovered industry wide freight and supply issues, this had a direct impact on IHP which reported that industry donations from across major pharmaceutical companies had fallen to an all-time low.

The industry which had once been a rich source of donations, was struggling to meet everyday patient and customer demand and whilst the world's attention had turned to COVID-19, the significance of this meant that thousands of vulnerable communities on which IHP and Accord focus our partnership efforts on were not a focus.



### **Ukraine conflict**

The world turned on its head again when the sudden invasion of Ukraine happened in early March 2022. Our partnership with IHP which had been strengthened during COVID needed to reprioritise our efforts, ensuring that refugees coming over the border were able to access life-saving and essential medicines.

Working on a strategic project with IHP called Project Hope, Accord mobilised its efforts, pulling forward our usual yearly donation of essential medicines within a week to IHP. The decision to do this was undertaken late on a Friday night with members of the Executive Team at Accord and IHP and the speed of decision-making and mobilisation ensured that Accord were not only the biggest donors of life-saving medicines to this project but was also the fastest when time really was of the essence.

Internally, we undertook a project called “Take Time for Ukraine” which was an unprecedented effort from Accord employees to not just support IHP, but to send humanitarian aid worth over £8m to the Ministry of Health of Ukraine.

This effort was highlighted by our teams, where via our passionate CSR ambassadors, we encouraged circa 2,000 employees to take an afternoon off every week during the War to support local charitable initiatives as well as our Polish office who went above and beyond volunteering time at the border for translation services, food delivery and other vital supplies.

### **IN DETAIL**

Working in partnership with IHP, Accord has gone above and beyond over the last three years and specifically over the last 12 months when the ramifications of COVID and the Ukraine War were becoming clear.

We have continued to donate more and more essential medicines to IHP since the start of pandemic, which we have effectively doubled year on year. Accord’s commitment to this cause never wavered, we wanted to ensure that we could support IHP to deliver our combined mission of ensuring equitable access to medicines at the point of need.

To date over COVID-19 and the Ukraine war, we have enabled over 800,000 urgently needed medical treatments to reach patients in over 50 countries, including antibiotics, antifungals, antiparasitics and anti-inflammatories and paracetamol. These vital medicines can provide treatments to life-or-death situations for vulnerable communities and are the ones that are the most desperately needed across some of the world’s poorest places where people lack access to basic healthcare.

In the last six months, Accord stepping up to the needs of those in Ukraine and has provided over 15,000 units of medicine (value £94,000) for IHP to prepare 166 Essential Health Packs. We also offered an extra 3,470 units (value £8180.20) in endocrine medicines to the Ukraine response and offered to provide an additional 46,700 units of medicine (value £82,053) of long-dated essential medicines to ensure other countries can also access medication.

Again, this was set against working to very tight deadlines and rapid decision-making. Beyond our relationship with IHP, Accord has also been one of the leaders with Medicines for Europe, which continually lobbies for medicines to be Access by All driving health equity and stepped up this request following the crisis in Ukraine by ensuring that we continue to raise awareness of the desperate situation in Ukraine and working with other pharmaceutical companies to ensure that we can work together collaboratively to bring awareness and support of the EU to drive equitable access.

It isn’t just about giving medication. Our work with IHP goes beyond giving donations of medicines, it touches our employees who actively contribute to



giving back and supporting them. Via a committed network of 32 CR ambassadors across Accord, our CR Goals are actively lived at Accord.

We actively engage our employees with our mission to make it better for those communities who do not have regular access to essential medicine. In addition to product donation and corporate donations, employees across Accord actively fundraise for IHP through various initiatives last year to help support their fundraising efforts impacted by COVID-19, culminating in our most successful campaign to date, The Big Give Campaign.

The Seasonal Big Give campaign in December 2021 raised over £12,000, which provided life-saving medicine for over 60,000 people and supported IHP to deliver over 14.5 million medical treatments, worth over £24 million across 31 countries to over 6.8 million people who were in desperate need of essential medical care.

Compared to donations in the last year 19/20 where we raised circa £5K via internal initiatives in 2021.

Added to this Accord doubled its efforts to reflect the impact of COVID-19 by:

- Doubling our usual company donation of £10K to £15K.
- We decided with our CSR ambassadors to forgo our usual corporate Christmas cards and instead donated the total £3.5K towards IHP.
- We ran a Step up for IHP campaign in the Summer of 2021 where we encouraged employees to walk 10,000 steps a day for IHP raising £5K.
- One of our talented employees ran a campaign to paint pet portraits for IHP raising £2K internally.



Over the past 2 years now, Accord working with IHP and Medicines for Europe has provided over 80,000 units of medicine to be distributed to countries with a direct need for access to healthcare. Malawi

Through Accord's donation to IHP, the Paediatric Oncology Unit at the Queen Elizabeth Central Hospital in Blantyre, Malawi has been able to support over 300 children.

One of these was Hope Nyondo, whose mother, Cynthia, a single parent of four, works extremely hard to care for her children. Hope's diagnosis not only dealt a blow to Cynthia emotionally, but financially too.

Cynthia says: "My child changed and was just crying for a month. I took him to Nguludi hospital where they referred me here."

Hope was referred to the Queen Elizabeth Central Hospital where he was found to have cancer which is now being treated. Cynthia survives and provides for her family through her small-scale business but is no longer able to work since she is in the hospital with Hope.

Thankfully, Cynthia does not need to worry about the added cost of Hope's treatment thanks to IHP and its donors.

### **Somalia**

In June 2021, a shipment of 12 Essential Health Packs (EHPs) was delivered to Somalia via IHP consisting of essential medicines donated by Accord.

These were distributed across seven different facilities in four regions, reaching a total of 49,263 people (16,000 males; 33,263 females) to address urgent medical needs and continuous care.

Sudan Supporting hospital and community-based care for COVID patients in Sudan, IHP with Accord and other donors helps meet the medical needs of COVID patients in both hospital and community settings.

Donation of essential medicines helps manage and treat those patients, especially those with co-morbidities.

### **Yemen**

In 2021 Accord supported IHP to reach 8 health facilities across Yemen with essential medicines and supplies following a shipment of 109,150 assorted medical treatments. One of the health facilities supported is a health centre at an orphanage that first opened nearly a century ago, in 1925.

Many of the orphans—all boys—lost their families during the fighting that has occurred over the past six years.

### **Haiti**

In central Haiti, at the Hôpital Ste Thérèse de Hinche, medics treated a total of 2 400 COVID 19 patients from July 2020 to July 2021 All were given aspirin provided by IHP's donor including Accord's to help lower the risk of blood clots In COVID treatment,

aspirin is used as an antiplatelet to reduce the risk of blood clots.

This common complication in patients with COVID 19 restricts blood flow and, without treatment, can be fatal.

### **Dominican Republic**

Continuing to work with countries of low income to drive health equity for all, International Health Partners working with their donors including Accord Healthcare donated 55,488 treatments of antibiotics which have been distributed free of charge to patients at Hospital Universitario Maternidad Nuestra Señorade la Altagracia, located in the capital city of Santo Domingo.

### **Ukraine**

The number of Essential Health Packs Accord products has helped IHP to send: 166 Within these EHPs we have the following figures for Accord Product:

Number of units: 15,338

Total value: £94,040.52

Number of EHPs: 166

Accord also supplied an additional 3,470 units (total value of £8180.20) in Endocrine medicines for the Ukraine response.

Added to this, we needed to support the distribution of this stock, Accord offered to support IHP's warehouse stock shortfall by providing IHP with an additional 46,700 (total value £82,053) units worth of long-dated essential medicines to ensure they can continue responding elsewhere this year, for example to the growing crisis in the Horn of Africa.

Additionally, we supplied over 8M worth of humanitarian aid outside of our partnership with IHP to the Ministry of Health in Ukraine to support

citizens in Ukraine during the conflict. Our vision to make it better by supporting our corporate charity partner to provide medication to those who need it in low income, disaster struck and war-torn countries including Ukraine is successful in its impact and outcomes.

Accord has actively provided millions of units of treatment over the last 18 months which has directly impacted thousands of people in countries all over the world with little or challenging access to medicine.

Added to this, the decision-making behind this process has ensured that we could deliver the help and support where and when it was really required meaning that we could mobilise supplies quickly and get the medicines to patients and war-torn refugees that so desperately needed them.

By working in partnership with charitable partners such as International Health Partners and by working together as an industry and utilising our lobbying impact with Medicines for Europe – we can actively make a difference.

“Accord is a greatly valued supporter of IHP. Through generous and long-term donations of needed and high-quality products, Accord has enabled IHP to reach vulnerable and disaster-hit communities in over 50 countries. We appreciate the commitment of Accord staff who ensure that they go the extra mile on our behalf.”

“From colleagues in manufacturing through to the Executive Team, Accord’s commitment to IHP’s vision and mission is evident. We regard Accord as a leader in partnership development and are pleased that they use their growing platform to raise the profile of

issues such as access to medicines, with their peers across the world.”

*Adele Paterson, CEO, International Health Partners.*

Our partnership with IHP, a successful one of ten years continues to flourish with combined campaigns such as The Big Give, which has a direct impact on communities that need access to healthcare.

We are proud of the fact that we are leaders in the industry and can quickly mobilise decision making therefore directly impacting the speed at which we can deliver life-saving products to the people that need them.

We are growing our partnership from supporting unprecedented events to delivering new medications to IHP’s programme to supply oncology medicines for children.

Year on year we continue to increase donations, but more importantly drive access to essential medicines and healthcare through our partnership with IHP, whilst raising awareness of equitable access to medicines with Medicines for Europe.





## **AD PORTS GROUP**

### **CORPORATE SOCIAL RESPONSIBILITY (CSR) AT AD PORTS GROUP**

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#### **SUMMARY**

Corporate Social Responsibility is the social pillar of sustainable development that ensures universal human rights are attainable by all people, who have access to enough resources in order to keep their families and communities healthy and secure.

AD Ports Group through its CSR department actively works towards meaningful community engagement,

which is of paramount importance to them. At AD Ports Group, we care about our people and the environment we live in.

Through our innovative yet considerate ideas, we have become a leader in sustainable growth in the UAE.

Our CSR activities have been part of that growth and are created beneath a framework of six key



focus areas supporting our communities, Health, Philanthropy, Employee Welfare & Development, Equal Opportunities, and the Environment.

Under these focus areas, we conduct CSR initiatives that also align with the Sustainable Development Goals (SDGs) and the United Nations Global Compact (UNGC) principles, to assist in the sustainable improvement of our community's health and well-being.

- 100,000+ Impacted Lives
- 100+ CSR Initiatives Our CSR department has gained international recognition for its socially responsible efforts and initiatives:
- We won Gold Trophy at Corporate Engagement Awards, UK, 2022 for the Best community involvement during a CSR programme.
- We were the first Middle Eastern company to be awarded the Gold Accreditation Excellence in Corporate Social Responsibility (CSR) in 2020, from the UK-based CSR Accreditation (CSRA).
- We won the International CSR Excellence award and CSR World Leader award in 2021.

## IN DETAIL

### 1. Does the entry identify clear CSR benefit?

At AD Ports Group we have become a leader via growing and expanding sustainably by means of ensuring that the communities and natural environments in which we operate are enhanced and advance with us subsequently.

We have established clear CSR advantages pertaining to the listed CSR initiatives that have been directed during 2022 along with their impact on Supporting Our Community in the focus areas of:

- Health
- Education
- Philanthropy
- Environment
- Equal Opportunities

- Employee Welfare & Development

### 2. Degree of originality/innovation. New solutions to problems?

At AD Ports Group the development and approval of our Innovation Strategy enabled the creation and capture of new value across our Clusters.

We prioritize intensifying and strengthening our operations and reflecting that on our surroundings and ecosystems.

Our innovative solutions are shown below.

- IBTIKAR showcases AD Ports Groups' creativity and welcomes audiences from outside the UAE to develop and breed new business ideas. The program also simplifies and improves business lines for employees and customers.

This program aims to deliver real results from doable concepts and align services for stakeholders. We strive for excellence in the arena of innovation through innovation-related trainings, domestic and global benchmarking exercises; and seeking out third-party accreditations.

- MANHAT Water Production Project- Water conservation and supporting local entrepreneurs are both key to AD Ports Group's Sustainability Strategy.

AD Ports Group's Innovation department's collaboration with Abu Dhabi-based deep tech start-up MANHAT's innovations has the potential to offer sustainable freshwater production with zero electricity use, zero CO2 emissions, and zero brine that is suitable for industrial and agricultural uses as well as human consumption.

- Saving Energy Through Innovative Coatings- We have formed an international alliance with German company SICC GmbH, provider of Superior Innovative Climate Coatings (SICC), whose specialised patented coatings reduce

buildings' energy consumption by controlling heat transfer.

The data that we collected in the study from approximately one million points is of excellent quality and provides a solid foundation for an AI-based modeling tool we are developing that will enable the accurate projections of energy savings delivered.

### **3. Commitment of the entrants' Involvement of relevant stakeholders and employees.**

*Have the staff demonstrated their commitment?*

Employee Commitment

By putting into practice a wide range of CSR projects, our workforce is better able to establish connections with the local communities and external stakeholders where we operate. This strengthens the bonds among team members at AD Ports, which are essential to the success of our company.

Our HSE team presented lectures and webinars about the dangers and signs of heat exhaustion in conjunction with the yearly "Safety in the Heat" programme created by the Abu Dhabi Public Health Center.

The campaign educates people on how to manage heat stress while working in sweltering temperatures and how to stay safe while doing so. 2466 training and awareness webinars were held as part of this project, and 64,827 members of our staff, stakeholders, and consumers participated.

### **4. Social Benefit.**

*Have communities or areas benefited?*

The Abu Dhabi Public Health Center's annual "Safety in the Heat" program included lectures and webinars by our HSE team on heat exhaustion.

The campaign educates workers on heat stress management and safety in hot conditions.

- 64,827 staff, stakeholders, and consumers attended

- 2466 project-related training and awareness webinars

Investing in our community is crucial to social sustainability, the social pillar of sustainable development that ensures everyone has universal human rights and enough resources to keep their families and communities healthy and secure.

Abu Dhabi Ports aggressively pursues genuine community participation, which is vital to our ecosystems, through its CSR division. The company's compassion attracts, develops, and retains the best and most diverse employees.

Abu Dhabi Ports is the first Middle Eastern company to receive Investors in People Platinum (IIP) accreditation. Our business and revenue models must remain sustainable as we grow.

We aim to benefit all stakeholders, the environment, and local communities. Our 71% community investment increase shows our commitment to workers and communities.

AD Ports Group hires enthusiastic people of all genders and ethnicities who support the UNSDGs and UNGC

- +76 nationalities work here
- 42% of employees are women
- Pathway20-Aurora 50 and Advanced Trade Logistics Graduates programmes to increase women in the industry

To promote inclusivity, team members were encouraged to learn sign language during International Week of the Deaf. This project promotes People of Determination (PoD) adoption and improves employee communication.

We invest in our community annually by supporting UAE-based non-profits such as the Emirates Red Crescent, Environment Friends, and Make-a-Wish Foundation.

### **5. Economic Benefit.**



*Have reductions or savings been achieved?*

Economic sustainability is achieved when global communities can maintain their independence and access the financial and non-financial resources they need.

AD Ports Group has prioritized sustainable infrastructure and technology investments. Our sustainable growth plan has significantly increased sales and annual gross profit.

Due to the expansion of Khalifa Port, Fujairah Terminal, KEZAD Group, and Mugharraq Port, Abu Dhabi is growing. With the AED 2.5 billion acquisition of Noatum in Spain, AD Ports will become one of the world's top logistics and freight forwarding companies.

Noatum is a 26-country logistics platform. Noatum is AD Ports' third major foreign acquisition in 2022

after buying 70% of Transmar and TCI in September and 80% of Dubai-based Global Feeder Shipping in November. (GFS).

**6. Future expansion of the scheme.**

*How do you intend to move forward?*

The "Big Picture" objective of having an impact on 1 million lives and the aims of each CSR Objective are both outlined in the 5 Years CSR Action Planner that AD Ports has developed.

**7. Replicability.**

*Can others adopt the procedures to their own benefit?*

Based on AD Ports Groups' six action pillars for implementing CSR activities, our internal clusters can easily adjust these CSR practices to suit their own needs:



### **Choose your Focus**

The value chain and the organization's principles must guide its CSR initiative.

Include alignment to the company's CSR strategy. AD Ports uses a CSR initiative selection tool to prioritize CSR initiatives and ensure compliance

### **List your Activities**

In the second phase of the CSR implementation plan, it is crucial to record which CSR activities to consider, their potential effects, and the budget needed to implement them. We created internal templates for AD Ports divisions to document CSR project budgets.

This phase also involves identifying the size of the department or company, target beneficiaries, potential community partners, and the type of CSR initiative.

### **Plan**

After listing CSR efforts and strategically selecting initiatives, we begin planning. In this phase, stakeholders' actions, the schedule, CSR champions, and department or "cluster" partnerships are identified. When initiatives are selected, the annual CSR planner should be updated with the Group-level CSR Plan and Cluster-specific CSR Action Plans.

### **Identify your KPI's**

To determine KPIs, CSR projects must be SMART (specific, measurable, attainable, reasonable, and timely).

### **Execute**

Selected stakeholders execute the CSR program as planned.

### **Report**

Using a CSR Survey Template to gather all relevant data post-implementation, including:

- Participants feedback
- CSR Initiative social impact report

- Track and improve future initiatives
- QR code creation

### **8. Other factors that merit additional points include:**

Component of continual improvement and sustainable approach.

Demonstrable programme for promotion and dissemination of the work.

Monitoring/Reporting Accountability/Transparency.

#### **CSR Booklet:**

Practical guide that explains the internal CSR procedures.

#### **CSR Strategy:**

This refers to the comprehensive CSR plan of AD Ports to design, execute, and analyze the CSR initiatives.

#### **CSR Policy:**

Policy to make CSR a key business process for sustainable development and reach the objectives laid out in the CSR Strategy as well as mandatory adherence by the workforce.

#### **CSR Initiative Selection Tool:**

Designed to prioritize and identify if proposed CSR Initiatives are in line with the Group's CSR Strategy

#### **CSR Evaluation Form:**

Aims to provide the details and identify the added value to AD Ports Group of the subject potential

#### **CSR Event/Sponsorship - CSR Planner:**

Provides the details of the Annual Group-level CSR Plan and the Annual Cluster-specific CSR Action Plans.

#### **5 Years CSR Action Planner:**

Outlines the goal of impacting 1 million lives and the beneficiaries' goals of each CSR Objective.

**CSR Implementation Report Template:**

Compile information and data on the executed CSR Initiatives and assess the social impact created via the CSR Initiative.

**CSR Survey Template:**

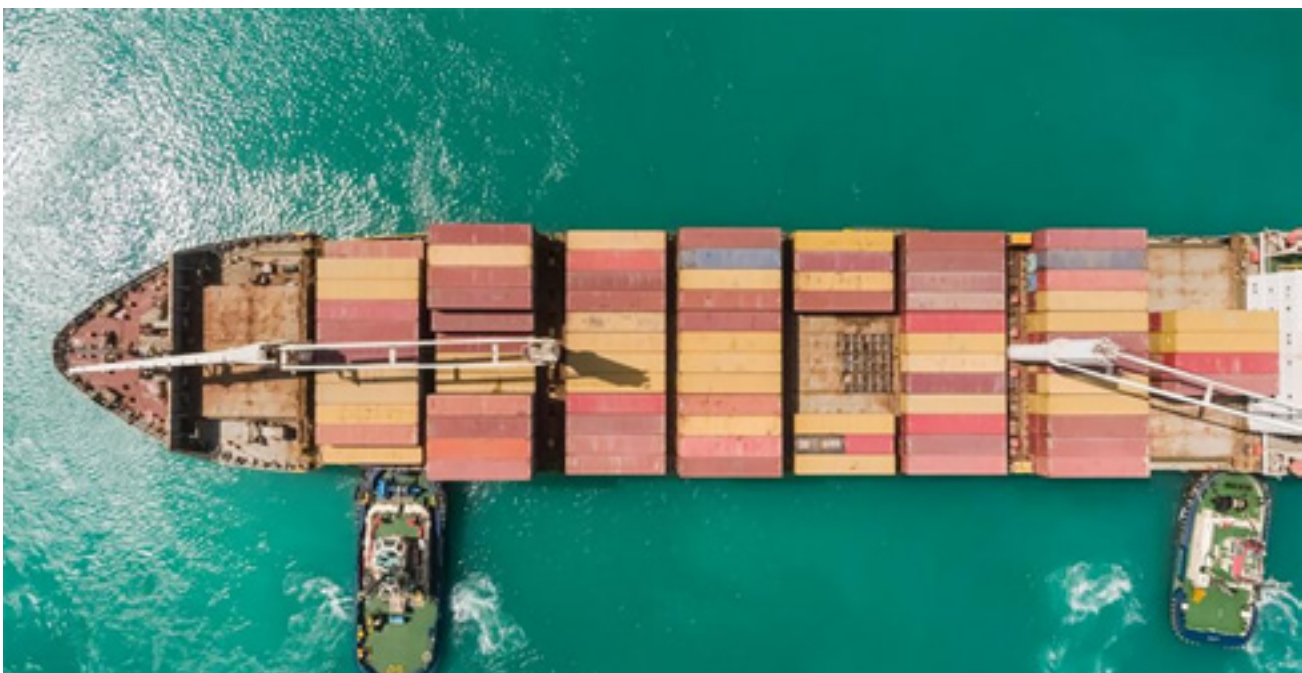
Used after the CSR Initiative is completed to:  
Collect feedback, Report on the social impact, keep track and ensure continuous enhancement

**Key Achievements: Awards:**

- Gold Trophy at CEA, UK 2022
- Gold Accredited by CSRA, UK
- CSR Excellence Award - By The Green Organisation
- CSR World Leaders Award - By The Green Organisation
- Port & Terminal Operator Award, Seatrade Maritime Awards
- Investors in People Platinum Level Accreditation
- 17 international business awards including recognition for
  - 'Achievements in Growth',
  - 'Best Digital Process Automation Solution',
  - 'Communication Department of the Year',
  - and 'Marketing Campaign of the Year' plus others at The Stevie International Business Awards 2022

**Highlights:**

- USD 1 Billion Bonds Listed
- 2,144 Innovative Ideas Received Through Ibtikar Programme
- 22% Increase in TEUs handled
- 41% Increase in Revenues Generated
- 72% Increase in Community Investments
- 105% Increase in the General Cargo Handled
- 71% Increase in Women Employees
- 63% Increase in Total Training Hours
- Environmental highlights:
  - Translocation of Spiny Tailed Lizards
  - 32% Decrease in Fuel Consumption Intensity per TEU
  - 37 Tonnes of Marine Debris Removed
  - Coral Relocation Monitoring
  - 95% Ambient Air Quality Compliance
  - 99% Seawater Quality Compliance
  - 47% Solid Waste Recycled
  - 12% Decrease in Hazardous Waste Landfilled





*Social highlights:*

- 67% Emiratisation
- 16,736 Employee Volunteering Hours
- 100+ CSR Initiatives
- 100,000+ lives impacted

**Key Initiatives Undertaken**

*Abu Dhabi Maritime Academy (ADMA)*

The Abu Dhabi Maritime Academy (ADMA) is the first stop for maritime training, education, consulting, research, and development. We are proud to operate the region's most advanced, fully-equipped, and first multi-disciplined maritime simulator center, where our highly qualified instructors teach our students how to handle business challenges and reduce risks.

*ADMA offers a range of regionally and internationally recognized courses including:*

- Short and Simulator Courses
- Academic Programmes
- Research & Development (R&D)

To provide quick responses to the needs of the marine industry, ADMA has also devised programmes that quicken development and fill employment openings within the maritime sector in six to twelve months.

- 73 Short and Simulator Courses
- 13 Professional Certificate Courses
- 4 Academic Courses, and 4 PMI Courses are among the offerings
- +600 students are enrolled in and certified by ADMA.

**Innovation**

*Summer Camp for students*

As part of our journey to encourage new thinking to shape the future of the global maritime and trade industry, we conducted the Innovators of the Future Summer Programme through a collaboration with Emirates Schools Establishments.

This aimed to engage children in a diverse range of activities – including mind games for speed and concentration, virtual reality, and exploring the metaverse, in addition to physical trips to our world-class Maritime Academy and Khalifa Port plus NFPC's factory in KIZAD.

Advanced Trade & Logistics Graduates Initiative Launched under the patronage of Her Highness Sheikha Fatima bint Mubarak, the Mother of the Nation, ATLG supports rising female talent in the sector of technology.

The initiative is open to Emirati females who have recently graduated or are final-year undergraduates. This year's Graduates were given the opportunity to join our Digital Cluster for a three-month internship, where they contributed to the deliverables of the Advanced Trade and Logistics Platform (ATLP).

The Graduates left the programme with first-hand experience in developing innovative technology that is advancing Abu Dhabi's trade and logistics sector and through this program AD Ports Group has impacted 90,000+ beneficiaries till date.

**IT Equipment Donation to Emirates Red Crescent Charity**

For certain members of our community IT equipment can be too expensive to purchase. A lack of access to IT equipment limits opportunities for education, training, and employment.

So, in cooperation with IT Management, AD Ports Group donated 532 pieces of IT equipment including laptops, monitors, printers, and desktop PCs to Emirates Red Crescent to benefit digitally excluded members of our communities.

## ALMOIZ INDUSTRIES LIMITED

### COMMUNITY UPLIFT

#### SUMMARY

Almoiz Industries Limited (AIL), Bonsucro certified company, is part of a large group. In a short time, through its dedicated team, sustainable practices, innovation and adoption, it has gained a lot of good will and respect in the community.

Almoiz Industries Limited key success driver is that it consider community, its employees, its suppliers and the environment, most important stakeholders of today. As being one of the biggest sugar industry players of Pakistan, AIL believes that the suppliers of sugarcane and sugar beet, which is raw material for sugar, are the most important stakeholders in its business and we have to take care of them.

So, AIL has taken following initiatives to uplift the community at large.

- a) Agri. loans to farmers: (AIL is giving loans to farmers up to 3 billion Pak Rupees on zero interest rate.
- b) AIL has built a state-of-the-art school to provide quality education to the children of surrounding area of its mills but also to the children of employees. AIL has collaborated with “The Citizen Foundation” to operate this school.
- c) AIL has signed an MoU with the Lahore University of Management Science (LUMS) and through this MoU, AIL will provide full scholarships to the students coming from these underprivileged areas through its NoP program.
- d) AIL has also launched “Farmers Literacy Program”

to provide free of cost education to all Farmers.

- e) AIL has also launched “creative learning project”.
- f) AIL has provided very comfortable environment to its employees where every need of the employee is being taken care of the AIL either it’s the health of employee and wellbeing. It has created a good work life balance for its employees.
- g) AIL has also established a Basic Health Unit for its employees.

#### IN DETAIL

Almoiz has two sugar units / mills in Pakistan, one is located in northern province of Khyber Pakhtunkhwa (KP). In addition to conventional milling, Unit 1 has adopted latest diffuser technology based on technology from Belgium.

This diffuser is used to extract juice from both crops i.e., Sugar Cane & Sugar Beet. The plant is equipped with automated milling tandem.



Second is located in Punjab, Almoiz Unit 2 is also equipped with automated milling tandem including the state of the art “Mill Max” (based on French design). An important feature of the operations is the installation of the latest “Eaton Filters” that facilitate in additional filtration so that the sugar produced matches the International Standards of quality in terms of ICUMSA and the required levels of turbidity.

Additionally, Pan Automation has also helped Almoiz in achieving the efficiency targets. Almoiz group has been certified against the requirements of international standards for Environment, Sustainability and Occupational Health & Safety Management Systems like ISO 14001, ISO 45001 and Bonsucro standard respectively.



### **Environmental Responsibility:**

The group is always serious in taking appropriate measures in safeguarding the environment and has strong commitment to follow the procedures/ arrangements required to control environmental hazards.

The group is very serious about its environmental and social responsibilities. We are committed to the prosperity of the localities in which our units are placed.

- The group has installed new & latest fully automatic Bagasse fired boilers with latest Fly Ash arresters along with the cyclones for the boiler ash removal.
- In addition to the advanced bagasse fired boiler and to mitigate the emission effect the group promotes the plantation of trees. The major focus is given to reduce the quantity of effluent water generation with continuous improvement.
- The group has replaced the use of black oil with imported white/Transparent oil due to which oil consumption has been reduced by 4 times.
- Almoiz Industries is registered with the United Nations Framework Convention on Climate Change (UNFCCC) under the KYOTO protocol for Certified Emission Reduction Credits (CERS).
- World class processing practices are adopted which are continuously improved, helping Almoiz Industries to reduce its carbon emissions and establish Almoiz as an environmentally responsible entity.

### **Almoiz Industries Limited – CSR Report 2022**

- Almoiz Industries has installed Air Pollution Control System at its Steel Plant so that scrap melting smoke cannot affect workers health and environment. APCS is installed to collect dust of scrap/ metal while charging scrap to furnace for environment, workers and plant safety.



It keeps the environment clean through suction technology thus allowing clear air exhausting from its chimney.

This system is operational 24/7 and 365 days.

*Environmental Protection Awareness & Plantation Campaign:*

Almoiz group launched the environment protection awareness and plantation campaign at site on 5th June 2022. Purpose was to increase the awareness level of site staff regarding importance of environmental responsibility.

Senior management officials attended the event to show commitment of top management and strengthen their vision towards environment protection at ground level.

*Almoiz Industries Limited – CSR Report 2022  
Environmental Goals & Performance Trends:*

A comprehensive plan for achieving the environmental goals was put into action by Almoiz group using different tools including staff training, equipment maintenance, technology upgrade and farmer development.

Recent trends are evidence of the positive impact that Almoiz has made towards climate change mitigation and environment protection.

Environment protection goals focused on following parameters as depicted in table below;

- Green House Gas (GHG) Emission Control
- Water Conservation
- Agrochemicals Consumption Control
- Energy & Fossil Fuel Conservation
- Soil Degradation Prevention
- Carbon Trace Reduction
- Environmental Regulatory Compliance
- Clean & Green Energy Promotion

**Triple R Approach:**

*For Conservation of Water:*

For in house water management, we are adopting 3R approach (Reduce, Reuse, Recycle). In the recent years, we reduced the effluent water (From 300 m3/hr to 80 m3/hr) as well as fresh water intake in the following ways;

*Reduce:*

Use of very high viscosity Organic and synthesized lubricant to reduce raw water intake for cooling of bearing for following (from 150 Tons/hr to 12.5 Tons/hr),

- Elimination of environmental impacts
- Elimination of spills from asphaltic contamination
- No health and safety risk due to lead & zinc
  - Use of raw water at wet scrubber was reduced to Zero by using in-house recycled hot water (34 Tons/hr).
  - Leakages of plant pumps were reduced and water going to drains was reduced. Task force was deputed to control and report the waste water
  - Effective control on use of tube well and efficient use of raw water and raw water intake reduced from 205 Tons/hr to 110 Tons /hr
  - Raw water overhead tank overflow reduced to zero through level automation

**Environment protection goals**

*Almoiz Industries Limited – CSR Report 2022*

- Over flows of hot water tanks at both mill tandems, process house & boilers feed water tanks have been stopped through automation
- Readjustment / redesign of vapor pipeline to reduce vapor condensation in pipeline and prevent waste water
- Overflow of hot tanks in process have been stopped through automation and control
- Raw water use at imbibition's has been stopped by using cooled surplus hot water.
- Installation of de-super heater for exhaust steam to reduce water wastage

*Re-Use:*

- Cooling water of cascade condenser going to drains was reused at wet scrubber of boiler. Water going to drain reduced from 10.4 Tons/hr to zero
- Cooling water of vacuum pumps was reused through cooling tower and use of raw water reduced from 14.2 Tons/hr to Zero.
- Overflow of condensate water was controlled by 100% by storing into a concrete pond. Showering system was installed to cool it down to reuse into spray pond. Addition of raw water into spray pond is zero.
- Recirculation system has been installed. All raw used in process house for brushing, cleaning and hydraulic testing of vessels, evaporators, pan been connected with recirculation system.
- Installation of heaters to recover heat from surplus hot water for RO water and reuse it as make up

*Recycle:*

- Water used at wet scrubber is recycled after screening (34.2 Tons/hr)
- Drain water useable for irrigation has been segregated from effluent water and being used for irrigation of crops (177 Tons /hr)

**Almoiz Response in Floods 2022:**

When the monsoon season began in June 2022, no one expected it led to one of the worst natural disasters in Pakistan's history.

With over 33 million people affected, 7.9 million displaced, and 2.1 million homes damaged or destroyed the people of Pakistan are still struggling to resume the life they knew.

Keeping in view the worst condition of the people of District Dera Ismail Khan Almoiz Industries Limited started short-

term recuperation projects for families in need like provision of monthly ration, drinking water, mobile medical services and tents.

The road ahead may seem long, but with our support the journey will bring comfort and ease for the affected peoples. It is noteworthy that Almoiz Industries Ltd. sustain the tradition of people welfare because in 2010 flood same sort of support were provided to the affected people at a big level.

**Almoiz Industries Limited – CSR Report 2022**

The flood affected the whole area ravaging villages and forcing them to fend for their lives. For the welfare of people, we started relief activities in form of Food, Water, Medicine, and Tents.

Till today we have delivered the help to thousands of peoples and striving to the serve many more thousands. In order to support the flood affected people of the surrounding areas of our site we started distribution of cooked food, food packs containing Floor, Grains, Ghee, Sugar, Tea, Salt, Water Purifying Tabs, Mosquito Nets, Shakar, Match Box, Almoiz Gur, Water Pack, Biscuits, and Tents.

Almoiz group donated PKR 100 million for the Prime Minister Flood Relief Fund for the purpose of distribution of food and tents.



## BALFOUR BEATTY

### BALFOUR BEATTY'S SCAPE TEAM PREVENT CITY'S FORESHORE EROSION

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#### SUMMARY

Weston Foreshore Coastal Erosion team worked collaboratively within a SCAPE framework for our customer Southampton City Council to build a 140m rock revetment valued at £1m within a tight 12-week timeframe with restraints of working at specific tidal times and an approaching overwintering bird season.

The team embraced the community of Weston Southampton while they undertook the vital repairs to protect the foreshore for 50 years. They, along with the supply chain volunteered 121 hours of time, £545, 327 of social and local value added, spent 30 hours supporting the local secondary school teaching future STEM pioneers and donated £4442.45 in equipment and resources in the area.

Caring for the immediate and wider the community the team welcomed the environmental challenges that working adjacent to a former landfill site, in the sea and needing to facilitate the delivery and positioning of 2529T of rock to site and into position without one complaint, environmental incident or accident.

The team, predominantly local to the area (living within 10 miles) were able to further contribute to the success of the project by having an invested interest in the area and being able to offer local knowledge into mitigating issues known to them.

By investing time, effort and timely, clear, honest and transparent communications the team received two written

complements and completed 2 weeks early, ensuring that the protected wintering birds would be able to nest on the mud flats of Weston Southampton.

In all the site was operational for 10 weeks during this time we undertook 12 community-based events spent 121 hours volunteering and spent £4442.45 on charitable contributions resulting in a weekly investment of 1.2 days volunteering 12.1 hours per week at a fiscal cost of £442.25

#### IN DETAIL

Degree of originality/innovation. New or novel solutions to problems?

Southampton is synonymous for being the gateway to the UK and has the third busiest cargo port in the UK, despite its coastline, only a fraction of it is accessible foreshore and until the completion of this project, the future of this precious space was hanging in the balance.

Above the eroding cliffs sits a treasured national footpath/cycleway, without the work being undertaken it would quite simply erode, with a real





risk of a landslide that would ultimately result in an inaccessible shoreline for the city.

Located in the eastern suburbs of the city, Weston has a mixed demographic and a higher-than-average crime rate for the unitary authority; pockets in the area suffer from high levels of deprivation and there is a high demand for free school meals.

Strict environmental sensitivities dictated the timeliness of the project as the site is protected during the winter months for the rare wintering birds that come during the latter months of the year to nest. To safely store the tonnes of rock coming to protect the foreshore, and provide welfare and storage for the project, we liaised with Southampton parking services and used a neighbouring car park, advanced signage was erected in the area and people liaised with to advise of the temporary closure. The team are always seeking new and innovative ways to reach Balfour Beatty's Net Zero Carbon by 2040 and embraced the use of a hybrid generator that charged via external solar panels, they jumped at the chance to embark on a trial of a solar powered weather station.

Productivity is, as we know impacted by the weather, and due to the impact on the community it was imperative that the team embraced every low tide opportunity to complete as much work as possible, by using an onsite weather station the team were able to accurately plan and execute a lean working approach that minimised any unnecessary inconvenience to the public.

### **Commitment of the entrants - involvement of relevant stakeholders and employees**






During the project lifecycle the project heavily invested in the area, not only with stakeholder meetings with local businesses but also by undertaking community events with the wider team.

This commitment included 7 litter picks, which occurred not just in the immediate area of the works, but further along the foreshore and in a community garden in the neighbouring suburb of Woolston.

Balfour Beatty staff, along with the supply chain were proud to see how these litter picks helped to clean up the vicinity, remove contaminants from the area, whilst preventing more plastic entering the sea and showed our commitment to the whole community.

### **Social Benefit. Have communities or areas benefited?**

We also embedded ourselves with other community groups including the Friends of Weston, a volunteering group who diligently look after Woolston Community Garden, we assisted the group, by clearing up the area and providing materials to assist them with the upkeep of the garden and more poignantly for a memorial area for one of the key individuals who had recently passed, to assist the charitable group the team provided materials not only to assist establishing this area, but also to maintain it in the coming years.

 <p><b>Full Team Litter Pick</b></p> <p>Southampton Council, Balfour Beatty and WSP litter Pick.</p>	 <p><b>Local Donations</b></p> <p>Donations for new local public benches and materials to community projects.</p>	 <p><b>Support the Local Community Garden</b></p> <p>Full text description to accompany the icon above</p>	 <p><b>Project Celebration Community Day</b></p> <p>Full text description to accompany the icon above</p>	 <p><b>School Engagement</b></p> <p>Full text description to accompany the icon above</p>
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This task was repeated throughout the scheme to demonstrate that we care about our immediate and extended working environment. Year 10 science pupils at nearby Weston Secondary School were treated to a hands-on lesson on flooding by our graduates and project team, including our client. Using many awe-inspiring methods including a wave machine the team were able to demonstrate the power of waves and coastal erosion, especially as Southampton has two high and low tides daily.

Once the project was at its final stages, the students then came down and after an induction were shown the site and how the installation of the rock armour solution would protect their foreshore. The team's working hours on the foreshore were dictated by the tide, due to the large vehicular movements to install the rock armour solution it was necessary to close the foot path, understandably closing this at sporadic times during the day was tricky to communicate to residents in advance, so an advance warning sign was placed at either end of the closure advising of the day's opening and closing times, this ensured that people weren't unnecessarily inconvenienced.

#### **Economic Benefit – Have the communities or areas benefited?**

Our working area was directly adjacent to Weston Sailing Club, the committee were fully supportive of the scheme, as they were fully aware of the issue, however and understandably they were concerned on the impact of the work to their club.

Discussions enabled us to identify that doing the work in the summer was preferable to the club, as most of their patrons would have their boats in the water by this point. Letters were sent to 1331 residents and 397 stakeholders including local Councillors with three weeks' notice of the works, we purposely sent the letter early to ensure transparency with the community and to ensure that we would be able to answer any questions or concerns, prior to the work commencing.

The large letter cascade openly discussed why the work was taking place, along with the detrimental impact that it would have to pedestrians and cyclists during this time. The letter included a detailed pedestrian diversion route for those in the area when



the footpath was closed. Having undertaken an in-depth study into the demographic area, along with previous experience of working in the vicinity, we knew that people would have questions and queries, so we provided a frequently asked questions page that detailed a host of answers to questions that the community may have.

Weston foreshore is visited widely by non-residents; to effectively communicate with them we produced weatherproof copies of the FAQ page, these were placed around the site hoardings, and in the footpath closure.



## **EVIDENCE OF MEASURABLE IMPACT/ BENEFITS (Environmental, social and financial)**

### **Are the theories supported by measurable improvements?**

The environmental impact of the project was constantly on the forefront of the team's mind, as any incident would have a catastrophic effect on the wildlife, flora and fauna of the area, it would also impact the reputation of all involved.

Processes for fuelling and vehicle checks were paramount to having a positive impact on the environment along with the re-using materials on site to minimise disruption of unnecessary vehicular movements to our neighbours and scheduling deliveries to arrive during off peak hours to minimise congestion around the site and not to disturb the adjacent residents.

Working in collaboration with local Southampton based charity City Farm the team donated and re-surplus and what would be waste materials to them. The City Farm team along with their volunteer team that comprises of youngster and adults with additional needs proceeded to make some bat boxes, that have been installed to provide additional habitats for our local bat population.

Education has been a thread throughout the whole scheme, throughout the communication process, including social media posts the team were mindful of creating interest and



knowledge, on the history of the area, by reporting the archaeological finds and explaining the impact of previous pre-war repairs, it seemed only right to provide opportunities for the community to continue this learning by providing rock pools in the new rock armour solution so that they could come and view and learn more about the bio-diversity that lives amongst them.

To support learning, the team ensured that a newly refreshed information board was available which is now accompanied by our sub-contractor's donation of 5 new seated benches along the promenade to provide provision for those wishing to enjoy and relax in the area.

Commercially it was imperative to the team to spend locally, not only would this benefit the local economy, but also reduce our carbon footprint a 79% local spend was achieved by careful pre-planning and using the in-depth local knowledge that we had on site. The project completed earlier than programmed, due to a mix of favourable conditions, great teamwork, accurate planning along with the lean and smart approach that was embraced during this vital work.

Understandably there was concern at the start of the project that due to the level of disruption and the impact of closing the only area of the city's foreshore during the summer holidays in an area where a proportion of residents didn't have outside space, that it would attract a large amount of negativity and instigate complaints.

Throughout the project the team didn't receive one complaint and embraced the two written compliments from members of the public. To show our appreciation to community, a collaborative community day was hosted at the adjacent sailing club.

As a team it was imperative that we said thank you, the Balfour Beatty way – holding true to our values of working collaboratively for the greater good of the area.

*The objectives of the day were to:*

- Say thank you to the community
- To assist fighting food poverty
- Promote safety
- Integrating the sailing club

To achieve this broad spectrum of objectives, we planned the day to coincide with the school half term, therefore enabling every demographic to attend, the timing of the day covered lunchtime and early evening.

The cost-of-living crises is being particularly felt in Weston, being mindful that school children wouldn't necessarily be accessing hot food during the half term we decided to provide a free BBQ to all who visited.

A scheme brochure was produced specifically for the event, along with flyer to promote it, invitations were sent to the local neighbourhood wardens, sure start centre, local schools, and nurseries along with a letter to the stakeholders and residents in the area.

A video was compiled at the end of the scheme to celebrate the work that was completed. The sailing club were pivotal in the success of the project; the club is used by local universities and small groups; however, they have in the past found it difficult to get local members, as they believe that there are myths in the social stature required by them, so this was a great way of integrating them into the community.

To assist them to hold future community events we donated a BBQ and seating to assist the success of their events for the local people. Locally the area experiences higher level of poor health and anti-social behaviour including incidents of arson.

With Halloween and bonfire night around the corner we liaised with the emergency services and invited them to attend the event, both South Central Ambulance Service (SCAS) and Hampshire Fire and Rescue Service were keen to join in and were thankful for the opportunity.

On the day, over 40 local people come to the event, including an impressed local councillor and his daughter, potential sailing club members our client team and supply chain. SCAS spoke to and demonstrated first aid, including how to carry out CPR on a resuscitation dummy, they also showed everyone how to use a defibrillator to their multiple audiences as well as answering questions from the public on specifics and informing them of the role of a first responder.

Hampshire Fire and IOW Fire and Rescue Service brought an appliance to the event, and allowed visitors to try on their specialist uniform, tour

red guests around the appliance and advised on safety. Being a positive lasting legacy leaver in the community is intrinsic to our values, in what proceeded to be a short 10-week project we have shown that by building trust, listening to and conversing with all areas of the community and embracing the demographic working with them we are able to provide at least 50 years of accessible, educational foreshore for the whole community to fully embrace and cherish.

Our client praised the site team for their enthusiasm and manner when communicating with members of the public.



## BALFOUR BEATTY

### SOUTHAMPTON HIGHWAYS SERVICE PARTNERSHIP - CSR PROGRAMME WITH GOAL 17 AND SAINT FOUNDATION

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#### SUMMARY

The Southampton Highways Partnership (HSP) team have now delivered 2 market leading employment skills and mentoring programmes in Southampton and in doing so have delivered over £200,000 of social value and helped over 26 young people transform their lives.

The HSP is a long term partnership between Southampton City Council and Balfour Beatty and at the heart of the partnership is a strong focus on legacy, social value and supporting the communities in which we work.

Having developed a unique and innovation employment skills and mentoring programme, working with Goal 17 and the Southampton Football Club “Saints Foundation”, the HSP team have

now supported 26 local young people who were at risk of becoming unemployed or homeless. These programmes have been supported and funded by local businesses and members of the HSP supplychain and have been so successful that a third programme is launching in the near future, in Southampton.

Alongside this, partner organisations have now launched their own programmes to replicate the fantastic work, started in Southampton. These programmes have used a unique approach to delivering significant CSR to the local community and have demonstrably helped young people with employment skills, jobs, support and guidance.

The success of the programmes have been widely recognized and staff from many of the HSP partner organisations are now requesting to get





involved, support the project and develop their own management and mentoring skills.

This is a unique, hugely impactful and transformation CSR programme that will continue to add value to local young people for many years to come, thanks to a great team of people from organisations committed to supporting the local people of Southampton.

## IN DETAIL

### The Southampton Highways Services Partnership

The Southampton Highways Service Partnership (HSP) is a collaborative partnership between Balfour Beatty and Southampton City Council. The partnership delivers a fully integrated, end to end highways service, including asset management, design, network management, traffic signals, communications and operational delivery functions.

Having mobilised in 2010, the partnership has gone from strength to strength each year. Increased scope, changes to the political and social landscapes, ever tightening budgetary challenges and an ever-increasing demand on the highway assets have all had an impact in shaping the partnership.

As the partnership has developed and the trust between the partners has grown, Balfour Beatty have become increasingly involved in projects outside of the scope of the core contract.

Social Value and a focus on delivering a service that leaves a true legacy for the City in future years has been a key focus of these projects and the COVID 19 pandemic has only increased this.

Delivering amazing CSR in Southampton: In 2019, the HSP leadership team had had several discussions around the challenge and strain that unemployment, homelessness and adult social care was having on the authority and whether the HSP

could help.

At the same time, Brian Hammersley, Balfour Beatty Contract Director, had a chance meeting with Fran Boorman, Founder of Goal 17.

Goal 17 are a market leading Mentoring and personal development focused organization, with 4 focus areas:

- *Power of mentoring:*  
Mentoring can change a person and a whole organization. We are leading the way in delivering solid commercial gains from effective Mentoring and providing a vehicle for our clients to achieve their organizational goals.
- *SPORT TO INSPIRE:*  
Sport has an amazing ability to break down barriers and bring people together. We use sport to inspire our trainees to engage, commit and embed their learning at a deeper level.
- *SOCIAL IMPACT:*  
Creating a social impact will be more than just a 'nice thing to do'. Moving forward it will be essential for organizations that want to survive. Goal 17 deliver social impact and ground breaking social mobility initiatives for our clients.
- *PARTNERSHIPS:*  
We believe that a key to success is in creating robust partnerships. Goal 17 bring together corporate clients, academics, charities, sporting organization and others.

Our sophisticated partnership model increases the benefits for everyone involved. Following the initial meeting, a plan was developed to utilize the skill set of the Goal 17 team and the HSP to bring about real change and deliver an impactful programme in Southampton.

By focusing on engagement with those furthest from the employment market and most likely to require further support from the local authority in the near

future, the programme would drive engagement with a high risk section of the community through the Goal 17 Embed Mentor Training plan.

*The plan focused on bringing together teams from:*

- Goal 17 bringing the technical capabilities and a market leading mentoring programme to offer developmental training to a team of executives.
- The HSP Management teams
- Our wider supplychain family, who share our values and support the delivery of CSR across the partnership – providing keen, motivated executives to undertake mentoring coaching and provide time, support and commitment to a group of young people
- Southampton Football Club's "Saints Foundation" to offer skills and employment training, coaching and developmental training as well as working with local charities to find and recruit a group of high risk, young adults that were keen to upskill and seek an opportunity to change their own fortunes.

The first Programme launched in April 2020, in the midst of the Covid 19 pandemic. 11 mentors were assigned to 11 mentees and the 3 month programme of mentoring was undertaken virtually, in order to ensure social distancing and compliance with various lockdown measures.

At the end of the programme a number of the mentees had been able to find full time employment whilst others were committed to returning to education.

A video celebrating the programme is available here: <https://youtu.be/6F0UKz0I2lc>

Following the huge success of the initial cohort, the second programme launched in April 2022 and this time 15 mentors and mentees were paired together.

Once again the programme was a huge success and attracted the support of the First Lord Mayor of Southampton, Cllr Jacqui Rayment.

#### **Clear CSR Benefit and Degree of originality:**

The Southampton HSP Goal 17 Programme is a market leading approach to providing genuine CSR within the community in which we work and is a first for the Highways Maintenance sector, Balfour Beatty and Southampton City Council.

The Mentors supporting the programme were all nominated or volunteered from the HSP team, other SCC departments, or from our wider supply chain community. The engagement and support from the Southampton Football Club "Saints Foundation" was also a first and ensured that the local focus of the programme was maintained at all times.

By focusing on engagement with the highest risk groups of society, the programme looks to maximize the benefits that the investment of time, money, effort and commitment will bring to those it engages with.

Aligned to this, the use of volunteers, with a genuine personal interest in and commitment to the local community is a unique and innovative approach.

By engaging with volunteers with a genuine, vested interest in seeing the programme succeed, the usual barriers and obstacles to success are broken down. Conscious and subconscious bias is removed, and both the mentors and mentees are empowered to make real change.

This approach brings opportunity and hope to the mentees and provides the mentors with the realization that there is an untapped community of young people that can add real value to their businesses.

By breaking down these barriers and social stigmas, genuine, lasting social value is provided to the community and personal benefit is provided to everyone involved.

Commitment of the entrants' Involvement of relevant stakeholders and employees.

### **Have the staff demonstrated their commitment?**

In order to help maximise the impact the programmes have had, mentors have come from a number of local businesses as well as Southampton City Council and Balfour Beatty.

Over the first 2 cohorts, 26 mentors from 8 different organisations have given up over 300 hours of their time to support the programme.

All 26 mentors have also volunteered and requested to be part of future cohorts, so great was the engagement in the initial ones.

#### *The Social and Economic benefits of the scheme:*

The Goal 17 programme has provided a demonstrable Social Value benefit to the city of over £218,000 (based on social value portal calculations). But the benefits have been much wider than this.

The UK government publish statistics in December 2022, showing 431,000 young people, aged between 16 and 24 were unemployed in the period between August and October 2022.

The Princes Trust, estimate the cost of this unemployment, in terms of lost national output to be around £6.9b in 2022, with a fiscal cost in the same period of around £2.9b

The charity Crisis estimate that today, 280,000 people are rough sleeping in the UK, costing the taxpayer around £30,000 per annum, per person. This cost does not include the c.£17,000 per annum that an individual will cost the NHS, criminal justice system etc.

These financial costs, while estimates and dependent upon an individual's exact circumstances are perhaps easier to measure than the personal and social impact.

Personal distress, mental health issues, reduce employment prospects, increased likelihood to be involved in antisocial activities are just a few of the wider impact's individuals are likely to face.

The direct and indirect costs of unemployment and homelessness are clearly staggering, and the situation has only been made worse during the COVID 19 pandemic.

The intervention, support, and opportunity that the Goal 17 programme has provided to the 26 mentees in Southampton has enabled those involved to make a meaningful choice about their own future.

At least 13 of the mentees are now in full time employment and others have returned to full time education. By providing the support, skills and encouragement the programme provides, it is clear that significant costs to the local authority have been averted and at a personal level, individuals have been given a genuine chance to improve their long term prospects and opportunity.

From the perspective of the employers involved in the project, the programme has given the staff involved a much wider understanding and skill set to be able to tap into an area of the employment market which is often overlooked.

Staff have undergone an accredited mentoring programme and are now capable and confident to act as mentor within their own organisations.

### **Future expansion of the scheme. How do you intend to move forward?**

Having now proven the concept of the scheme and demonstrated the social value brought about by the programmes, the third cohort will launch in early 2023. This cohort will take adopt a slightly different approach, this time bringing together senior executives from around Southampton to act as the mentors.

This approach will provide a joint goal and vision for the senior stakeholders in the city and provide meaningful support and opportunities across a number of multinational organisations, based in Southampton.



At the same time, Saint Foundation and Goal 17 will adopt a 12 month “term time” with Mentors and Mentees able to dip in and out of the programme throughout the course of the programme. This approach will provide significantly increased flexibility for all involved, while still delivering a fantastic opportunity and development for all involved.

**Replicability- Can others adopt the procedures to their own benefit?**

The HSP Goal 17 programme can be adapted to suit the needs and requirements of any business with a genuine interest in delivering real CSR.

Following a recent supplier day, our supply chain partners at Vp plc – an industry leading plant hire business have now decided to embark on their own CSR programme with Goal 17. This sharing of best practise and commitment to providing genuine benefits to the communities in which we work is indicative of the HSP and our supply chain and clearly demonstrates the flexibility of the Goal 17 programme.

There is no reason that similar programmes could not be provided by other authorities and providers both in the construction sector and across the wider market. Wherever the programme is applied, local people and those providing their time and commitment will reap the benefits.



## **BIN DASMAL CONTRACTING**

### **INITIATIVES (for communities, customers, employees, environment)**

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#### **SUMMARY**

BDC, a sustainability focused company is one of the most preferred firms, which in-effect validates BDC's market leading position as a sustainability expert and in multiple ways a pioneer in carrying out retrofit projects and energy audits on mixed-use buildings in UAE.

BDC with an integrated approach towards sustainability has taken up multiple projects with clients to enhance the systems operating in existing buildings with system upgrades.

BDC is executing initiatives in line with the regulations by Green Building and has partnered with energy solutions firm LOYTEC and as well is focusing on Indoor Air Quality (IAQ) solutions

Bin Dasmal Contracting has taken up its new business vertical that's created to address the need of the hour utilizing the group's strength of strong access to MEP and civil project sites to make a difference positively by addressing the challenges of climate change, implementing 3R's (Recycle, Reuse, Reduce) MEP waste on project sites and contributes to Social and Economic causes by reducing food waste, offering fresh food local produce for better health of the community and create a positive impact by implementation of the Sustainable Greenhouses, Indoor Vertical Farms (IVF) and Container based vertical farms.

#### **IN DETAIL**

##### **1. CSR Benefit. Does the entry identify clear CSR benefit?**

###### **1A. Environmental responsibility**

The Bin Dasmal Group's Environmental responsibility initiatives aim to reduce pollution and greenhouse gas emissions and the sustainable use of natural resources. In line with the above principle the Bin Dasmal group of companies are involved in reducing food shortage by the construction of SUSTAINABLE GREENHOUSES, INDOOR VERTICAL FARMS (IVF) (Container Model) to increase the local food production thereby supporting food security by encouraging construction of more sustainable Greenhouses, IVF and green farms across all offices in UAE.



### **1B. Human rights responsibility**

As a part of good health and wellbeing, we have at our office, a recreational room for its employees to refresh themselves. There are no fixed timings for using the room giving the employee a flexible work environment.

We provide equal opportunities to men and women at our workplace. The Bin Dasmal group of companies cater to an open-door policy where the employees are free to raise their concerns to the management whenever they feel the need to do so.

### **1C. Economic responsibility**

All buildings need to operate efficiently, cost effectively and sustainably much in the same way that we take care of your health.

Buildings like human resources are valuable assets and we all want to keep our operating cost to the minimum whilst maximizing performance. Assessing a building's energy efficiency is the first step towards identifying the most cost- effective energy conservation measures.

Our expert energy audit team conducts detailed inspections and measurements to accurately assess the building's energy consumption, efficiency and quantify the energy savings which propel us amongst the elite of the energy audit companies in the UAE.

### **2. Degree of originality/innovation. New or novel solutions to problems?**

#### **2A. CLM – Circuit Level Monitoring**

Bin Dasmal are proud to have pioneered the implementation of circuit level monitoring in the Nakheel Palm Tower Project.

The data generated from the CLM system for the individual circuit allows for greater operational efficiency and energy savings for the end users. The CLM eco-system present in the building has increased its overall real estate value as the diverse energy needs of the building for its various energy profiles are now being monitored at a granular level.

This has enabled the various parties involved in making precise changes to the various systems operating within the building with the help of the PUE (Power usage effectiveness) values to optimize load distribution across the entire facility/building.

Commercial and industrial companies are very dependent on the trouble-free operation of their electrical systems. Monitoring every branch circuit of an installation with the CLM enables you to quickly detect issues before serious damage occurs.

Cost saving and splitting Branch monitoring gives maximum clarity on where and how the electricity is used. It enables you to do an effective energy





management analysis in order to save and efficiently assign costs.

### **2B. Local Fresh Produce**

Given the nature of climatic conditions in the Middle East, Unpredictable weather problems and seasonality can be avoided altogether in the indoor vertical farming container model. The use of recirculated water in the container model also ensures conservation of water.

This is the next step in ensuring food security for decades to come. “ekthaar” is Bin Dasmal Group’s own newly formed Indoor vertical farming container model manufacturing unit inaugurated in December 2022 and was established in line with the execution of the latest international green building standards and regulations.

In principle “EKHTAAR” can reduce the supply chain as the indoor vertical farming container model can be built in any neighbourhood and can be easily managed with fewer man hours. Micro-climate facilitation and maintaining the perfect amount of nutrition inside the container results in faster crop cycles and year-round growth.

### **2C. Poppy Biosafety Intelligence – Pathogen Sensing Network for Improved Indoor Air Quality.**

Bin Dasmal Contracting collaborates with Poppy to provide biosafety intelligence solution for indoor space. Bin Dasmal Contracting made the announcement on 21 March 2022 through an event called “Poppy Health in the MENA region” at the Canada Pavilion in Expo 2020 Dubai; the aim being “bringing powerful biotechnology for buildings, to secure a healthy indoor world”.

Poppy’s mission is to provide breakthrough technology that can help create infection- resistant buildings. The firm’s system has been deployed across many facilities across North America and Europe including the largest financial institutions, factories, entertainment theatres, schools, yachts, and a royal palace.

Using highly accurate genomic sequencing and molecular assays, Poppy detects and identifies over 1000+ pathogens, health related and pests — including SARS-CoV-2 and its variants, food-borne bacteria, multi-drug resistant bacteria, and invisible molds.

### **2D. Innovative Retrofit Solutions**

Bin Dasmal ensures energy and cost savings through retrofitting. Bin Dasmal shares focus on elevating building performance, enhancing energy efficiencies, creating cost savings, and improving comfort for occupants within a built environment through retrofitting projects.

Industry-leading, ISO-certified firm Bin Dasmal Group, which has more than four decades of experience in offering civil and MEP services in the MENA region, has cemented its position within the civil construction, electromechanical, HVAC, and public health sectors over the past 12 months. All ISO 9001, ISO 14001, and ISO 45001 certified, with the aim to drive future growth through excellent local and international partnerships.

Most recently, Bin Dasmal Group and Bin Dasmal Contracting – which offers civil and MEP contracting, facility management, and energy services – have been actively involved in a number of leading retrofitting projects in the UAE, with an increased focus on energy efficiency.

These projects are in line with Dubai’s ambitious target to reduce 30% of its energy use by 2030, which could result in a minimum of 1.7 terawatt-hours of energy savings and a reduction of one million tonnes in carbon emissions.

BDC has executed key projects like SHARJAH INTERNATIONAL AIRPORT PROJECT where retrofitting is executed by replacing outdated features and technology with optimized, modern products and solutions – in order to elevate building performance; enhance environmental conditions in the premises; improve the comfort touchpoints for the users and occupants of the building; ensure

the highest standards of safety systems; and to minimize energy consumption.

NAKHEEL'S AZURE RESIDENCE PROJECT AT PALM JUMEIRAH project involved the provision of fresh air to every apartment as per the norms prescribed by Green Building regulations.

### **3. Commitment of the entrants' Involvement of relevant stakeholders and employees.**

Have the staff demonstrated their commitment?

#### **3.A Partnerships With Major Clients Sharing Common Sustainability Goals**

BDC has partnered with Poppy (Bio-safety intelligence system) and LOYTEC for GRMS, thereby utilizing the control systems and motion sensors to provide to the clients intelligent managing systems that are BMS automated.

This helps in 25-30% energy savings. Bin Dasmal Contracting division are fostering innovation into the industry by integrating all tools, technologies, and services for the end goal of sustainable development that's in line with most of the UN SDGs.

#### **3.B Employee Commitment**

"ekthaar" by Bin Dasmal Group was awarded as Organization with best "Green message" in Green Run 2023 organized by Dubai Investments on 15-01-2023. The award was presented by Mohammed Saeed Al Raqbani, head of Sustainability Committee, Dubai Investments and General Manager, Dubai Investments Industries and Masharie. "ekthaar" aims to be in line with the execution of the latest international green building standards and regulations in the UAE and with such green recognition and encouragement, we aim to increase awareness among the community and address the need of the hour by reusing construction waste materials and as a result becoming a commercially viable solution for tackling the region's food security issues.

The entire Bin Dasmal Group staff and families showed their support and spirit for this endeavour through their presence at the event

### **4. Social Benefit. Have communities or areas benefited?**

#### **4A. Zero Hunger**

The Bin Dasmal Group is involved in reducing food shortages by the construction of SUSTAINABLE. GREENHOUSE, INDOOR VERTICAL FARMING (IVF) units for increase in the local food production thereby supporting local and regional food security by encouraging the construction of more sustainable Greenhouses, IVF and green farms across all offices in UAE.

#### **4B. Good Health and Well Being**

As a part of good health and wellbeing, we have at our office, a recreational room for its employees to refresh themselves. There are no fixed timings for using the room giving the employee a flexible work environment.

We provide equal opportunities to men and women at our workplace. We have complete transparency in terms of structure of operation, gender equality at workplace and our employees are with us for really long period due to the credibility we have developed with them over the period. We are a large family who stand by each other and focus on larger purpose.

#### **4c. Clean Water and Sanitation**

Ensuring clean water and sanitation, BDC is involved in smart metering retrofit projects to monitor water consumption thereby increasing water efficiency and raising awareness to the end user about their daily consumption patterns.

#### **4D. Industry, Innovation and Infrastructure**

BDC has partnered with Poppy (Bio-safety intelligence system) and LOYTEC for GRMS, thereby utilizing the control systems and motion sensors to provide to the clients intelligent managing systems that are BMS automated.

This helps in 25-30% energy savings. The Bin Dasmal Group is fostering innovation into the industry by integrating all tools, technologies and services for the end goal of sustainable development that's in-line with most of the UN SDGs.

#### **4E. Sustainable Cities and Communities**

To ensure sustainable cities and communities, BDC has partnered with Poppy for the UAE market to monitor pathogens in commercial spaces. This contributes to reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management by 2030.

#### **4F. Climate Action**

UAE's leading distributed solar energy provider Siraj Power has signed two solar power deals with UAE-based engineering solutions provider Bin Dasmal Group. The solar power deals included the installation of two solar rooftop plants at the company's facilities in Dubai Investment Park (DIP) and Dubai Industrial City.

Under optimal conditions, the second solar rooftop installation is expected to generate a solar energy output of 2.7GWh. The solar plant system will reduce nearly 2,000 metric tonnes of carbon dioxide, which is equivalent to planting more than 30,000 trees.

#### **4G. Peace, Justice and Strong Institutions**

Contributing to peace, justice and strong institutions, the Bin Dasmal group ensures responsive, inclusive, participatory, and representative decision making in all levels.

All employees are encouraged to share their opinion to the management to improve overall working conditions.

The employees get a chance to express their issues whenever there are meetings in the head office to celebrate organizational milestones achieved.

#### **5. Economic Benefit. Have reductions or savings been achieved?**

Energy Star Products in general use lesser energy when compared to their counterpart. In order to earn the label of Energy Star it is compulsory to meet the set criteria by the US environmental Protection Agency or the US department of Energy.

As a result of consuming less energy, these products will save the end user money on their electricity bill and result in fewer harmful emissions from power plants.

#### **5A. Energy Savings**

As part of its effort to strengthen the ENERGY STAR® program, the Environmental Protection Agency recently named AHRI as a recognized Certification Body (CB) Bin Dasmal Group's centralized air conditioning and kitchen ventilation equipment manufacturer T ROSTEN are having AHRI 410 certification for the cooling coils being provided to the air handling units, chilled water fan coil units, ducted split units and rooftop package units.

TROSTEN was involved directly involved in the construction of the UAE expo pavilion 2020 which is a LEED Platinum design project inspired by a falcon in flight.

#### **6. Evidence of measurable impact/benefits. (Environmental, social, and financial)**

Are the theories supported by measurable improvements?

#### **6A. Environmental Local Fresh Produce and Harvest Ekhtaar -**

Bin Dasmal Contracting division's own Indoor vertical farming and sustainable farming solutions unit envisions in the longer term to solve broader problems such as regional food shortages by locally growing and harvesting fresh produce with greater nutrition and easier accessibility in any given space that is unused and available anywhere while



protecting the environment at the same time for future generations by growing more with usage of less soil and water.

This will have a direct impact on the food production capacity and security of the community at large and safeguard it from predicted droughts estimated to displace 700 million people by 2030 as per the UN sustainable development goals report 2022.

#### **6B. Social**

Participation in various events to raise awareness about food security and highlight unsustainable consumption and production patterns which is the primary cause of the triple planetary crisis. (Climate change, biodiversity loss, pollution) i.e Green Run 2023.

#### **6C. Financial**

The Bin Dasmal Contracting division is proud to be ESCO accredited. The accreditation scheme aims to give prospective clients confidence in contracting with ESCOs by recognizing companies which have appropriately qualified personnel in the organization; robust financial status; and a track record of successfully delivering energy saving projects in Dubai.

#### **7. Future expansion of the scheme. How do you intend to move forward?**

Concentrated efforts in raising awareness about various sustainable farming methods such as indoor vertical farming, net house farming and greenhouse farming.

#### **8. Replicability. Can others adopt the procedures to their own benefit?**

Yes, the sustainability initiatives are replicable and others can adopt it for their own benefit.

*Other factors that merit additional points include:*

Demonstrable program for promotion and dissemination of the work.

Monitoring/Reporting Accountability/Transparency.

The Measurement and Verification Protocol provides a consistent method for calculating energy and water savings arising from Conservation Measures. The protocol enables changes to be considered to ensure that savings result from Conservation Measures.

For example, using the protocol can attribute changes in energy consumption to changing occupancy or changing climatic conditions.

However, to get the most out of this protocol it is essential to establish a good baseline period to ensure there is a clear understanding of current energy efficiency levels.



## BIRMINGHAM AIRPORT

### BEING A RESPONSIBLE NEIGHBOUR

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#### SUMMARY

We see the desperation on people's faces, we all know friends and families struggling through the cost-of-living crisis. The charities we're connected with across the Midlands could well be supporting our friends, loved ones, neighbours and colleagues.

Barack Obama famously said "change will not come if we wait for some other person or some other time. We're the ones we've been waiting for. We're the change that we seek."

Being a responsible neighbour includes many aspects for Birmingham Airport. Alongside our commitment to mitigate the negative impacts of our operations, we recognise the importance of contributing to the wellbeing of those communities impacted by our operations.

We work with a range of stakeholders to understand local community priorities, and to direct the resources that we have available so that they can have the greatest benefit.

Our priority areas are East Birmingham and North Solihull because youth unemployment rates and the proportion of the working age population with no formal qualifications has historically been above the national average.

Over the past 4 years and throughout the covid pandemic we've worked with 11 key charities and supported more than 50 local community projects. Our community trust fund donated more than £110,000 in

2020/21 and the Recommended Retail Price (RRP) of the surplus food, drinks, miscellaneous stock, pushchairs, buggies, lost luggage, surrendered toiletries and cosmetics etc donated is valued at almost £400,000 in 2022.

Our sustainability strategy is aligned to the UN Sustainable Development Goals and is informed by The Airport Council International (Europe) Sustainability Strategy for Airports. Our CSR strategy focuses on nine topics covering environment, community and economic issues, and this application will demonstrate how despite a global pandemic, Birmingham Airport has taken great strides as a Responsible Neighbour to our local community.

#### IN DETAIL

We're committed to working as a Responsible Neighbour to the Midlands community, especially in East Birmingham and North Solihull which is why we've committed to supporting more than 50 community projects and 11 key charities. For many



businesses, commitment to charity is simply about donating money.

Whilst we recognise that this is important, the truth is that in a cost-of-living crisis, our community needs our time and our resources as much as it does our money.

### COMMUNITY TRUST FUND

Despite the challenging financial situation created by Covid-19, we took the early decision to retain full funding for the Community Trust Fund in recognition of the contribution it could make to sustaining projects hardest hit by the pandemic. Our Trustees awarded almost £110,000 to more than fifty local projects.

Clean & Green are a local community group based in North Solihull, and aims to encourage volunteers to discover, explore and get involved in their local environment in a safe and fun way. Our trustees approved a £3,000 grant for the group to purchase wildlife camera traps, bat detectors, binoculars, USB microscopes, bird feeders and wildflower plants & seeds.

### SOLIHULL MIND

In February 2020 we announced a charity partnership with Solihull Mind. The decision came directly from our employees who were all given the opportunity to nominate local charities and then to vote for the one they wanted to become our new official charity partner.

They supported us in appointing 40 fully-trained Mental Health Ambassadors as part of our “Here For Each Other” employee wellbeing campaign. One of our funding solutions is less than conventional.



We committed to trading our Used Cooking Oil (waste stream) via a company called EthicOil who donate £0.05 for every litre collected from us. To give context, UCO can trade for circa £0.30 per litre. In 2022 we had 11,280 litres of UCO collected which resulted in £564 being donated to MIND.

### CONNECT AID

For many reasons, passengers transiting through our airport leave pushchairs and buggies which we must deal with. Rather than treating them as a recyclable waste stream, we have opted to donate them to several charities over the past 4 years.

Connect Aid collected push chairs, buggies, suitcases, bottled water and hand sanitiser from us and took them to Poland ready for Ukrainian refugees to use. Whilst these might seem like surprising items for families to need, the reality is that many people fled to safety, leaving behind almost all of their worldly belongings.

The hand sanitiser was left over by aid agencies supporting red-route refugees fleeing Afghanistan on rescue flights which arrived at Birmingham Airport.



## **BRUSHSTROKES COMMUNITY PROJECT**

Brushstrokes serve the whole community, particularly asylum seekers, refugees and newcomers, with kindness and respect, to affirm the rights and dignities of vulnerable people. This was another worthy cause in needs of pushchairs and buggies of which we amass more than 800 per year.



## **SALVATION ARMY**

All clothing left around the airport or as abandoned luggage (which hasn't been reclaimed) is donated to the Salvation Army for resale in their stores. The funds generated by reselling these goods supports projects for children, families, the homeless community, as well as providing budget and debt advice and more.

The Salvation Army are also one of the charities receiving suitcases, laptop bags, rucksacks etc as these are sought after items with a good resale value for charity outlets. Fact – During the summer of 2022, we donated 2.185 tonnes of clothing.

## **BRITISH HEART FOUNDATION**

The BHF are one of our newest charity partners who visit us on a regular basis to collect suitcases, holdalls, laptop bags, rucksacks etc for resale in their charity stores. They use the monies generated to fund medical research related to heart and circulatory diseases.

## **HOME-START**

Home-Start is a local community network of trained volunteers and experts helping families with young children through their challenging times. Many of the

retail concessions at Birmingham Airport are well-known.

They include brands such as Marks and Spencer's, Weatherspoon's, Boots, WH Smith and more. Historically, books, toys and games that were no longer intended for sale to the public were disposed of as general waste.

Brands were protective over the risk of their products being resold without their knowledge. As covid-19 hit the airport in 2020 and flights all but ceased, stores were left with unsold products on the shelf. As the UK slowly reopened for travel in July 2021 this meant stores had to clear tonnes of products ready to restock shelves with newer items.

On-mass, retailers agreed to change their approach. Home-Start collected and resold more than 10,000 items in 2022. This can be anything from a stuffed toy to football paraphernalia to last years best selling book.

In addition to items collected from concessions, other items were captured via the airports security checkpoint. Across most UK airports, items surrendered as all mixed together and ultimately treated as waste rather than being seen as a reusable, resalable item that has a value in the circular economy. Funds raised led to a new

playroom being fitted out and decorated by volunteers so that local children have a safe place to play as part of their early-years development.

Some of the items collected were used to create Christmas hampers for 225 local families. 265 children under the age of 5, 14 unborn babies, and 103 older children received Christmas presents. 20% of the airports surplus stock of food and drinks are also donated to Home-Start.

This is often material no longer fit for sale because it's damaged or passed it's "best before" date. Whilst a product with an expired "best before" date cannot be sold, it's still perfectly edible and is always a welcome donation to local charities.

Sarah Fisher, Manager of Home-Start Birmingham North-West said "The donations from Birmingham Airport really do make a massive difference to the families we support and our local community. At a

time when people are making choices of eating or heating, it felt great to have practical much needed items to distribute. We distributed all 100 pushchairs in less than 24 hours."

A recipient of one of the pushchairs said "Thank you so much, mine is broken and I simply can't afford to buy a new one. This has made my day and now I have one less thing to worry about."

### **BIRMINGHAM CHILDREN'S HOSPITAL**

Some of our Books, magazines and stationery was collected and donated to the staff of Birmingham Children's Hospital. This was aimed at helping staff take their minds of the incredibly challenging job that they undertake daily.

We also offered items for the children at the hospital. However, this offer was declined due to the children being at high risk of infections.

### **NEWLIFE**

Over the past 3 years we've also donated unclaimed suitcases to Newlife, the charity for disabled children. Suitcases are donated and re-sold through their stores. Profits go towards helping ensure that disabled children have the best chance in life through the provision of essential equipment.

### **BAGS OF HOPE UK**

We've also established a partnership with Bags of Hope UK to improve the experiences of children and young people in the care system. Abandoned bags are given to young people to prevent moves where their belongings are transported in bin liners and shopping bags.

The provision of these bags to young people in the care system will play a small part in helping to relieve the anxiety associated with moves.



## LET'S FEED BRUM

Let's Feed Brum are a leading homeless charity in Birmingham. Every day, volunteers connect with people who are homeless and at risk of homelessness, creating a consistent and meaningful dialogue that helps us all better understand what they need. Volunteers also help signpost people to the relevant services across the city, encouraging them along the way.

Recently, most of our lost luggage bags, suitcases and buggies have been sent to Let's Feed Brum due to the influx of refugees coming into the Midlands. Surplus luggage is also sent to Calais and Poland to be used by refugees and asylum seekers in need of help. 80% of our surplus food and drink from the airport is collected every Monday and used to feed the local homeless community on Tuesday mornings at the weekly breakfast club.

Some of the toiletries and cosmetic products surrendered at the airports' security checkpoint are also welcomed by the charity.

## IMPACT

To put all of the information above into context, in 2022 we donated 47 ½ tonnes of cosmetics, surplus food & drink, assorted books, toys etc as well clothing and pushchairs. Historically, almost all of these items would have been treated as waste which would have cost us more than £7,000 to dispose of.

The approximate Recommended Retail Price for everything donated is £395,000. Having donated so much, the real success of this project isn't the RRP of the items, it's the impact it has on our local community.

## WHAT'S NEXT

Every month our Sustainability partners, Novati, monitor and report on the charities being used, tonnages being donated and the environmental

impact this has on our airport. But, at Birmingham Airport, we're not ones to rest on our laurels.

Our next major project is to create a connection with Olio. They're a B Corp certified company, and our goal is to work with them to collect unsold food that has a short "use-by" date. Olioers will pick up unsold surplus food and save it from going to waste.

Every evening they'll collect unsold sandwiches, cakes etc and list them on the Olio app for redistribution in their local community.

Over 50% of items on Olio get picked up within 30 minutes!

## REPLICABILITY

The success of our charitable projects is replicable in many different retail settings. If you've ever travelled through a train station like London Kings Cross or St Pancras then you would see that these environments are now being designed in a similar manner to shopping centres and airports.

Our CSR and Sustainability team share knowledge with many airports via our commitment to The Airport Council International (Europe)





## CARIDON PROPERTY

### CSR ACCREDITATION

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#### SUMMARY

**CARIDON GROUP CSR POLICY**  
Caridon Group Ltd ate committed to being socially responsible organisation. We believe that our vision of being a socially responsible and legally compliant organisation helps to safeguard society and the planet for our future generations, as well as uniting us as an organisation that we can all believe in.



We believe a socially responsible organisation is more efficient, productive and profitable as well as being resilient to future challenges.

*We believe we can make a positive impact for:*

- The environment on which we all depend
- The workplace (the people we employ, our clients, supply chain and customers
- The communities where we operate; and
- The philanthropic agenda.

Our CSR policy reflects our values and is integrated into our business strategy and measurable goals. We aim to use our particular strengths through our operations and related to our industry. We are committed to providing adequate resources in order to measure and minimise our impact and go beyond, to leave a positive legacy.

We will carry out the necessary training in order to communicate our vision and goals internally to our employees and externally to our clients, supply chain and customers. This policy and our progress will be reviewed annually by the senior management team

and all discussions and actions minuted.

#### IN DETAIL

We strive to bring a sense of community and co-living to our residents who perhaps have never met before and come from all walks of life, our regular socials bring otherwise isolated individuals and families together to create lasting friendships and a sense of belonging and neighbourly love.

Our offices on each development are fully staffed with specific experts in the field of housing and co living, to assist with:

- Applying for GP and School placements
- Applying for grants
- CV writing
- Discounts to local businesses and amenities i.e gyms, restaurants and cinemas
- Translation
- Signing up to welfare benefits and assessing entitlements
- Council tax reductions

Some of the great community engagement initiatives we hold throughout the year on our developments are:

Table Tennis and 5 a side football

Easter Fun days and Easter Eggs hunts

Summer BBQ

Gardeners Club

Pond Clean Up with tenants and the Wildlife Centre (Broadfield)

- EID Party
- Litter pick in the community
- Halloween Party with Magician/
- Christmas Santa Visit with Toys for Kids
- Christmas minced Pies & Mulled Wine

Working within each of our extended communities we build partnerships with local organisations that can provide much needed support and signpost our residents to the relevant local government and charitable institutions.

Monthly themed Coffee mornings hosting:

- Job fairs with the DWP and local businesses, back to work or study and Volunteering opportunities
- Adult education classes
- Early help organisations and extra support for working parents
- Representatives from Local GP and Nursery for help with new applications
- Mediation and reconciliation groups



- Wellbeing, sport and mental health pop up shops
- Domestic violence outreach and advice

Caridon Foundation provides a not for profit arm to the Caridon Group. Set up in April 2017, the Foundation offers housing related support to tenants that are deemed vulnerable within the community and who find it difficult to manage their day-to-day affairs and/or suffer tenancy related issues which may pose a threat of eviction.

The service was initially rolled out in the London Borough of Croydon and has since extended its services in a number of other Boroughs around London. Caridon Foundation helps tenants to successfully manage their tenancy, avoid eviction processes, improve on money management, promote independence and link them into longterm support.



Our goal is to ensure tenants remain in their property for longer and move on to long term housing options when they are ready.

Caridon Young Living Is a specialist support and accommodation service for young people. We are committed to providing high quality support in a caring and positive environment in which young people can achieve independence, fulfil their potential and realise personal goals.

Our service is targeted at 16-21year olds who are making the transition into independence but who may still require additional care and support.

All people, irrespective of race, religion, gender, sexuality or social disadvantage deserve the

opportunity to maximise their potential and that with the right support, every person can achieve successful outcomes while learning to live independently.

We believe our clients have the right to develop their personal and educational potential to the full and contribute to society through positive citizenship. Our services are provided in accordance with the Children (Leaving Care) Act 2000 and the Children Acts 1989 and 2004 (and additionally any relevant government and/or statutory regulations and guidance).

Caridon Landlord Solutions (CLS) is a dedicated consultancy service specialising in Housing Benefit and Universal Credit advice and guidance. We offer competitively priced services throughout the whole tenancy process, from start to finish.

CLS provides landlords with an invaluable support network and access to expert guidance on a range of issues. CLS is a people-focused business. Our staff are specialists in their fields and are well informed about current regulations and licensing.

They provide valuable counsel throughout the entire tenancy process and are available to guide landlords through the tenancy minefield. CLS deals with a huge range of issues including housing benefit claims, environmental health checks, management of debt collection, and tribunals.

It offers a onestop-shop for both new and experienced landlords.

### **01. Environment**

Our aim is to continue our retrofit project across the existing owned portfolio - insulation and upgrading of dual tariff intelligent heating systems. We expect to have converted all our company vehicles including the vans into Hybrid or fully electric by 2023 Our Goal is to be carbon neutral by 2024 and to continue to educate the tenants and the staff on the importance our actions play on the environment.





## 02. Workplace

Employee engagement in our growth plans are key and we do this via monthly newsletters and team building events. We continue to increase the diversity of our workforce at all times, Caridon have provided a wide range of tools to assist with mental health and well being in a post pandemic era. There is a direct correlation between employee satisfaction and customer satisfaction.

This year we have proudly been accredited with the Living Wage Accreditation.

## 03. Community

Our Goal is to continue to improve the wellbeing of the people and the community we serve. Our special

partnerships with the various organisations we have worked with over the last 13 years continue to be nurtured and our network has grown across London and the South of England.

## 04. Philanthropy

2021 has been our most successful year in terms of supporting various charities, sponsorships and donations. Our goal is to double our fundraising and sponsorship to £60,000 in 2022/23.

## TENANT TESTIMONIALS

*"I have lived in Ashburn House for almost five years now. i have never had a major issues with anything. I certainly have no plans to live anywhere else. Jack Vora is an amazing addition to the Caridon team. He is kind and courteous whenever i see him. He is brilliant at his job, if I have to report a repair, it gets done the same day. He is very approachable, I am currently waiting for major surgery, following repeated hospital admissions since April. Jack has been fantastic telling me if i need any shopping or electric and he will sort it, and he always does. I hope he continues to work for Caridon for many years to come."* — Ashburn House, BB

*"Jack has been the most understanding manager he gets any maintenance sorted out as soon as possible he explains everything you know where you stand, he's just a great guy."* — Maplehurst House, SG

*"In August 2020 i was illegally evicted from my home. I came back to find my things outside on my driveway and locks changed. The police were called, my car was filled to the brim with what i could take and homelessness happened that quickly. For the next 3 months the reality of having nowhere to call home was panic inducing. I carried on with my jobs and that helped keep me sane(ish). I was showering before my shift and warming up my food in the microwave before I got in my car for the evening. When I was at work one day my colleague mentioned Imperial Apartments. Life changer, I went for a*

viewing and I moved in 3 weeks later. I have made some great friends, had great support from staff and genuinely feel I've found a home. Thanks, Caridon... everyone needs a home and I've found mine." — Imperial Apartments, S

"I highly recommend CARIDON, i feel happy and secure with them, High security building with high standard dealing with any issues face us, well done guys for this high- level job keep it up Khaylaa xx" — Sutherland Quarters, KA

## OUR ACCREDITATION AND FRAMEWORKS



## CITYWATCH

### CITYWATCH THE CAPABLE GUARDIANS OF SOUTHAMPTON

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#### SUMMARY

The Balfour Beatty Citywatch service, run on behalf of Southampton City Council, are the capable guardians of our city. The control room is staffed 24 hours a day, 365 day of the year and provides residents, businesses and visitors with protection and reassurance that there are people looking out for their safety and their property making Southampton a safer place to live, work and visit.

The Security Industry Authority accredited staff monitor over 1,000 CCTV (Close Circuit Television) cameras across the City, which include traffic cameras, public space, car park, bus enforcement and tower block concierge cameras which provide a CCTV footprint of approximately 12 square miles on all main arterial routes, city, and district centres in Southampton.

They are pivotal in providing active intervention and public reassurance, helping to create a safer Southampton for all.

#### IN DETAIL

##### 1) Is there a clear CSR (Corporate Social Responsibility) Benefit?

Since the service started in 2012 the Citywatch team have been collaborating with the police, businesses and the Go!Southampton Business Crime Partnership and have been actively involved in:

- 5,398 arrests
- Monitoring 41,140 real time incidents including tracking perpetrators for the police to intercept
- Recovering £366,808.40 of stolen stock
- Responding to 430,910 concierge calls for assistance
- Providing over £6m benefit to local business

The team have never been more aware of our corporate social responsibility to help protect the communities and people of Southampton when they witness suicide attempts from the Itchen Bridge.

In 2022 alone the Citywatch team monitored 82 incidents involving suicide, whether this be threats, or actual attempts.

##### 2) New or novel solution to problems?

Unfortunately, the Itchen Bridge is a hotspot for suicide attempts and in response a member of the Citywatch team came up with an improvement idea to split the functions of the site across two cameras, leaving traffic monitoring at the junction on a static camera, whilst upgrading the existing controllable camera to one which capable of extreme zoom to better spot vulnerable persons at a distance on the bridge.

It was this camera that Archie was using the day he intervened and helped save a life. This solution was new to the city as it challenged the traditional focus of CCTV use for vehicle monitoring only to actively monitor the safety and wellbeing of vulnerable individuals.

##### 3) Have the staff demonstrated their commitment?

One example of this was in May 2022, Archie, one of our CCTV Operators was on duty and reviewing the city's cameras, that cover car parks and public spaces in the city and district for public safety and traffic incidents.

When upon scanning the Itchen Bridge, he saw a person jump from the centre of the bridge into the water. Archie acted immediately to help save the life of this individual and alerted the emergency services





via the Police airwaves radio in the control room.

He remained calm and professional under pressure, he continued to check the water for signs of the person whilst also guiding officers to the point they had jumped from, as he had noticed personal items had been left there which could help with identification.

Two police boats arrived on the scene and the person was pulled to safety and was taken to hospital for treatment. Following the incident Archie continued to assist officers from Hampshire Police with their investigation reviewing cameras and determining the route the individual had taken to the bridge.

Thankfully, for this individual, Archie dedicated his time that day to proactively scanning the system and was quick to react to the situation as it unfolded. The individual involved is now receiving care and support

to manage their mental health and wellbeing.

Archie has been recognised for his actions by the Highways Magazine and you can find the article here:

<https://www.highwaysmagazine.co.uk/Highways-Hero>

“Southampton City Council and Balfour Beatty have enjoyed a trusted partnership in delivering the Citywatch service for the city since 2012.

The team’s dedication to suicide prevention through their day to day and charitable activities is admirable. We are proud to have a team that helps our communities to stay safe and supports some of the most vulnerable people in our communities.”

Paul Paskins, Head of Supplier Management,  
Southampton City Council

**4) Social Benefit: Have communities or areas benefited?**

The dedication of the Citywatch team has had a tangible benefit to the communities we serve. Their unique ability to keep an eye across the city and get emergency responders to individuals considering or attempting suicide has saved lives, and helped individuals get the support they need to try and cope with their challenges.

The Citywatch team will continue to keep a watchful eye across the city and will act as an essential point of contact for the Police, monitoring the city's CCTV and supporting the emergency services in keeping the city safe through real-time alerts and liaison.

**5) Economic Benefit: Have reductions or savings been achieved?**

Whilst no tangible economic benefit can be attributed to the achievements of the Citywatch team in helping the emergency services intervene in suicide attempts, the individuals they help save have an opportunity to get the help they need to continue their lives and engage more fully with society.

**6) Evidence of measurable impact/benefits**

The team continues to demonstrate their commitment to our communities when outside of the CCTV room by using their two volunteering days provided by Balfour Beatty to raise funds for



charities and awareness of mental health issues.

In June 2022 two members of the team, Katy, and Mathew, came up with the idea to do a mental health awareness video in collaboration with our client Southampton City Council. The video encourages staff from both parties to seek help if they are struggling with mental health issues.

This video has been seen by over 1,000 colleagues, providing a positive message for themselves and one that they can take into their day to day lives and spread wider in the community.

You can find the 'We're Here for You' Mental Health Awareness Video on YouTube:  
<https://www.youtube.com/watch?v=VgJsiaQHO7Q>

On the 20th August 2022, six members of the Citywatch team completed the Yorkshire 3 Peaks Challenge to raise funds for the mental health charity 'Shout' who provide a free, 24/7 confidential text service for 'anyone who is struggling to cope'.

You can find further details on the Shout charity here:  
<https://giveusashout.org/>

The teams raised just over £1,200 by walking 24 miles in under 12 hours over Ingleborough, Pen-y-ghent and Wharfedale.

They chose this charity as the £450 fees they paid to the 3 Peaks would also go to support the Construction Sport charity who use the power of sport to help reduce suicide rates within the construction industry.

#### **7) Future expansion of the scheme: How do you intend to move forward?**

The Citywatch team continue to proactively keep a watchful eye of the city and dedicate their spare time to support the various charitable causes that work to support our communities. Moving forward the Citywatch team have now joined a monthly Go!Southampton Criminal Intelligence briefing.

These meetings are attended by representatives of various businesses and stakeholders, such as shop security guards, council welfare wardens and Hampshire Constabulary officers. These meetings share intelligence such as criminal offenders and their recent behaviours and criminal orders, wanted individuals and their whereabouts, certain issues being faced by businesses and notifications about ongoing police operations that may require our awareness.

These meetings provide excellent opportunities for the Citywatch team to show what they are doing to support the vulnerable in our communities and gather support for new schemes, investment in new and enhanced cameras and charitable fundraising.

#### **8) Can others adopt the procedure for their own benefit?**

Most cities in the UK operate a CCTV system, some keep this purely for traffic monitoring but where the infrastructure exists the teams who operate them can start using them for this wider community benefit.



## COLAS

### CSR ACCREDITATION

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#### SUMMARY

We operate an ambitious Act and Commit Together (ACT) strategy. Like the CSR Pillars, ACT includes 8 Pillars with corresponding targets. This is supported by our Social Value Policy, Environmental/Energy Policy, and our team of experts who work with our workforce, supply chain, and communities/organisations to deliver meaningful activities.

Our Carbon & Biodiversity Strategy (to achieve to Net Zero Carbon by 2040), includes our goals to promote circular economies to preserve natural resources and reduce the impact of our activities. This includes low carbon innovations to reduce waste, energy, and carbon.

We also provide a range of facilities to support sustainability and encourage active travel, including our Cycle to Work Policy, EV charging points, rainwater collection, and recycling facilities.

#### Future expansion:

Finalising and implementing a business-wide “Green Travel Plan”

Working with clients to adopt circular economies and implement carbon calculator reporting  
Roll out low carbon innovations to the wider business and 100% EV/alternative fuel vehicles by 2040

We maintain a 5% Club Membership and offer apprenticeship, trainee, and graduate opportunities. To support wellbeing, we re-developed our culture surrounding mental health and have introduced a mental health provision that incorporates third party partnerships with local suppliers, Mindful Employer Network, and Mates in Mind.

#### Future expansion:

Develop new Trailblazer Apprenticeship standards in Traffic Management  
Roll out our new Regional Mental Health strategy nationally

Build our network of partnerships charities to improve our training provision.

Continue to fulfil and surpass our 5% membership.

We have introduced solutions to break down barriers to employment for the most vulnerable through our Re-integration to Employment scheme. These partnerships also facilitate donations, volunteering, and community/environmental betterment programmes. We partner with schools, colleges, and universities to deliver site visits, work experience, and careers events.



**Future expansion:**

Roll out our bespoke Reintegration to Employment programme nationally.  
Continue to develop innovation partnerships with universities to influence road user behaviour  
Roll out 'Trauma Led Leadership' training to equip our business with the understanding to manage vulnerable individuals

We undertake philanthropic activities and provide a 2-day workforce volunteering per annum. We deliver varied activities, including donations to local charities and food banks, community engagement, and cost of living crisis relief.

**Future expansion:**

Develop relationships with national charities to support regional approaches.  
Launch a social value page to celebrate our initiatives and share good practice.

**IN DETAIL**

**ENVIRONMENT**

Like the CSR Four Pillars, Colas operate Eight Commitment Pillars within our ACT Strategy. These pillars correspond with our strategic objectives and company policies, including our goal to become a Carbon Net Zero organisation by 2040.

Our Net Zero goal is supported by our Environment and Energy Policy, Carbon Reduction Plan, and Carbon & Diversity Strategy- each of which are managed and delivered by our dedicated in-house Environmental Department and supported by our workforce and supply chain.

As minimising energy consumption is a core element of our Net Zero strategy, we maintain and implement several management systems and initiatives to support this imperative.

***Provision Monitoring energy consumption***

We operate a ISO14001 Environmental Management

System to manage, standardise, and monitor our activities in line with our environmental, biodiversity, and energy policies and procedures. We also operate an ISO50001 Energy Management System at our quarrying and manufacturing sites in Warrington, Carnsew, and Rowfant as our energy outputs are more significant at these locations. Through our Energy Management System, each location has an Energy Reduction Plan which we use to measure our performance and maintain best practice towards environmental and energy consumption, as well as identifying opportunities to improve.

We use the BRE SmartWaste software to quantify fuel and energy use across site equipment, cabins, vehicles, and generators, amongst other equipment.

The platform collates data into accessible, user-friendly dashboards and KPI report- which feed into our Management Systems. Our Environmental team use these dashboards to monitor compliance and compare performance across projects.

Each of our buildings also have Half Hourly Energy Meter reading systems which provide 'live' readings of the energy usage every half hour. It also provides full auditability, which assists in ensure we fully comply with external standards.

For example, we secured CEEQUAL accreditation for our £8M Humber Bank Link Road project in Grimsby as well as obtaining a Green Apple Award.

***Minimising energy consumption***

We work to minimise our energy consumption through a range of initiatives, behavioural campaigns, and innovative solutions.

Behavioural awareness campaigns include reinforcing the importance of shutting down offices at the end of the working day, turning off lights, and switching off plant/vehicles when they are not in use.

We also introduced a Cycle to Work Initiative in 2022. For innovations and material solutions, we work with our supply chain and harness the global

research and development capacity of the Colas Group to create and manufacture low-energy solutions in-house.

For example, our Specialist Processes division have a range of low carbon alternatives to traditional surfacing techniques, including our award-winning, NHSS13 certified Insitu Recycling methodology 'Retread' - which saves energy outputs by 76.76%.

#### ***Maintaining awareness and engagement***

Our Environmental team convey our strategy and performance through a year-round programme of communications.

We arrange regular events (briefings, Toolbox Talks, environmental "Webinar Wednesdays"), as well as themed events such as "World Environment Day", "Colas' Environment Day", "Walking Week", and "Green Up" moments before meetings.

We have a dedicated environmental blog on our intranet system, and regularly include content in our ONE magazine/app and LinkedIn to highlight innovations and best practice across our operations.

We also run interactive events and challenges; incentivising our personnel to walk/cycle, or to minimise their resource competition through leaderboards and prizes.

#### ***Future expansion***

As part of our commitment to achieving Net Zero 2040 and the targets and initiatives in our Carbon & Biodiversity Strategy, we have a range of upcoming aims and objectives to further reduce our energy consumption including:

Improving our energy efficiency culture through continued targeted training and awareness campaigns, as well as selecting and training in-house "Energy Champions"

Using best practice from our Area 9 contract to aim for all new projects to operate on electric vehicles/ alternative fuels

Implementing defined minimum standards for buildings – such as double glazing, insulation, and solar power.

#### **WORKPLACE**

We are committed to providing an inclusive, supportive workplace environment, which helps our personnel to maximise their potential.

Our dedicated Human Resources (HR) and Learning & Development (L&D) are responsible for shaping our training strategy and wellbeing provision, which were recently re-certified to "Gold" standard by Investors in People (IIP).

Retaining this prestigious standard places Colas in the top 3% of the highest-performing employers who are accredited by the scheme and demonstrates a commitment to continuous improvement.

We also achieved reaccreditation in 2021 for the FIR Framework, a programme supported by the Construction Industry Training Board and the Supply Chain Sustainability School promoting fairness, inclusion and respect tailored to our industry.

We achieved level 4 of 5 at Embedded level, becoming one of the first contractors to move across onto the new framework. This programme is supported nationally by our 26 FIR Ambassadors to promote a fair and inclusive culture using the resources and tools available through the Supply Chain Sustainability School.

We communicate our provision as part of our employee induction process and use annual Personal Performance Appraisals (PPA) to set individual targets and training plans. To help maintain workforce awareness, we use our internal communications channels (Colas ONE App, Yammer, our Connex intranet system, and our corporate magazine) to promote themed events such as "Apprenticeship Week" and "Mental Health Awareness Week".



We also have an internal, colleague-nominated award scheme to celebrate individual and team excellence. We maintain a master Training Plan to record the activities / hours of training and CPD delivered across our business and use the National TOMs framework to quantify the benefits.

**Provision:**

***Apprenticeships:***

We are a member of the Government-backed “5% Club” and can demonstrate a strong commitment to apprenticeships. We offer a variety of pathways across our business – including technical/ engineering, commercial, administrative, and business support apprenticeships, with our provision accredited by the CITB.

***Work experience:***

We offer both short and long-term placement opportunities for young people interested in our sector; including fortnightly placement opportunities for high school / college age students, and 6-12-month placements for university-age students looking to complete “time out” in industry.

We also offer adult work experience placements for candidates from disadvantaged backgrounds, which can provide a valuable pathway into employment for those who have been out of work for a long period.

We work with several partner charities to co-ordinate the latter, including: the St George’s Crypt Growing Rooms scheme, Nobody Left Behind and Leeds Care Leaving Team.

***Training and CPD:***

We have a strong, long-standing commitment to developing the capability of our workforce, and have been accredited to the Investors In People scheme for 19 years. We undergo a re-certification audit every 3 years, and recently retained our status as a “Gold” standard employer in April 2021. The auditing team identified Colas as a “business ambitious for the future, clear about its strategic objectives and working hard to align capability and capacity and

evolve the culture necessary for success.”

IIP provide us with a bespoke Action Plan after each audit, which identifies opportunities for continuous improvement. This provides a robust basis for our Human Resources and Learning & Development (L&D) teams to plan short, mid and long-term business improvement activities. Personal Performance Appraisals (PPAs) are key to our CPD provision.

At the start of each year, every member of our workforce is provided with a documented PPA, via their Line Manager. We use PPAs to review performance, cascade business objectives, and agree training/development opportunities to support professional growth.

We complete PPAs on a bespoke digital system, which ensures the content is auditable, and can be referred to by our personnel and their line managers throughout the year. The PPAs for our managers include a “360 review” element, where personnel in their teams are provided with an opportunity to rate / score their performance.

This process ensures dialogue between junior and senior levels and enables our managers to better understand how they can improve their management styles. The training and professional development activities we identify through PPAs are wide-ranging.

We use a variety of platforms and resources to help our personnel develop their knowledge and capabilities.

***Examples include:***

Classroom-based courses delivered by accredited internal and external trainers. Many of our personnel are certified to deliver in-house standards (such as LANTRA), and we have retained relationships with several construction training SMEs.

Practical courses focussed on plant, vehicle or equipment usage, such as award-winning Safer Attitudes in Driving (SAID+) course.

E-learning modules on our in-house Colas Campus platform, on core topics such as compliance, sustainability and CSR.

Toolbox Talks designed to reinforce awareness of company and industry standards.

In addition to training courses, we also help our personnel to develop their skills through our “mentoring” and “job swap” schemes. Our mentoring scheme pairs aspirational junior members of staff with senior equivalents, who provide 1-2-1 guidance and support as required.

Our job swap scheme enables our personnel to apply for a short- or long-term placement in a different area of the business, so they can sample new challenges and work content.

***Equality, Diversity & Inclusion (EDI):***

We achieved reaccreditation in 2021 for the FIR Framework, a programme supported by the Construction Industry Training Board and the Supply Chain Sustainability School promoting fairness, inclusion and respect tailored to our industry.

We achieved level 4 of 5 at Embedded level, becoming one of the first contractors to move across onto the new framework. This programme

is supported nationally by our 26 FIR Ambassadors to promote a fair and inclusive culture using the resources and tools available through the Supply Chain Sustainability School.

Our Equality and Diversity Policy defines our commitment to: “...promoting equality and diversity and maintaining a culture of fairness, transparency and respect for all employees, clients, communities, suppliers, contractors, and other stakeholders.”

We have a variety of initiatives in place to help support a culture of inclusivity. For example, we maintain a variety of “family friendly” policies, which provide our personnel with benefits like flexible working.

Our family friendly policies were updated in 2021 following a review, promoting our new enhanced benefits for maternity, paternity and adoption leave above the statutory amount and with ‘new parent hampers’ to congratulate our new parents on their arrivals.

We also enhanced our sick pay entitlement for Operatives moving in line with the Construction Industry Joint Council Industry Sick Pay Scheme in October 2021, and we launched our new Hybrid Working Policy the same month communicating employees can apply to work from home 2 days per week.

We also develop targeted recruitment initiatives to help marginalised groups access employment opportunities. On our Manchester framework schemes, we have worked with local 3rd sector partners to help homeless and refugee candidates’ access CSCS training, and permanent employment opportunities.

In addition, we deliver regular EDI training/awareness sessions



through our in-house network of 'FIR Ambassadors'. In 2021, we launched a Returners Programme when we worked with our partners Women Returners to advertise positions to potential candidates who had been on a career break for over 24 months.

This programme is continuing into 2023 with the support of Women Returners, who also provide coaching and training any returners recruited through a tailored programme to help support them back into the workplace.

Colas also retained our accreditation in 2020 for Disability Confident Employer and are looking to progress this further to Disability Confident Leader in 2022/2023.

## COMMUNITY

Colas support a wide variety of community projects. We empower our regional hubs and project teams to form partnerships with schools, 3rd sector organisations, community/environmental advocacy bodies, and a wealth of other organisations.

By adopting this flexible approach, we can tailor our provision the diverse needs of the communities we operate in. We celebrate these initiatives through our internal and external communications channels and use the National TOMs framework to quantify the benefits delivered to local communities.

### **Provision:**

### **Wealth and income creation:**

### **Employment:**

Maximising local employment opportunities is a fundamental aspect of our approach. When we secure a project, we work with our clients, local charities, and employment agencies to recruit local candidates into project roles.

This includes candidates from both "mainstream" and "hard to reach" backgrounds – with a focus

on marginalised groups such as NEETS, BAME candidates, and those from deprived backgrounds.

### **Local supply chains:**

We also strive to maximise the proportion of project spend retained in local communities, so that we can maximise the benefits of the circular economy. On the Stoneferry Road project we are currently delivering for Hull City Council, we have retained more than 90% of the £14M value in the local area, by utilising local contractors Ashcourt Group and Lighting & Signs.

*Both contractors are based within 3 miles of the site, ensuring both economic and environmental benefits. Schools, colleges and university engagement:*

We work closely with our partners in the education sector to tackle the STEM skills shortage, typical initiatives include: School / site visits:

We arrange interactive sessions with nearby primary schools to support the curriculum and emphasise the importance of staying safe around live construction sites. When COVID19 made face-to-face school visits challenging during 2020, our Manchester teams with school staff to deliver digital sessions via Teams and Zoom.

This has now been developed into a hybrid model to maximise reach.

### **Work experience:**

We regularly provide short term placement for high school students, and longer-term placements for under-graduates looking to complete a "year in industry" prior to the completion of their degree. We have also recently worked with careers consultancy Springpod to develop a digital work experience provision, so that we could offer placements during COVID19, this is in the process of being developed into a hybrid version so we can benefit more students' with placements.



**Careers advocacy:**

We arrange careers sessions and CV writing workshops for high school, college and university students considering careers within the built environment sector. In Manchester, our team have also worked with local careers consultancy Spark to produce a video outlining the career opportunities available within our industry.

The video included “spotlight” sections on a number of the apprentices and post-graduate personnel leading our schemes in the Northwest.

**Community engagement:**

We work extensively with community groups across both our UK and international operations – examples include:

**Manchester:**

Our regional CSR Lead has overseen the delivery of several community-facing initiatives, including the removal of an asbestos-contaminated building from a local school, the delivery of a community garden in the city centre, and the donation of site materials at the conclusion of one of our framework projects. For the latter, we worked with our cabin supplier to donate white goods, furniture, and office supplies to local charity the Mustard Tree, so they could be donated to homeless people, or sold to raise funds.

Our team also gave 20 used pallets to the Gaskell Garden Project, which provides refugees and asylum seekers to gain skills working on local permaculture projects.

**Portsmouth:**

Colas are currently in the 17th year of our 25-year maintenance PFI with Portsmouth City Council. Our long-term presence in the city has provided an opportunity to forge strong links with local stakeholders, which has led to several successful community-facing initiatives.

*We have worked with local partners to:*  
Rehabilitate a run-down alley, which was

encouraging anti-social behaviours near to a local primary school.

Donate Traffic Management (TM) resources and labour to local community events.

Arrange beach clean-ups alongside local volunteers.

**Advocacy bodies:**

We work with several 3rd sector partners focussed on the creation or preservation of green spaces, such as Treesponsibility in Calderdale. In 2020, we provided staff release days for 3 personnel to participate in a planting day with the Treesponsibility team in Walsden.

We also maintain partnerships with several partners focussed on advocating for sustainable transport modes. On our Manchester framework schemes, we have supported post-project “scheme activation” initiatives, which are designed to ensure that residents realise the benefits of the new cycling infrastructure we have delivered for the Council.

We have also supported collaborative initiatives with local cycling charities to provide education and resources. Future expansion: Our in-house CSR team are currently working hard to expand our provision.

**Key initiatives include:**

Formalise partnerships with 2-3 carefully selected national charities, to support our numerous regional partnerships.

Attend “Build Back Better” events in collaboration with our clients, partners, and local stakeholders, so that we Launch a dedicated CSR page on our website, to further celebrate our partnerships and initiatives.

Roll out our Reintegration to Employment Programme nationally after the success of our Leeds pilot.

## PHILANTHROPIC

Forming strong partnerships with charities and 3rd sector organisations is a central part of our ACT strategy as well as featuring within our Social Value Policy. This includes: Promoting and enhancing good community relations.

Maintaining a community involvement programme contributing, company time and resource to charitable organisations. Investing in the local physical infrastructure by providing additional maintenance and construction services to local communities.

To achieve these objectives, we empower our regional hubs and project teams to form strong 3rd sector partnerships, so they can plan/implement impactful initiatives, which are tailored to the needs of local communities and stakeholders.

We provide all our employees with a minimum 1 day of volunteering time per annum, with many of our personnel significantly exceeding this baseline. We celebrate these initiatives on both our internal and external communications channels – which include Yammer, Connex, and a staff monthly newsletter, as well as our website, Twitter, and LinkedIn pages, respectively.

Notably, we also use the National Themes Outcomes & Measures (TOMs) framework to produce quarterly project reports, and an annual corporate report, celebrating our CSR activities – with a focus on charitable endeavors.

Our approach is replicable, and members of our CSR team regularly work with our sister companies and industry partners to exchange ideas.



## **DUBAI HEALTH AUTHORITY**

### **RASED “THE VIRTUAL HEALTHCARE FACILITIES INSPECTION FRAMEWORK**

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#### **SUMMARY**

In line with its regulatory scope of work, the Dubai Health Authority’s mandate encompasses running inspection services for licensed healthcare facilities across the Emirate.

With the happening of COVID, and as to ensure its governance management tools could be continued despite public health constraints, DHA introduced the region’s first virtual inspection framework for healthcare facilities.

The framework surpassed the now-traditional virtual communication into a broader set of guidelines and tools that are used to ensure the quality of inspection activities and reports. DHA researched global best practices with regards to virtual inspections in healthcare.

However, practices worldwide encompassed other industries and no mention of virtual health inspections. Hence, DHA decided to introduce this new model where DHA inspection teams would utilize technology to run virtual inspections for facilities.

Following the research and model design phase, DHA developed a set of guidelines and forms as to educate the private sector about its novel practice and started the project in 2021 piloting it to cover a limited set of inspection services. Through introducing RASED, DHA ensured Business Continuity of Inspection Services

in light of any public health crises.

It also remarkably enhanced productivity per inspection team from 1-2 visits to 6-8 visits per day. Virtual inspections brought about huge cost reduction, with no cost for fleet acquisition, fuel, maintenance, parking fees, toll fees, etc.

Also, with less time consumed per inspection visit, the human resources needed to cover the same scope of inspections also got reduced. Hence, cost of the inspection processes covered by RASED got reduced by 45 % per year.

RASED also waved away the need for printing evidences and keeping hardcopies, saving more than 50,000 printouts yearly and reduced inspection





function footprint by removing the physical site trips, hence saving around an average of 4.6 metric tons of carbon dioxide per year per team. Following its remarkable success, DHA is planning to widen the scope of the inspection via RASED even further as to cover all final inspection services, adding one-day surgery centers and hospitals in the coming year.

## IN DETAIL

Being the key regulator of the public and private healthcare services within the Emirate of Dubai, the Dubai Health Authority (DHA) Governance Model includes four modules, namely:

- Dubai Health Sector Governance (Health laws & regulations, health insurance, licensing, Inspection, etc.)
- DHA Clinical Governance (Patient safety, quality of care, health outcomes, clinical)
- Operational Governance (Information technology, human resources, procurement, media, environmental health and safety, asset management, business continuity, etc.)
- Financial Governance (DHA accounts, health care funds, procurement, investment and PPP, etc.)

DHA's Strategy has a dedicated Strategic Goal towards "Driving and ensuring compliance and accountability through an Innovative Governance Framework", with an aligned strategic objective for "Revamping the governance structure of DHA".

To address this strategic Goal, DHA implemented 11 strategic initiatives, including issuance of policies, guidelines, clinical guides, updating of governance-related procedures in addition to achieving the



compliance to the ISO 37000:2021 for Governance of organizations.

DHA's Scope when it comes to Dubai Health Sector Governance not only covers licensing of medical professionals and facilities, but it also emphasizes on offering inspection services on facilities to ensure compliance to set standards and regulations, ensuring patients and customers' happiness, safety and enhanced health outcomes.

With the increasing attractiveness of the investment climate in Dubai's Healthcare Sector, the Emirate witnessed a huge surge in the number of licensed facilities for the past five years, marking an increase of 40 % for the period 2016-2021.

This dramatic increase in number of licensed facilities brought about a huge demand on DHA's health inspection function, creating the need for a revamp of the function's business model to adapt to

the increasing demand while maintaining inspection services quality and scope rendered. Furthermore, and as COVID-19 pandemic brought about a global health & socio-economic shock, DHA, being the health sector regulator within the Emirate had to play a major role towards ensuring access to care and continuity of service in public and private facilities.

DHA took a clear set of measures to ensure smooth continuity of its regulatory services, processing 8,253 facility and 83,929 professional licensing applications from January to November 2020. Yet, the inspection aspect of its regulatory framework faced a challenge due to the interactive nature of inspection activities and the necessity to continue with inspections as to ensure maintenance of quality of service provided.

In response to these two key challenges, DHA researched global best practices with regards to virtual inspections in healthcare. However, practices worldwide encompassed other industries such as vehicle licensing, municipal inspections, etc. with no global practice for virtual health inspections.

Hence, DHA decided to adopt a pioneering novel framework to move its final inspection services from physical to virtual, while maintaining its thoroughness and diligence, and named this new business model “RASED”.

RASED, has a clear set of objectives, KPIs and targets as to ensure an impactful implementation, namely:

1. Ensuring Business Continuity of Inspection Services in light of public health crises & enhanced productivity
  - 1.1. KPI: % of disruption of inspection services due to public health disasters (Target: 0 %)
  - 1.2. KPI: Rate of Productivity enhancement within inspection process (Target: 50 %)
2. Enhancing efficiency of inspection processes
  2. 1. KPI: % of cost reduction of inspection processes (Target: 25 %)

2.2. KPI: % of reduction of time consumed per inspection team (Target: 20 %)

3. Introducing more sustainable health facility inspection activities
  - 3.1. KPI: % of reduction in metric tons of carbon dioxide per year caused by inspection vehicles' trips (Target: 25 %)
  - 3.2. KPI: % of reduction in paper consumption (Target: 70 %)
4. Preserving the health and safety of inspection & private facilities teams
  - 4.1. KPI: Reduction in number of infection cases within inspection team members or private facilities members as a result of inspection visits (Target: 100 %)

Following the planning phase, DHA developed a set of guidelines and forms as to educate the private sector about its novel practice and started the project in 2021 piloting it to cover a limited set of services. The originally-planned scope of RASED was to cover inspection pertaining to smart pharmacies, medication delivery, addition of specialization within facilities, planned modifications and expansions.

Yet, due to its remarkable success, DHA expanded RASED scope to also cover additional inspections such as home nursing, optical outlets, dental labs, schools, etc. RASED, represents a Disruptive Approach towards a more sustainable Health Facilities Inspection that had wide-scale positive outcomes, enhancing productivity, efficiency and effectiveness and surpassing its intended objectives:

**1. Objective:** Ensuring Business Continuity of Inspection Services in light of public health crises & enhanced productivity:

Virtual inspections ensured the continuity of service even during COVID-19 subsequent waves, hence, preventing the disruption of a very important mandate of DHA's regulatory framework, namely inspection.

During the years 2021 and 2022, DHA successfully conducted around 600 hours of virtual inspections, where RASED enhanced the productivity of the inspections per team from 1-2 visits to 6-8 visits per day and where 100 % of final inspection service requests were processed within 5 working days across 2021 and 2022.

**2. Objective:** Enhancing efficiency of inspection processes:

RASED brought about huge cost reduction, with no cost for fleet acquisition, fuel, maintenance, parking fees, toll fees, etc. Also, with less time consumed per inspection visit, the human resources needed to cover the same scope of inspections also got reduced.

Hence, cost of the inspection processes covered by RASED got reduced by 45 % per year.

**3. Objective:** More sustainable health facility inspection activities:

Turning into virtual inspections, DHA waved away the need for printing evidences and keeping hardcopies, saving more than 50,000 printouts yearly.

Furthermore, with no vehicle trips to and from inspected facilities, RASED contributed to the reduction of the inspection function footprint by removing the physical site trips, hence saving around an average of 4.6 metric tons of carbon dioxide per year per team.

**4. Objective:** Preserving the health and safety of inspection & private facilities teams:



With no physical visits, the risk on the team's health and safety was diminished, where the periods following RASED witnessed no cases of inspection-caused infections within the team.

Through following clear guidelines and measures in carrying out the virtual inspection, DHA's team were able to ensure that non-compliance cases and areas of improvement were spotted and addressed across the inspection cycle, with 63 % of the inspected facilities having recommendations or cases of non-compliance reported, hence virtual setting didn't have an impact on inspection thoroughness and diligence.

Following its remarkable success, DHA is planning to widen the scope of the inspection via RASED even further as to cover all final inspection services, adding one-day surgery centers and hospitals in the coming year.



## DUBAI POLICE SMART AWARENESS GAMES

### A. General Situation in Schools.



### B. Dangerous Situation



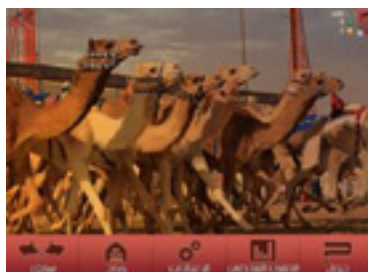
### C. Initiative Aims



### D. Examples of our Games



**Knowledge City**



**Camel Racing**



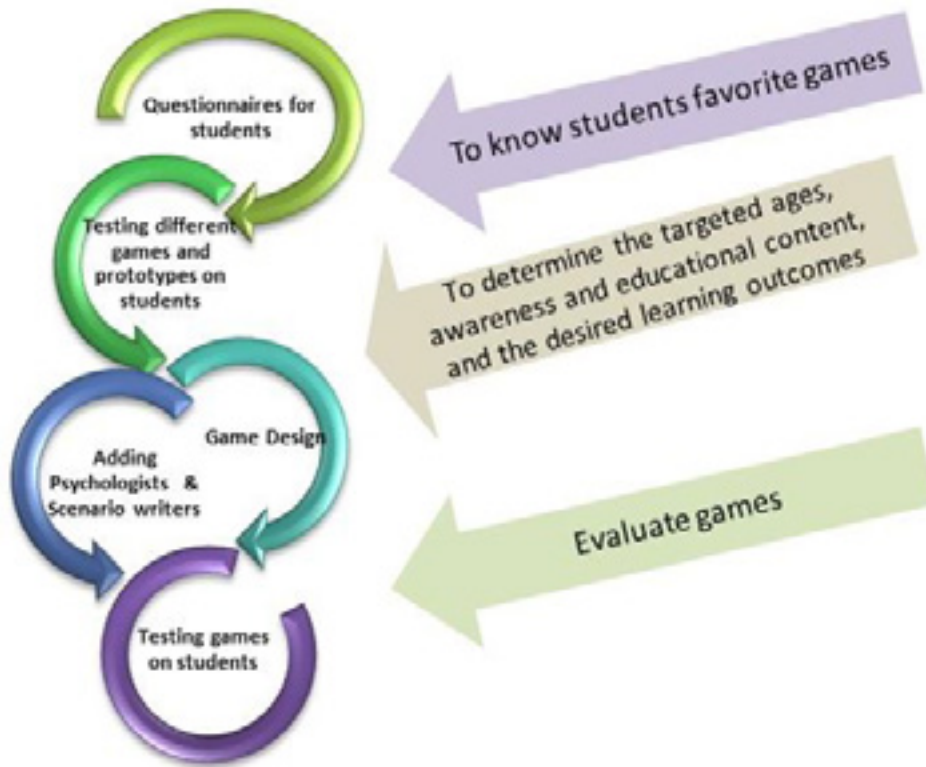
**Theme Park**

**E. Intangible Benefits**





## F. Games Development Cycle



**G. Focus Groups for more than 1200 Male and Female students, taking their views and comments to improve the games and making them more interest**



## H. Examples of Media Coverage

Targeting the nation's youths, Saif bin Zayed launches computer game called "UAE Racing"



### UAE virtual game to foster positive values in children

SmartAppar City game aims to build educational and health awareness while fighting crime

By Nade Al Tajer, Staff Reporter



### NEW GAMING APP TO COMBAT CRIME IN UAE





## **EIZO**

### **EIZO INTERNATIONAL EXCELLENCE AWARDS 2023**

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#### **SUMMARY**

EIZO Limited are part of the wider Japanese EIZO Group but for the purposes of this submission we are referring to UK operations only but under the guidance of the Japan Head Office Corporate Philosophy.

We follow the “EIZO Principles of Conduct” as guidelines for each EIZO employee and as a commitment to our stakeholders. We pledge to conduct our business in accordance with these Principles.

We will supply high-quality products and services loved by customers through creating and offering new value by unique technologies and ideas. We will promote our manufacturing and business activities in consideration of reducing their environmental burdens.

We will act as an international corporation with a global outlook and mindset. We will conduct open and fair trade. We will seek to build and maintain strong bonds of trust with our stakeholders (business partners, employees, shareholders, and the local community).

We will strictly respect and comply with both the letter and the spirit of the law as a good corporate citizen. We will respect basic human rights and value a broadminded corporate culture. Our full Principles of Conduct can be found <https://www.eizo.co.uk/about-us/csr/>

At a global level, EIZO Group measure non-financial measures such as: CO2 emissions, energy use and % female managers. They have set targets of 50% carbon reduction by 2030 and carbon neutral by 2040, currently they are nine years ahead of schedule to achieve these goals.



In May 2021, they also took on the recommendations of the Taskforce on Climate Change Financial Disclosure to analyze the risks of climate change on business. In order to match and prepare for future EIZO Group requirements, EIZO UK are very committed to driving a positive change in corporate social responsibility.

In 2021, the whole EIZO UK Leadership team undertook a CSR training day to truly understand CSR at the top level and have subsequently decided to undertake the CSR Accreditation for continual improvement, consultation/guidance and external validation.

We recognize the importance for internal staff engagement, to attract and retain the best talent, to protect the planet and contribute to our local communities as well as to put us in the best position to win future work.

## IN DETAIL

**ENVIRONMENT** The Head Office at 1 Queen Square is all LED lighting with motion sensors throughout. Energy company supplier is SSE and this is a green tariff Electricity charge points are provided outside for electric vehicles.

Redundant office furniture has been upcycled to local Heatherwood hospital. Redundant laptops and monitors have been donated to local school, Sir William Borlase School All bathrooms/toilets have low flush toilets and stop taps Motion sensors on all floors help to reduce energy consumption and not waste valuable resources

Office paper is FSC and waste

paper recycled through Shorts Waste Management services. Our printer cartridges are recycled by our print company – Agilico EIZO have a Travel plan Coordinator and a Travel Plan

The Travel Plan objectives are to seek to ensure that staff and visitors use more environmentally friendly alternatives than driving alone.

### **The Plan contains four specific objectives:**

To enhance the Organisation's corporate social responsibility

To encourage the use of more sustainable modes of transport

To reduce unnecessary travel

To ensure that all staff are aware of the Travel Plan

Currently we have 11 company cars, 4 are hybrids 7 are diesel.



Alison Bunn, CFO, is investigating electric vehicles as well as further hybrid vehicles, the conclusion is “All our vehicles will be hybrid by the end of 2022”

#### **Facilities Supplier Framework/supply chain management**

We currently have 32 suppliers and these are tracked on a Facilities Supplier Framework document Suppliers are monitored for performance and activities. We aim to use local businesses where possible in order to promote local business and economy but also to reduce carbon miles for maintenance and servicing of offices.

#### **Current results are:**

66% of suppliers and subcontractors are within a 25-mile radius of the office

12% of suppliers and subcontractors are greater than a 25-mile radius

12% of suppliers and subcontractors are greater than 50 miles

We use a local company for removal and disposal of waste and zero waste goes to landfill. Both Mixed Municipal waste and Mixed Packaging waste are sorted through their Material Recovery Facility. Any items not able to be recycled are sent to Energy Recovery so nothing goes to landfill.

#### **WORKPLACE Training**

All new staff who join us undergo a 2-hour induction with Alison Bunn, the CFO, to go through the Employee Handbook. This is a personal one to one session so all questions, queries and concerns can be addressed.

In addition, all staff spend an approx. further 2-hours with Colin Woodley, CEO to go through the EIZO principles, culture and strategic business plan. It is very important for Colin to give this personal welcome and to meet all new starters.

Where necessary further training from other departments/ disciplines will be undertaken from relevant existing staff members.

#### **EIZO will aim to provide**

Support, development and training that will assist with the implementation of its policies and help achieve the business plan.

Planned, consistent induction training for all new staff, to help in understanding individual job roles.

Appropriate career development opportunities and training to help maintain and enhance standards of performance over a period of time.

Regular performance reviews, with a focus on future and personal development plans.

Support, development and training for any employees who change roles, department or location to help them to deal competently with their work.

Support for Continuing Professional Development (CPD).

We operate a Flexible Working Policy for all employees with a continuous service of over 26 weeks work. We are committed to ensuring that every effort is made to resolve any grievances or complaints as quickly and as objectively as possible. We have established a Grievance Procedure that should be followed to ensure that any such complaints will be dealt with in a fair and consistent manner.

#### **Termination of Employment (Redundancy, Retirement, Resignation)**

We will endeavour to take all reasonable steps to avoid compulsory redundancies. If a redundancy situation arises the following steps will be considered to prevent compulsory redundancy: Reduction in or a freeze on overtime. Lay-off or short time working (without pay) other than Statutory Guarantee Pay. We will seek to find volunteers for redundancy as the first step, but reserve the right to refuse particular volunteers if the needs of the Company require it.



We do not operate a Default Retirement Age. If any staff wish to retire then need to put it in writing to their Manager, in accordance with the 'Notice' Section of your Contract of Employment. Health and Safety Policy - EIZO Limited is committed to the pursuit of excellence – in the quality of services offered to its members, customers, suppliers and stakeholders, and the standards of health and safety provisions it makes.

One of our key principles is to attain, and exceed, the standards of the Health and Safety at Work Act 1974 and associated legislation. Training on Health and Safety will be undertaken at induction and on an on-going basis.

#### **Workplace**

We have several policies relating to conditions of work and social protection:

- Absence and lateness Policy
- Adoption Leave Policy
- Bullying and Harassment Policy
- Dependant Leave Policy
- Disciplinary and Capability Policy
- Diversity and Inclusion Policy
- Equal Opportunities Policy
- Fertility Treatment Policy
- Holiday Policy
- Maternity Leave Policy
- Parental Leave Policy
- Paternity and Partner Leave Policy
- Remuneration Policy
- Whistleblowing Policy

We really do care about people who work at EIZO Limited and to show this we've created a broad and varied benefits programme that we hope will make your life at EIZO Limited as enjoyable and rewarding as possible. Our aim is to keep adding to these benefits, but we're always happy to discuss what additional benefits you would like to see. In the main all our benefits are open to permanent members of staff who have successfully completed their probation period.

#### **COMMUNITY**

EIZO have set up a CSR Monitoring Framework which has a Community subsection. This tracks the community engagement locally as well as prompts for future topics and ideas to be considered by the Charitable Committee headed up by Jacky Rodgers. In June 2022, EIZO supported a local group in Reading, helping children to read. [www.abctoread.org.uk](http://www.abctoread.org.uk)

Books on a Waterstones Wishlist were purchased for the charity by EIZO staff members. We have supported a local women's group against domestic abuse called BWA – Berkshire Women's Aid. In Feb 2019, we decorated and painted a refuge place and paid for the paint and the brushes as well. "We really do appreciate all your efforts, the room is so much fresher and the light shade and curtains were fantastic" – Tracey, Refuge Manager.

"Thank you very much for all being willing to take time out to offer your support here",

Susie BWA. [www.berkshirewomensaid.org.uk](http://www.berkshirewomensaid.org.uk)

#### **PHILANTHROPIC**

EIZO Limited set up a Charitable Committee in 2019, it is run by Jacky Rodgers and meets monthly to get thoughts and ideas from the whole team. A total of £98,696 has been donated to philanthropic causes over the last couple of years and this has ranged from fund raising, volunteering to more in-depth time spent supporting a charity like the Scrubs Glorious Scrubs campaign during the height of the pandemic.

The Pink Ribbon Foundation is a grant making trust with a mission to fund projects and provide financial support to UK charities which relieve the needs of people who are suffering from, have been affected by breast cancer, or who work to advance the understanding of breast cancer and its early detection and treatment.

EIZO invited Pink Ribbon in to do a talk to all staff to raise awareness and support for all breast cancer charities. Sebastian Actions Trust need to raise over £1.5 million every year to ensure they can continue to provide support to families of seriously-ill or life-limited children.

They ask their CSR teams for a small donation towards the cost of maintaining their gardens, woodlands and property, to help reach their goal. See Appendix 4. Philanthropy for proposed equipment wish list. Jacky Rodgers visited the Sebastian Trust in 2019 to do some volunteer gardening.

A team of 5 members of staff completed walks which equated to climbing Mount Fuji for the charity

George and the Naval Children's charity raising £260. MacMillan Cancer Charity is close to our hearts because it has supported one of our staff. We spent time baking and selling cakes to raise money 28 September 2020 - £170 raised.

In November 2020 we were unable to hold a Christmas Party so we donated the equivalent money to Crisis and Christmas - £2380 In November 2020, Diane Bedford from Involve suggested some gifts in kind to a single parents' charity called SPSAS – Give a Gift Appeal.

A total of 12 families were given gifts from EIZO staff members - £180 In November 2021 - Social Stories Hampers – Christmas hampers were given to the team at a value of £898.



## GINEBRA SAN MIGUEL INC

### GINEBRA SAN MIGUEL INC-TESDA PARTNERSHIP

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#### SUMMARY

For Ginebra San Miguel, Inc. (GSMI), the importance of having a sustainable social responsibility program is a priority – and the company believes it is possible through its “Ginebra San Miguel Bar Academy.”

The Ginebra San Miguel Bar Academy is a corporate social responsibility project of GSMI, producer of the world’s no. 1 gin in terms of volume and the Philippines’ market leader in the liquor segment. This project doesn’t only provide a sustainable livelihood for Filipinos but is also aligned with the company values of “malasakit” (empathy; concern for others), perseverance, and “never-say-die” spirit.

This project traces its roots way back in 2014 when GSMI collaborated with the Technical Education and Skills Development Authority (TESDA), a national government agency. Through the collaboration, the “GSMI Technopreneur Program” was launched

to commemorate the Ginebra San Miguel brand’s 180th anniversary.

Under the program, 180 beneficiaries were chosen from different regions in the Philippines who were trained for three months in the rules of cocktail mixing and basic entrepreneurial skills and provided with a mobile bar start-up business upon graduation. The GSMI Technopreneur Program has found itself making far-reaching impacts that go beyond education for its scholars as it has touched and transformed not only its beneficiaries but also their families and communities.

With that, GSMI decided to escalate the program to make it more impactful and sustainable. In 2021, the company allocated over PhP5,000,000 (est. US\$100,000) to refurbish the Ginebra San Miguel Bar Academy located at the TESDA Women’s Center in Taguig City.





The state-of-the-art facility has allowed GSMI and TESDA to reach out to more Filipinos — making the dream of a better life a reality through education, livelihood opportunities, and community development.

Amid the pandemic, the Bar Academy was able to produce graduates being one of the pioneers of “blended learning” in the Philippines. The Ginebra San Miguel Bar Academy is now a sterling venue to elevate the quality of bartending education in the Philippines.

Beyond the pandemic, it plans to have 100 students as beneficiaries annually.

## IN DETAIL

“Malasakit” (empathy; concern for others) is central to everything the company does. Guided by this set of values, Ginebra San Miguel Inc’s (GSMI) primary goals for its corporate social responsibility program are to provide students with the opportunity to change their lives for the better through education, to generate graduates who are globally competitive and job-ready, and to raise the bar for the Philippine bartending industry.

## BIRTH OF A PARTNERSHIP

The partnership between GSMI and the Technical Education and Skills Development Authority (TESDA) started in 2014, forged in time for the celebration of Ginebra San Miguel’s 180 years. Ginebra San Miguel, GSMI’s core brand, is the world’s largest-selling gin and the Philippines’ oldest consumer brand still in the market today.

TESDA, on the other hand, is a government agency created and mandated to empower and make people and communities productive through excellent training programs and services.

With that, TESDA is the perfect partner to help GSMI accomplish its goal to help transform the



lives of Filipinos through education and livelihood opportunities. Today, the GSMI partnership with TESDA has since become a model for other companies that have their own corporate social responsibility efforts.

In this partnership, TESDA conducts the training, while GSMI provides the program and infuses capital for the student’s needs. Part of GSMI’s commitment is also to provide quality liquor products to students regularly while they are still training. This helps the students become familiar with “actual” products used in their line of work.

## FULFILLING THE FILIPINO DREAM

In the almost decade-long partnership of GSMI and TESDA, the GSMI Technopreneur Program has made far-reaching impacts that go beyond education for its beneficiaries. Successful graduates get to help their families and communities. Now, with the Ginebra San Miguel Bar Academy, both groups want to ensure that students are equipped not only on the theoretical aspect but are also trained on practical applications.

Under the Tourism (Hotel and Restaurant) Bartending NC II of Ginebra San Miguel Bar Academy, students are guided by the ten basic principles of Competency-Based Training (CBT) delivery. At the conclusion of the course, a student will learn how to operate a bar, prepare and mix cocktails and non-alcoholic concoctions, as well as basic wine services.

Graduates also gain a National Certificate II from TESDA, which is recognized worldwide for employment. Moreover, to establish a top-notch education in bartending – the equipment and facilities, values education, and skill training are the key foundations.

This gives the graduates a certain level of confidence in their skills and gives them a sense of familiarity with the trends in the bartending industry that will make them more globally competitive. Through the years, GSMI has spent a considerable amount on this project, but expenses are “worth it” considering the lives that have changed.

With the multi-million-peso renovation and

improvement, the Ginebra San Miguel Bar Academy is a state-of-the-art facility – it features a fully-air conditioned flairtending gym, a world-class and spacious bar counter that can accommodate three bartenders, a fully-stocked wine cellar, an all-stainless steel back bar workshop, and hotel-style dining area complete with modern furniture and fixtures.

The flairtending gym with floor-to-ceiling mirrors, a high ceiling, and rubberized flooring is where scholars can hone their showmanship skills. GSMI also transferred the location of the original bartending school to a bigger school within the TESDA Women’s Center to further boost the confidence of students.

It is no wonder that the Ginebra San Miguel Bar Academy has become TESDA’s premier showcase for its world-class training workshop and venue of its numerous national events. Graduates used to get easily intimidated by high-end bars, but this is no longer the case since the arrival of the newly built Ginebra San Miguel Bar Academy.



In fact, graduates even feel that the facilities they have at the TESDA Women's Center are much better compared to the bars outside.

### **SUSTAINABILITY AND SUCCESS STORIES**

For GSMI, the sustainability of a program is measured at the bottom line – if its graduates are well-equipped and ready to face the challenges of the actual job in their chosen field; and second, if they have become productive members not only of their household but more importantly, of their immediate community.

The sustainability of the program was also greatly tested during the onset of the worldwide health pandemic. Even with the disruption and seemingly confusing state of lockdowns in the capital, it didn't discourage both groups from continuing with the program, even after most schools halted their operations.

The Ginebra San Miguel Academy was privileged to be one of the first educational groups to be given the authorization to do “blended learning” – a mix of online and on-site (with only a small group for physical distancing) classes.

According to Shella Bawar, bartending head trainer, the challenge of the pandemic was felt, but they soldiered on. Even with only 16 students who started the two-and-a-half-month course amid the pandemic, all of them completed the online lessons.

She is proud to say that all graduates are currently budding entrepreneurs as the economy is opening up and events are now allowed.

For Joelly Llantada, being trained in the Ginebra San Miguel Bar Academy helped him gain the confidence and the right attitude to be the bartender he aspired to be. He also noted that the Academy's learning tools prepared him for his current job as a bartender at Balai Palma, a fine dining, a reservations-only restaurant in Makati City.



This also happened to another graduate of the Ginebra San Miguel Bar Academy. Joanna Penaflor immediately landed a job as a bartender, server, and bar back staff at the Mantra Indian Kitchen and Bar in Makati City.

Her employer knew the caliber of graduates from TESDA. The reputation of this partnership played a big part in the employment of its graduates. It is undeniable that this program has helped graduates have an “edge” over other applicants.

For GSMI, these successful testimonies serve as a stepping stone toward its goal of producing at least a minimum of 100 graduates annually.

### **MORE THAN EDUCATION, IT'S LIFE SKILLS**

Joanna revealed that she appreciated the hands-on training of the program and observed how their trainer (Ms. Shella Bawar) ensured that each student was truly learning. The education at the Ginebra Bar Academy, according to Joanna, is “worth it.”



She noted that Ms. Bawar is a professional in what she does. With her TESDA-Ginebra education, she is confident that the best is yet to come for her and her family. The same goes for Angela Felarca, one of the graduates who is very thankful for the program.

The Ginebra San Miguel Bar Academy helped develop her communication skills, which is also a vital part of the bartending job. According to Angela, she was able to enhance her skills even more, and she learned how to communicate with different people, even from other nationalities. The program helped her become the first lady bartender at Manila Craft, a mobile bar company that caters to high-end events and occasions.

This program isn't just limited to teaching bartending skills. The trainers make sure that graduates are also equipped with entrepreneurial skills that can help them start their own businesses in case they want to pursue an enterprise.

This was the case with Cherry Galit. To improve her skills, Cherry studied food and beverage services at TESDA. While there, she was offered to study

bartending, which at that time already had the support of GSMI.

This was the original Technopreneur program where scholar-graduates were given mobile bars to help them start their own business after graduation. Back then, Cherry wanted to work right away so she could support her mother's needs and help with the family's expenses. Fate, however, had other plans for Cherry.

She felt that she needed more training and that made her go back to TESDA. She finally enrolled in the bartending program. After graduating and getting her National Certification II, she and two fellow scholars established their own mobile bar business using the knowledge they gained from the program.

The first run of their business was quite challenging, but they continued to serve their clients with heart and passion and believed in the potential of their enterprise. Word of mouth worked for them. Their satisfied clients referred them to others.

Soon, they were serving major clients that included entertainment organizations and theater groups. GSMI was also one of their regular clients, which got them for its marketing and sales events. Cherry and her team used the proceeds from their profits to buy another mobile bar, enabling them to cater to more clients.

Through this, Cherry's business grew to the point that it would be booked for three big events within a month with more than 100 guests to serve per event. Her success eventually gave her the opportunity to help graduates of the Ginebra San Miguel Bar Academy.

Cherry saw this opportunity as a way of giving back to the community and beneficiaries like her. When the pandemic came, they had to temporarily close their business due to restrictions on physical gatherings. Cherry knew that this was just another challenge that the Academy had prepared her for. Equipped with entrepreneurial knowledge and



skills, she opened an online milk tea business in the comforts of her home.

Today, she is now a full-fledged entrepreneur who can fully provide for her family. Cherry said that she didn't come from a wealthy family and didn't even finish her studies, but these challenges did not deter her from fulfilling her dreams of being able to provide for her family. She is "very grateful" and "deeply appreciative" to Ginebra San Miguel for the once-in-a-lifetime opportunity given to her.

The program helped graduates such as Cherry reach their potential and dreams. If not employed in the country, most are now working abroad. Cherry is one of the exemplary graduates of Ginebra San Miguel's program – a graduate who is globally competitive to help improve the standards of the Philippine bartending industry.

Aside from being a business owner, she is also helping other individuals reach their potential by providing employment opportunities through her business. Since the news of the success of the Ginebra San Miguel Bar Academy, plus its world-class facilities and TESDA's industry-standard curriculum, more scholars have inquired.

VIP visitors of TESDA, which include investors and diplomats, are also impressed with the Bar Academy and have given their support to this program.

#### **'MALASAKIT' IN EVERYTHING WE DO**

Ginebra San Miguel Inc. is passionate about its brand, products, and services. The company is inspired by its heritage of excellence guided by 'malasakit' (empathy, or a genuine concern for others).

The Ginebra San Miguel Bar Academy, which was merely an idea more than a decade ago, is now able to improve the lives of hundreds or even thousands of Filipinos all over the country. In everything Ginebra does, 'malasakit' comes first, even concern for the country.

The Ginebra San Miguel Bar Academy is now able to help elevate the quality of bartending education in the Philippines. Students have the edge over others because of industry-standard facilities as well as the comprehensive tools, equipment, and resources.

The scholars would be able to work with confidence and swiftly adjust once they start working in the industry because professional experience is applied throughout training. The number of requests from those looking to join the bartending program has tremendously increased.

While this is going on, students are motivated to attend class each day and complete the course of study. This indicates that there has been a paradigm shift and that the industry now highly values and seeks out technical-vocational graduates, notably those of the GSMI-TESDA bartending program.

By improving the quality of life of our countrymen and contributing to the achievement of the Filipino dream through community development, employment opportunities, and education, GSMI believes it is "providing value to its shareholders as well as upholding its commitment to good corporate citizenship."

Moving forward, GSMI has many plans for its Ginebra San Miguel Bar Academy. Starting this year, the company intends to host learning sessions for students and graduates. During these sessions, the company will invite industry professionals to discuss the latest updates in the bartending industry.

GSMI also aims to provide more suggestions on the existing bartending curriculum to keep its students competitive in the industry. There is a saying that a dream doesn't become a reality through magic – it takes sweat, determination, and hard work.

The Ginebra San Miguel Academy will continue to uplift every Filipino through its program – keeping their dreams alive and never stopping to give them the spirit to take the first step toward a better life.

## GREEN MOTION

### GREEN MOTION - LEADING SUSTAINABLE TRAVEL

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#### SUMMARY

**THE 'GREEN' IN GREEN MOTION.** Green Motion is committed to providing customers with eco-friendly rental vehicle options while also making a positive impact on the environment. Our unique approach to "Going Green" doesn't come with a premium cost, showing customers that they can make responsible choices without sacrificing comfort or affordability.

We also prioritize sustainable practices such as reducing energy consumption, conserving water, promoting effective recycling, and using environmentally responsible materials in all areas of our business operations.

To achieve this goal, Green Motion strives to involve the entire production chain by establishing strategic partnerships with some of the world's prominent automotive manufacturers to procure and integrate cutting-edge automotive technologies that significantly reduce carbon emissions. The

company boasts a diverse range of low-emission vehicles, including hybrids, plug-in hybrids, range extenders, and fully electric vehicles, catering to the diverse preferences of its environmentally conscious customer base and beyond.

This has enabled Green Motion to strengthen its position as an environmentally friendly car rental choice in the industry and provide its customers with a plethora of options that align with their environmental values.

Nonetheless, it strives to maintain cost-effective pricing strategies to appeal to a diverse customer base. Currently, Green Motion's fleet comprises of a 35% representation of electric and hybrid vehicles, a testament to its commitment to sustainability.

However, the company is not satisfied with just this and has set an ambitious goal of becoming the world's first and only vehicle rental brand to operate a fully zero-emission fleet.



This is a significant milestone, but Green Motion is determined to make it a reality through continuous innovation and commitment with a help of all franchise locations.

#### IN DETAIL

##### **GREEN MOTION NETWORK – LEADERS IN ENVIRONMENTAL MOVEMENT.**

First and foremost, our sustainable practices are adhered to and are embraced throughout all of Green Motion's franchise locations and offices, such as following best



recycling practices by creating dedicated recycling zones, minimizing water consumption, reducing energy use, and using ecological materials where possible; this is all in addition to introducing more electric cars into their fleet.

Green Motion's goal is to disrupt the traditional car rental industry and provide an eco-friendly option for customers and we want the whole network to be united in this mission. Green Motion is proud to have the greenest vehicle rental fleet in the world. The best representation of Green Motion's Drive Zero initiative is through our franchise location network.

The beginning of 2023 saw the addition of brand-new Toyota Cross Hybrid vehicles to the Green Motion South African location, one of the fastest-growing Green Motion franchises. Green Motion's franchise locations in Martinique and Guadeloupe have taken the company's focus on reducing CO2 emissions to heart by operating clean fleets featuring the latest BMW and Mini vehicles, including electric and hybrid models.

Additionally, Green Motion UK has further expanded its already market-leading low-emission offering by incorporating electric VW ID.3 and Polestar vehicles into its fleet. To support these efforts, we have entered into an ongoing partnership with European airline Wizz Air through the travel platform Booking.com in 2022 to provide customers with greener car rental options and reduce emissions associated with travel.

In addition, each year, Green Motion hosts an awards ceremony during its annual conference to recognize the achievements of its franchisees. These awards, such as "Leaders in the Environment" or "Greenest Fleet," serve to reinforce the company's commitment to sustainability and promote pride in the Green Motion brand. This year is no exception, with all popular nominations returning and new nominations emerging.

The 'Drive Zero' Award was one of the new additions to the line-up honouring those Green

Motion operators who have gone above and beyond to support our drive towards zero emissions goal; buying electric cars and installing charging infrastructure and supporting community initiatives to lower emissions – supporting the core values of our brand.

The entire network has celebrated Green Motion Stansted which recently made a significant investment by implementing a cutting-edge vehicle valeting system. The system, supplied by ByWater, guarantees that all water used during the cleaning process is captured and recycled. Additionally, the team uses eco-friendly, biodegradable washing solutions to ensure that all valeting services are not only effective but also prioritize the well-being of the environment.

Another award went to Green Motion Morocco - a recipient of the "Leaders in the Environment" award for their efforts in reducing emissions, managing waste efficiently, and educating employees on the importance of eco-friendly behaviour. The franchisee continuously improves the energy efficiency of their sites and fleet, utilizing renewable energies and the latest technologies to minimize electricity consumption.

They also regularly renew their fleet with less polluting, more fuel-efficient vehicles, and have even partnered with Toyota to launch hybrid cars for rental in Morocco. The "Greenest Fleet" award recognized franchisees who have best embraced Green Motion's taken steps to increase low-emission vehicles in their fleet.

The latest award was jointly won by Green Motion Italia, who boasts the greenest car rental fleet in Italy, and Green Motion Martinique & Guadeloupe, who offer the widest selection of hybrid and fully electric mini and BMW vehicles for rental. Green Motion Costa Rica was also acknowledged for their efforts in sustainable tourism, having received certification in the field and organizing volunteer activities throughout the year to support environmental initiatives such as cleaning natural,



protected areas, recycling campaigns, and supporting local communities.

## **SOCIAL IMPACT**

Green Motion's extensive franchise network serves as staunch advocates for our environmental goals. The Green Heart Fee is a unique way for Green Motion to advance environmental sustainability and preservation. By collecting a voluntary fee from customers during bookings (1 GBP, 1 EUR, or 1 USD) and then directing the funds to the Costa Rican government's reforestation and conservation initiatives via FONAFIFO, Green Motion can make a tangible impact on the environment while allowing customers to offset their carbon footprint.

Launched by the master franchisee for Green Motion Costa Rica in 2013, this initiative showcases the company's dedication to environmental stewardship and accountability. The revenue generated from the Green Heart Fee supports reforestation and conservation programs in Costa Rica, which aid in

which help alleviate the effects of climate change, conserve biodiversity, and safeguard crucial habitats.

To date, tens of thousands of dollars have been donated through the Green Heart initiative, resulting in the planting of thousands of trees, and supporting other ecological efforts. Additionally, Green Motion's customers serve as a major source of strength and motivation. Green Motion is known by our customers as a company that prioritizes the environment and sustainability.

The dedication of our customers was demonstrated in Cyprus where they went above and beyond, bringing their sorted plastic and glass waste back to our location for recycling. These actions have a profound impact and serve as a reminder of the importance of environmental responsibility. These inspiring moments are what set Green Motion apart.

Green Motion recognizes the significance of collaborating with the local community. The company

endeavours to partner with local businesses to obtain marketing materials, including brochures and merchandise, which are critical to the company's representation.

Beyond acquiring supplies for Green Motion, the firm is committed to giving back to the community. The entire team at Green Motion headquarters has actively supported the local MK Food Bank Charity campaign by donating ample amounts of food.

The Head office is closely working with the charity to make a positive impact on the community for several years.

#### **GREEN MOTION RESPONSE TO COVID-19 AND INNOVATION**

Green Motion was one of the first car rentals that responded to the coronavirus swiftly and effectively. To support both our customers and the Green Motion location teams, we implemented new protocols to enhance the safety of everyone involved at our head offices and all franchise locations worldwide.

These protocols ensured the well-being of our customers and staff, who remained active and available on the front line during these challenging times. In all location's protector shields, hand sanitiser units, social distancing markings and directives were installed.

In addition, thorough and daily sanitation, cleaning, and wear of protective equipment were in place. A mandatory thorough cleaning of the cars ensuring that the inside and outside are disinfected was a must during the pandemic.

As we have been at the forefront of our market since the beginning of the COVID-19 pandemic by implementing our aforementioned COVID-19 Shield Customer & Staff Safety program, we wanted to go one step further. This is how a straight-to-car 'Drive & Go' solution was born. Our contactless car rental option provided added safety by eliminating in-person interactions.

We invested in advanced technology to make the rental process seamless and safe. Customers were able to handle the entire process, including





document submission and booking confirmation, through our app. Once they had picked up their rental located near our offices, they could even use their phone to unlock the vehicle and report any damage, mileage, and fuel levels.

We are also incredibly proud that Green Motion Founder & CEO Richard Lowden was also named a Finalist for the 'Lockdown Leader' Award in the 2020/21 SME Business Awards for his swift, decisive, innovative and sustainable response to the pandemic. Awards Green Motion is honoured to be recognized as an award-winning car rental company, having received numerous awards for our environmental contributions.

These accolades include being named "Rental Car Company of the Year" by GreenFleet for seven consecutive years (2009-2016) and receiving the "Fleet Hero Award" from the Energy Saving Trust in 2011. The 'Environmental Rental Company of the Year' for the Institute of Transport Management in 2011, and Green Apple Awards in 2015, 2016, 2017, 2018, 2019 and 2021, 2022 as well as becoming Green World Ambassador in 2016, 2017, 2018, 2019, 2020 and 2021.

Green Motion also won an International Corporate Social Responsibility Excellence Award in 2020, 2021 and 2022 for our continued work in supporting sustainability across the entire business platform. Another award was Green Tourism Silver Award in 2019 for the brand's initiatives such as analysing waste and recycling processes, as well as water use reduction by installing new efficient toilets were introduced in accordance with the Silver Award criteria.

The whole network is also proud to say that Green Motion Founder and CEO has achieved 4th place out of 620 nominees in the World CEO Rankings of 2022. THE FUTURE. Green Motion is now in its 15th year of operation and has achieved phenomenal success in creating a completely new brand sector within the daily rental industry with many of our industry partners and competitors starting to

introduce their own greener fleet.

Green Motion was genuinely the market disrupter that started the total change towards greener vehicle rental. Despite the covid years being the toughest in Green Motion's history, not just for the car rental sector but the entire travel and tourism industry, our franchisees have continued to thrive, with us expanding into new locations, launching new franchises, and being the very first international car rental brand to put into place and roll out across our international network our COVID-19 Shield Customer & Staff Safety Procedures, for the protection and wellbeing of all of our valued customers and colleagues worldwide.

The end of 2022 brought exciting news to the Green Motion network; Green Motion will be entering the Spanish market for the first time which will see its first Master Franchise for Spain opening in 2023 with five more locations opening across the country. This expansion comes after the news of Green Motion acquiring a predominantly America-based car rental brand U-Save solidifying Green Motion's US expansion and its deserved status of a fully franchise and affiliate-based award-winning car rental brand.

The acquisition of U-Save and its expansion into the Spanish market reinforce Green Motion's position as a leading car rental brand and demonstrate the company's commitment to growth and expansion. The acquisition will allow Green Motion to expand its presence in the US and Spanish markets and offer its customers a wider range of rental options including its electric offering.

The future plan is to take this opportunity to promote core brand values across all new locations and territories worldwide.

We will continue to support the regeneration of the travel and car rental industries, using our position as leaders in our sector to reinforce our green message for sustainable development and progress towards 'Drive Zero'.

## **HAYAT/MOLFIX**

### **MOLFIX BOND WITH LOVE**

#### **SUMMARY**

Molfix Bond With Love Project aims to make a difference in helping babies born prematurely or unhealthy, who are in the phase between life and death, to hold on to life. According to UNICEF's 2019 Global Child Mortality Report, 1.5 million children aged between 1 and 11 months died in 2018 in the world and in Turkey, mostly due to "preventable causes".

There was a significant lack of awareness in the society about this tragic phenomenon. Research has shown that the way mothers relate to their newborn babies is a critical factor that can make the difference between life and death.

It was a scientific fact that with good treatment and care, mothers' close attention and love had a miraculous effect on the survival of babies. Molfix Bond With Love Project also aims to contribute to the reduction of infant deaths caused by "preventable causes".

The project, which was launched in 2019 with the support of the Ministry of Health, General Directorate of Public Hospitals and in partnership with the Infant Mental Health Association, includes awareness-raising training programs for mothers & fathers, prospective mothers and midwives & nurses to explain the importance of secure attachment bond for babies.

It also includes providing vital equipment support to the newborn intensive care units such as incubators, breathing

apparatus, etc. As a result, it is a project that should be continued since it contributes to the bonding of more babies to life.

#### **IN DETAIL**

With the Molfix Bond With Love Project, it is aimed to support the social and psychological processes of mothers whose babies are in the neonatal intensive care units, strengthen the bond they establish with their babies in this process. It also aims to ensure a secure attachment bond between them, contribute to the reduction of infant deaths caused by "preventable causes".

The project also raises awareness among prospective parents, parents and health workers about secure attachment bond and child development and improves neonatal intensive care units. Within the scope of the Molfix Bond With Love Project, psychologists visit mothers who stay in the mother guesthouses of state hospitals every 15 days





and provide them trainings on the topics of Secure Attachment Bond, Child Development and Care at Home.

Awareness is created for mothers and fathers about Secure Attachment Bond, starting from the pregnancy period, postpartum and continuing the developmental processes of babies. Presentations, informative leaflets and Child Development Playbooks prepared by Hacettepe University Child Development Department, Infant Mental Health Association Academic Board and Kocaeli University Neonatology Department are given to the mothers during the trainings.

In the project, midwives and nurses who are in first contact with parents are given communication trainings with parents by academicians. With the neonatal intensive care technical equipment support for provinces representing the whole Turkey and hospitals with high birth rates, it also contributes to the survival of more babies.

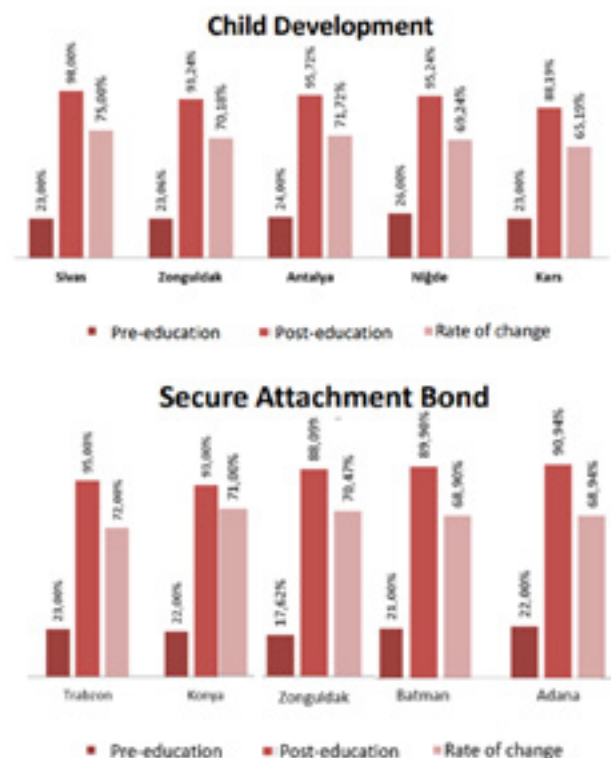
In line with the identified needs, basic equipment such as incubators, ventilators, phototherapy devices and bedside monitors are determined and donated to the neonatal intensive care units. During the pandemic period, the “Bond With Love Mother and Baby Covid-19 Information Program”

was launched to ensure that all parents have access to accurate and reliable information. The contents, prepared by doctors, were transferred to families by healthcare professionals through tablets donated to 135 Gynecology and Childhood Hospitals in 81 provinces in Turkey.

Molfix Bond With Love serves Good Health and Well-Being, which is the 3rd goal of the Sustainable Development Goals. With the project, the mood disorders of mothers whose

babies are in intensive care are reduced and the secure attachment bond of mother and baby is supported.

At the same time, the project creates equality of opportunity by ensuring the transfer of qualified educational content.





The project also serves the following sub-goals under the target of Good Health and Well-Being:

- 3.2: Preventing all preventable deaths under 5 years of age
- 3.4: Reducing deaths from noncommunicable diseases and promoting mental health
- 3.8: Ensuring access to universal health services



Within the scope of Molfix Bond With Love Project, in the period of 2019-2022;

- 3,500 trainings of 110,000 minutes were given.
- A total of 130,000 parents were reached through the trainings provided.
- 284 neonatal intensive care equipment donations were made to 34 hospitals in 29 provinces.
- 400 trainers in 10 municipalities were trained.
- 100,000 information materials were distributed.
- The contents were delivered to 135 hospitals in 81 provinces.
- 135 smart tablets were donated to 135 hospitals.
- With the pre/post test conducted on approximately 2,000 people, the level of knowledge on Child Development increased by 58% and the level of knowledge on Secure Attachment Bond increased by 61%.
- The knowledge rate of mothers staying in Mother Guesthouses increased from 69% to 84%.
- The highest increase rates in mothers' knowledge levels were seen in Şanlıurfa, Trabzon and Van.
- Within the scope of the Secure Attachment Bond and Social Development Training Program, 17% increase in knowledge was achieved compared to the average of the questions asked to the neonatal intensive care midwives and nurses.

- The most significant change in knowledge level occurred in issues related to Kangaroo Care.
- While the rate of those who said "I know what to pay attention to during Kangaroo Care" was 70% before the training, it increased to 97% after the training.

The project is planned to continue in 2023 in Ankara, Istanbul, Sinop, Erzincan, Afyonkarahisar, Giresun, Bursa, Muş, Mardin and Rize.



## KINGDOM HOUSING ASSOCIATION

### CSR ACCREDITATION

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#### SUMMARY

Our mission at Kingdom is to build strong, sustainable communities and to provide More than a Home. We have found different ways to support and assist our communities including;

The Kingdom Coronavirus Assistance Fund, to support tenants and customers experiencing financial difficulties as a result of COVID-19.

We have supported 507 families to a value of £111,105 with each application averaging approx £220. Chief Executive Small Gift Fund - Staff from across the organisation have enjoyed sending small treats to our tenants over the last year. We sent out an amazing 489 gifts.

Tenant Support Services - Over the last year our housing team has collectively engaged with 1106 customers, and secured over £659,000 of benefits for our customers since April 2021.

Connecting Scotland Funding, where iPads and Chrome books have been secured, we have received 271 electronic devices that we have distributed to the most vulnerable members of our society.

Charities and Community Groups who have accessed funding donations through our Charitable and Community Initiatives fund.

We have donated over £55,000 to help support these groups. Delivering Community benefits through investment programmes, services and projects. Our community benefits strategy is to add social value, including what can be delivered as part of our development projects, to provide sustainable benefits in the longer term.

#### ***Contributing to Climate Change objectives.***

We have plans to plant 400 trees to help offset the carbon footprint of our transport fleet. Charging points for electric vehicles are being installed at Kingdom's offices. The initiatives Kingdom facilitates and delivers demonstrates our Corporate Social



Responsibilities and ultimately meet our objective to provide More than a Home.

## IN DETAIL

For many years it has been recognised that housing associations deliver a wide range of activities and services that extend beyond our core activities related to the provision, management and maintenance of housing which is reflected within our Corporate plan. We have recently been awarded a Gold International Corporate Social Responsibility (CSR) Excellence Award and a Corporate Social Responsibility (CSR) World Leader Status recognition for our dedication and commitment to building strong, sustainable communities.

Kingdom Housing Association, like many other organisations, has experienced an unprecedented few years due to the Covid-19 pandemic but this has only increased our dedication to our Corporate Social Responsibility. Our mission at Kingdom is to build strong, sustainable communities and to provide More than a Home.

We have found different ways to support and assist our communities including; The Kingdom Coronavirus Assistance Fund, to support tenants and customers experiencing financial difficulties as a result of COVID-19.

We have supported 507 families to a value of £111,105 with each application averaging approx £220.

### **Chief Executive Small Gift Fund -**

Staff from across the organisation have enjoyed sending small treats to our tenants over the last year. We sent out an amazing 489 gifts.

### **Tenant Support Services -**

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### **Contributing to Climate Change objectives.**

We have plans to plant 400 trees to help offset the carbon footprint of our transport fleet. Charging points for electric vehicles are being installed at Kingdom's offices. The initiatives Kingdom facilitates and delivers demonstrates our Corporate Social Responsibilities and ultimately meet our objective to provide More than a Home.

We work closely with local communities to support and facilitate the development of community benefit projects, with a focus on:

- Employment & Skills
- Environmental projects
- Resident and community projects
- Education and schools initiatives
- Public art

Financially, the pandemic has been very challenging for many of our tenants, customers and communities. We have found different ways to support and assist them including;

- The Kingdom Coronavirus Assistance Fund, to support tenants and customers experiencing financial difficulties as a result of COVID-19
- Chief Executive Small Gift Fund
- Tenant Support Services



- Connecting Scotland Funding, where iPads and Chrome books have been secured to distribute to vulnerable and eligible people in our communities
- Charities and Community Groups who have accessed funding donations through our Charitable and Community Initiatives fund
- Delivering Community benefits through investment programmes, services and projects.
- Contributing to Climate Change objectives

### Coronavirus Assistance Fund

In April 2020 and April 2021, Kingdom's Board of Management created a £100,000 Coronavirus Assistance Fund each year to assist tenants and customers experiencing financial difficulties as a result of Covid -19.

As the pandemic continued the Board of Management felt it was important to increase the funding each year. So far we have supported 507 families to a value of £111,105 with each application averaging approx £220.

The fund is available to people whose household

income has been directly impacted as a result of the coronavirus pandemic.

The fund is available to Kingdom Housing Association tenants, Kingdom Initiative tenants, sharing owners or individuals who are supported by Kingdom Support and Care.

All we needed people to do was demonstrate that their household income had been directly impacted by the coronavirus pandemic, provide details of any changes in their employment situation and provide an indication of what the grant will be used for. As the pressures of the pandemic ease we have converted this fund to a cost of living support fund for our tenants.

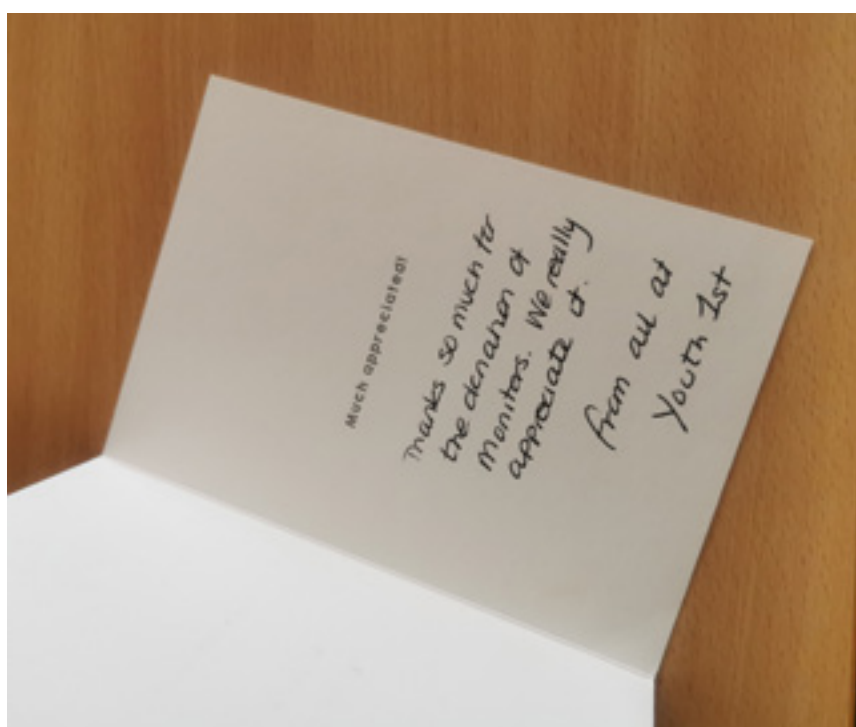
Chief Executive Small Gift Fund At Kingdom; we have an employee recognition scheme where staff nominate colleagues or other teams for actions and behaviours they have demonstrated that fit with our Values.

As part of the scheme the staff can nominate a charitable donation and receive gift vouchers as prizes and this year they all agreed that the

donations and vouchers should be used to buy the small gifts for our tenants. Staff from across the organisation have enjoyed sending small treats to our tenants over the last year.

We sent out an amazing 489 gifts and the feedback from our tenants has been very rewarding. Here's a small selection of some of the comments:

"Almost in tears here. I just received a wonderful bunch of flowers. No one has ever sent me flowers in my entire life. I'm totally overjoyed. Been a long time since I've had this extra smile."



“I had an amazing gift of an amazon voucher nominated by a Kingdom member of staff. As a nurse who has worked throughout this pandemic, this has made me smile so much today and I cant believe the kindness people show and have for others”.

“Thank you for the afternoon tea delivery - what a lovely surprise, I really enjoyed it - a fantastic gesture”.

### **Tenant Support Services**

The rising cost of living, combined with the impact of the pandemic on the mental and physical health of our most vulnerable service users, means that there continues to be a great demand for help across our services. This demand has been particularly prevalent in the area of energy advice, with more customers than ever before seeking crisis support due to an interruption to their energy supply.

We recognised that many of our tenants were even more vulnerable due to the restrictions and we immediately introduced a system of welfare calls and visits to people who we knew required support, or were socially isolated in their homes. Part of this was a staff initiative to visit tenants, to help with shopping and deliver small gifts to them to help brighten their day. The tenants really appreciated the interest shown and the visits and contact has been maintained.

Since the start of the pandemic we have enhanced all our advice, assistance, tenancy sustainment and energy advice services. Over the last year our housing team has collectively engaged with 1106 customers, recorded over 3000 case notes, and secured over £659,000 of benefits for our customers since April 2021.

It has also provided 786 non-financial outcomes in



areas like welfare advice, form filling, and advocacy. Kingdom employs a dedicated energy adviser who can support tenants with advice and assistance, this has been particularly important throughout the pandemic and more so now with increasing energy costs.

Various support initiatives have been introduced to support tenants and provide measures to address fuel poverty, including projects such as;

- Warmer Winter Packs
- Fuel Bank Vouchers
- Pressure Cooker Scheme
- Energy Hardship Fund.

A customer who received assistance from Kingdom said; “Myself and my family got Covid and unfortunately I’ve been left really weak, so this was such a nice surprise! I appreciate the support I’m able to get with budgeting and fuel top ups. Due to us all being at home, the gas/ electricity is through the roof! Many, many thanks again - I’m so happy to be part of a nice Association that recognises good community spirit”.

The pandemic has financially impacted on many social rented tenants resulting in them building up significant rent arrears. Through funding available from the Scottish Government we have been able to

secure almost £100,000 in funding support to pay tenants rent arrears, which helps reduce their debt and address their financial stress, it aids health and well-being and ensured their tenancy sustainment.

### **Connecting Scotland Funding**

We have received 271 electronic devices that we have distributed to the most vulnerable members of our society. The provision of mobile devices through the Connecting Scotland Fund helps people access banking, shopping and other online services, as well as facilitating social interaction with friends and family.

One of the tenants who received a new Chromebook said, “I really don’t think people realise what a difference this will make for us. It’s just fantastic”. Community Initiatives Fund Kingdom’s Community Initiatives Fund has been in operation since late 2017 and donated over £50,000 to help support community projects submitted by tenants, residents in the community, clubs, schools, voluntary groups and others who are promoting community projects.

Our tenants, residents and community projects could qualify as well as projects delivering training and employment schemes. Education and school initiatives, public art initiatives and activities aimed at improving energy efficiency and the environment are all considered. Kingdom is committed to building communities as well as affordable homes.

The average donations are between £250 and £500, however they make a significant impact to the delivery of community projects and we are very pleased to be able to make these donations to help worthy causes.

The organisations receiving these donations are diverse and some examples of donations are;

- Sports teams, purchasing kits and equipment
- Community groups putting on christmas lights and firework displays
- Public art

- Community Councils improving children’s play area.
- Buying books for local primary schools
- Help support local families in crisis and aim to keep children in their homes and community and out of the care system during the Covid-19 pandemic.
- Provide duvets/pillows/pots and pans which are new and are suitable for use for families who are in financial hardship

### **Community Benefits**

Delivering community benefits and sustainability are core objectives that contribute to Kingdoms Corporate Social Responsibility. At Kingdom we have a large house building programme and we incorporate community benefits into the programme.

The purpose of the community benefits strategy is to add social value, including what can be delivered as part of our development projects, to provide sustainable benefits in the longer term.

As part of the new housing supply strategy we prioritise the following community benefits;

- Employment and Skills, such as;
  - Creating apprenticeships to help increase levels of youth employment,
  - Creating jobs for unemployed people,
  - Providing work placements and training opportunities to unemployed people, to help them gain work experience to aid their job search,
  - Providing work experience to students.
- Supporting resident and community projects across a range of themes including;
  - Health and well-being initiatives,
  - Capacity building and advice and assistance projects which assist residents and the local community to help address the challenges associated with such things as;
    - welfare reform
    - financial inclusion
    - digital inclusion





- Environmental projects, which contribute to sustainability objectives, particularly in the following areas;
  - Housing quality and renewable technologies as part of the new build standards,
  - Energy conservation and fuel poverty,
  - Promoting environmental awareness and energy efficiency with tenants,
  - Environmental and amenity improvements.
- Education initiatives, through developing business partnerships with schools and colleges which contribute to their curriculum and help to promote an integrated and inclusive society.
- Community arts projects which provide value to local communities such as;
  - Local arts and crafts projects,
  - Public artwork, as part of the redevelopment project,
  - Photography, design and media projects.

### **Collaborative Working**

Many of our CSR initiatives are delivered through collaborative working with others.

#### ***Recent examples include;***

- Working with contractors and developers to deliver community benefits as part of our capital investment programme.
- Joint working with a local primary school to develop and publish a Healthy Living handbook to improve health and well-being during the pandemic.
- Consulting with local communities to develop public art projects including an art trail initiative as part of a regeneration project.
- Partnerships with local employers to deliver employability projects such as phase 2 of our

Naumann Initiative, where we provide support and a home to a homeless person and work with local companies who provide the jobs.

### Climate Change

Kingdom continues to demonstrate our CSR commitment to tackling climate change. This is demonstrated through our new build specification and the investment in the improvements we undertake to our existing housing stock

We have plans to plant 400 trees to help offset the carbon footprint of our transport fleet. Charging points for electric vehicles are being installed at Kingdom's offices and proposals are being progressed for adding electric and hybrid vans to the fleet as part of a £50,000 commitment to investing in reducing our carbon footprint.

Landscape architects are asked to maximise tree planting and retention within the design specification and cycle storage is being provided for residents in common access flats.

### Resourcing At Kingdom

we resource delivery of our corporate social responsibilities through a range of methods including;

- Direct funding
- Securing grants
- Contract Conditions and procurement practises
- Collaborative working and joint funding
- Managing and delivering added value services and projects in our communities
- Investing in the workforce

The earlier examples demonstrate how we deliver on the above. At Kingdom our core customers are our social rented tenants and the initiatives above identify how we deliver benefits to both our core customers and the people living in the communities where we operate.

In respect of the added value services we provide to people in our communities, who are not tenants, this includes services such as;

- Care and Repair; where we manage and provide an adaptations service to older and disabled people who are owner occupiers or private rented service tenants.
- Small Repairs Service; where we provide small repairs to vulnerable older people.
- Kingdom Works; our employability project, which builds the capacity of unemployed people, through providing training and securing employment with employers in the community Kingdom embeds the delivery of community benefits across all our services and employs a range of dedicated staff members and teams to deliver sustainable tenancy services and added value projects.

Kingdom recognises the 4 Pillars of Corporate Social Responsibility through a full range of activities summarised in this application, including the following areas;

### Environmental Activities

#### ***Various environmental strategies, policies and practices related to;***

- Contributing to climate change through Kingdoms Sustainability Policy
- Provision of new high quality sustainable affordable housing that provides;
  - Enhanced Energy Ratings
  - Fabric First
  - Improved Air Quality
  - Energy Savings
  - Emission Reductions
  - Noise reduction and minimisation
  - Use of Recycled Materials where possible
  - Water Savings
- Biodiversity Initiatives
- Staff schemes to promote cycle to work
- Provision of electric vehicle charging points
- Waste Management and Recycling

## **Workplace Activities**

### ***Various initiatives and policies related to;***

- Sustainable Procurement
- Customer Services
- Customer Engagement and Participation
- Equality, Diversity and Inclusion
- Employee Communication and Engagement
- Equal Opportunities
- Governance
- Community Initiatives
- Corporate Investment (Time / Resources / Funding)
- Leadership
- Training, Learning and Development
- Employee Benefits
- Awareness, Promotion and Education
- Family Friendly Commitment
- Flexible Working
- Health and Well-being
- Health & Safety
- Skills Development
- Investment in Young People

## **Community Activities**

### ***Programmes and Initiatives covering areas associated with;***

- Community Benefits in projects related to;
  - Tenants, Residents and Communities
  - Training and Employment
  - Energy Efficiency and the Environment
  - Education and Schools Initiatives
  - Public Art
- Community Commitment and Support
- Community Initiatives
- Corporate Investment and Funding
- Partnerships and Collaborations
- Sponsorship



## **Philanthropic Activities**

### ***Activities associated with;***

- Charitable and Community Initiatives Funding
- Support, Communication and Promotion
- Investment of Corporate Resources
- Sustainability
- Staff Volunteering and Fundraising
- Sponsorship

The initiatives Kingdom facilitates and delivers demonstrates our commitment to supporting our customers and communities, allowing us to deliver on our Corporate Social Responsibilities and ultimately meet our objective to provide More than a Home.



## **LEARN CORPORATION PUBLIC CO., LTD.**

### **LIFE CHANGING PROGRAM**

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#### **SUMMARY**

“Life Changing Program” offers quality education for a brighter future. Learn Corporation is an EdTech company with the mission to innovate a Lifelong Learning Ecosystem to support people to reach their goals.

We believe everyone has potential to live a better life, if they receive the opportunity to learn. Poor quality education and inequality are two main educational problems in Thailand. Since we are in the education business, we have seen these challenges first hand.

We know that our learning platform which is one of our main products can help to reduce this

educational inequity gap and make a real impact to students’ future. We started the Life Changing Program in 2019.

The program is a scholarship made to combat against education crisis that high school students lacking an opportunity and necessary funds have to face, along with the issues of lacking access to quality education in order to prepare themselves for a university. The program provides access to high quality education through appropriate online courses according to the student’s career of choices and interests.

Additionally, Life Changing Program promotes leadership skills and self-development. The program also helps build a community to create a great



relationship and connections for our students to share idea and support each other.

The program not only supports academic knowledge, but also encourage our students to have “pay it forward” and “global citizenship” concepts. Till now, we have provided over 10,000 online courses to more than 5,000 students. The expenses for the courses have costed over a few million US dollars so far, however, the returns are uncountable.

The program has created a huge impact by building quality people for our society. The students could pursue their dream jobs to be doctors, teachers, or engineers, and can support their family and have the brighter future.

#### IN DETAIL

Life Changing Program was founded by Learn Corporation since 2019. The scholarship has served more than 5,000 students across Thailand with the opportunities to access quality education. The purpose of the program is to build young leaders for our countries and the world.

We provide students top quality online courses to help them to get into colleges and pursue their dream jobs. In Thailand there are challenges to achieve education.

Over a million children are not in the education system and about 1.8 million students in the education system are underprivileged (40% of all students).

Moreover, showing from the PISA scores (PISA 2018), Thai student scores are ranking at the bottom for all Math, Science and Reading which reflects severe poor quality in Thailand’s education system, and that also leads to other societal problems.

Despite massive attention by the government, education quality still has not improved, as indicated by the low average score on the national

examinations in recent years. In addition, the lack of 66,000 quality and quantity teachers is also one of the major problems.

This causes the tremendously high student to teacher ratio, and there are a large number of teachers teaching subjects which they are not qualified.

Moreover, Thailand was ranked among the lowest of the participated countries in the equity in educational resources. LEARN Corporation is the leader in EdTech that adopts technology to develop and design learning to meet the needs of people of all ages, so they can develop their skills, achieve their goals, and be ready to pass on good things to others and develop society together to move forward into the future.

LEARN Corporation was established in 2006 with the vision to reduce educational inequality and distribute quality lessons to people across the country. Therefore, OnDemand was founded and became the top and first tutorial institute that uses computers as a medium for teaching and learning, with the most learners in Thailand.

In 2017, LEARN Corporation developed an innovative learning platform that meets all the needs of people of all ages. Then Learning Ecosystem was created and has reached more than 2.5 million people across the country. The Life Changing Program seeks to award students who believe in the power of education and have growth mindset. It is very challenging to get into top departments and well-known colleges in Thailand without having tutoring.

There are many underprivileged students who have big dreams and work hard to pursue their dreams, but they lack of opportunities. These students cannot afford to pay for tutoring, and then they cannot compete with other students to get into the departments or universities that they want. The program offers high quality online courses at no cost to assist students to be able get in to colleges.

The scholarship provides access to education through appropriate online courses according to the student's career of choices and interest. The program also offers laptops and funding for students in need to make sure that they could be able to take our courses we provided online.

Additionally, Life Changing Program promotes leadership skills and "pay it forward" concept and provide a support community network for students. It is a community that students can share their ideas on how to prepare for exams, share their school notes or update information about getting in to colleges, or even ask for supports from other students or from the Life Changing Program mentors.

We have a team that checks and follows up on our students' learning progress and support them. During the Covid-19, we provide our students live streaming tutoring sessions so they can learn and ask questions from their tutors directly. Since the online learning platform that we provide to students is one of our own products, the Life Changing Program is quite sustainable because we use our own resource.

Our company has developed the first one-on-one learning platform. Here are the features of our solution for a virtual learning.

1. Learn Anywhere: The freedom of learning anywhere and anytime with any devices including computers, mobile phones, or tablets.
2. Teacher Portal: The system that provides reports on progress of students.
3. Online Quiz: To check for student understanding after each chapter.
4. Clear System: Helps students to answer their questions within 24 hours.
5. Online Classroom: Creates interaction between teachers and students.

We believe that our work is unique and innovative as follows:

1. First innovative 1-on-1 technology blended learning platform with affordable cost.
2. High efficient business in term of the economy of scale. The values of cost per student tends to decrease every year due to the increase of customers and the lower cost per head.
3. The expertise in IT system for content delivery which easily scale to many users at a time.
4. Our solution gradually shapes students to become active and self learners.
5. The knowledge of implementation process which will allow our product to integrate into school environment.

We have implemented our program through all our social media channels especially on Facebook and LINE which are the most popular social media platforms in Thailand to reach our targeted students. We have also contacted local schools in each province where we have connection with to reach out to students across Thailand.

Till now, we have more than 5,000 scholarships in total allocated to students in all regions of Thailand. We not only run the campaigns for the students but also for our employees. We have our internal campaigns to encourage our staff to participate in the Life Changing Program to be LCP student mentors or interviewers.

Our management team also participates in the campaign by helping interview the applicants. The program is run solely by our staffs, and many of them volunteer to help out with the program. Our staffs help to interviews over 5,000 applicants each year.

The interview is a very important step for our selection process. The interviewers ask students questions to make sure that they are qualified for our programs, help them to plan their study, and suggest courses to match their needs to enter college.



One of our co-founders, Mr. Tanin Timtong, has been appointed to be Chief Social Impact Officer to dedicate his efforts together with his social impact team to ensure that Learn Corporation as a group creating a positive impact to Thai education system by providing the high quality of course contents, knowledge, and technology (our products & services) to schools and by granting the scholarships through Life Changing Program to the selected students.

Our management teams have involved heavily into this program. They lead by showing and participating in all implementation plans. Then, it has built a huge impact across the organization. We have officially implemented this program since 2019. It has been 3 years that we have supported over 5,000 students.

Among those who completed our program, the university acceptance rate, for example, at school of Medicine is 21% and school of Engineering is 12%. They can apply and get financial aid from most public universities or apply for low-interest rate student loans from the Thai government.

It is a holistic approach to ensure that our students get the better future. Our employees have worked

from home and hybrid mode for 2 years. We have implemented several internal virtual and onsite events to keep collaborative spirits including a Life Changing Program volunteer campaign to boost up employees' spirit and mind.

We continue to build the sense of helping others and connecting with other colleagues, and that help to create the positive consequence of the collaboration among team members. Several colleagues from different departments who never worked together have a chance to meet and collaborate in this project.

The number of volunteers has increased from just over 30 to more than 100 volunteers this year. Another positive outcome is the company reputation in public. In Thailand, we have several tutoring centers and many education-related companies. Among those who define themselves as education technology firms, we are outstanding in our CSR program which helps to reduce the educational inequity and have a real impact to students.

Our CEO, who is one of the founders, always inspires and emphasizes this principle of belief to



all employees, and this is always an important part of the orientation deck for new team members. So far, our main targeted students are high-school students.

We help them to ensure that they receive quality education and get into universities for higher education. However, in the future, we have planned to double the numbers of students and expand the education level. We would like to explore students in primary schools, especially those who need to do the entrance exam to get into quality junior high school.

In Thailand, when students graduate from grade 6, they are required to get the entrance exam or registration for grade 7 (junior high school) at another school. Several primary schools in Thailand have only grade 1 – 6.

Even though, it is a compulsory level from the government, the gap in quality of schools plays a huge part in Thailand. Students who have potential tend to apply for well-known public schools in each province which parents believe will help their students to get a better quality of education. However, the group of students who come from underprivileged family are most likely not able to get into top schools since they lack of quality education and cannot compete with other students who have opportunity to receive tutoring.

Additionally, we provide laptops, pocket WIFI and Sim-Card to ensure that the selected students be able to access our contents as well as in some provinces where we have our centers on site (45 centers across Thailand), we allow the students to learn at our centers. We are aware that online learning sometimes causes the learning ineffectiveness especially to those who are under 15 years old.

However, we provide blended learning methods to suit both Covid-19 situation and students' learning style. The next step, we plan to continue our second phase of the Life Changing Program with a social impact called "Pay It Forward" by encouraging our thousands of students to extend the opportunities to at least 10 students from each.

The extended opportunities can be in any terms such as sharing academic knowledge, counseling junior students on their educational path, or developing leadership skills to youth in the community. We belief that this way will help to expand the educational opportunity to more students We believe that in order to make a great impact, it needs partner connection and collaboration.

Therefore, we plan to publicize more about the Life Changing Program, especially using testimonials from our alumni to show how this program does change their life. It could build the company's positive reputation organically to the public and will bring in more organizations that have the same desire to support in this program.

Investing in Education and Changing students' life remain our key strategy for the CSR program at Learn Corporation.



## **MEON UK**

### **CSR ACCREDITATION**

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#### **SUMMARY**

Meon was founded in February 1994 and began as an import export agency. With our roots shaped by traditional family values, we evolved by developing a close relationship providing solutions for line marking, surface repair, decorative resin and aerosol markers to the sectors we serve across the UK & Ireland.

With 25 years of consecutive growth, we have attributed this, in part, to listening to our customers and always asking ‘what more can we help you with’?

We use the acronym REACH – ‘I’m RESPONSIBLE to put EFFORT into ADVANCE the CULTURE

through HONESTY’ and this has served us well both internally and externally.

Internally we use it as a framework in our Personal Development Plans and for the Employee of the Month scheme for recognition of outstanding work. Externally we use it to delivery against our purpose.

Our purpose and contribution to society is simple - to ‘Deliver Great Surfaces’. We do this by being passionate about improved line marking and surface repair solutions, backed up by world class support. As a totally independent company, our customer centric approach works back from the challenge facing the asset owner, specifier or applicator. Over 25 years of experience and listening have become embedded in our values of Resource,





Action, Passion and Trust, the central core of our professional foundation.

We currently have 3 brands: Spectrum, Magma and Performance Machines and focus our business around

- 1 equipment hire and service,
- 2) innovation and expo,
- 3) a training centre and
- 4) on demand projects.

We are ISO14001 accredited and improving our offerings with electric and greener products has been successful and we take pride in sharing our expertise within the industry, through our collaboration with the government project Net Zero Carbon Highways Campaign, our own Meon Training Academy and our 'How to' videos which ultimately contribute to a safer and more sustainable society.

## IN DETAIL

Meon regularly reviews and looks at ways of reducing Energy consumption, examples of this:

LED Lighting Unit 1

Reroofing of Warehouse planned for 2022 – currently AC with minimal insulation & single glazing.

Unit 1 - FF Office Area Roof Insulated Unit 1

FF Walls Externally insulated Unit 2, Warehouse unheated

Senior management are currently looking at solar panels costs and benefits for the warehouse building which they own. Currently total energy used in 2021 was 61,907 kWh at a cost of £12005 (Utility company is Drax <https://www.drax.com/> have



robust sustainability programmes globally and a goal of net zero energy through hydropower, bioenergy, pumped storage hydro, pellet sales and carbon capture)

Carbon foot printing is underway with a dedicated data analyst currently collating Scopes 1,2 and 3 carbon data. Once a benchmark has been set, Meon plan to set targets and goals to reach carbon net zero.

MEON is part of the Local Government Technical Advisory Group supporting the Project Highways Net Zero Carbon Highways Campaign. As part of this MEON presented and were exhibitors at the Presidential Conference - 'Greening the black' 8th June 2022 in London. LGTAG ([lcrig.org.uk](http://lcrig.org.uk)).

Project Highways Zero started in 2020 to highlight how carbon savings can be made across our highway and transportation infrastructure with respect to line marking and surface repairs. The LGTAG Silver Jubilee Conference tackles the practical issues of decarbonizing our highways and public infrastructure.

Its aim is to gain insight into increasing nature, trees and habitat in our highways to support nature recovery, community wellbeing and carbon reduction. As part of the low carbon and natural solutions, MEON are promoting their reduced thermoplastic products which dramatically reduces Co2 with cold lay application, it is more durable, more visible/safer and creates less noise.

This is particularly important as this work is often done at night and can disturb local communities. The product is applied with electric machines, uses 90% less CO2, has a 50% less disruptive factor and the material can last up to 3 x longer – avoiding the need for more frequent repairs.

For more details: <https://meonuk.com/blogs/news/meon-s-presents-at-the-lgtag-greening-the-black-conference-in-london>

A similar conference took place at the Traffex Conference at the NEC Birmingham 14-16th June 2022. [traffex-parkeex-2022.reg.buzz](https://traffex-parkeex-2022.reg.buzz)

The Meon range of electric powered machines is a vision of the future from Graco Linelazers to Contec line removal machines. This range of electric machines can match the performance of a petrol machine but without the fumes and noise.

These machines can apply line marking as well as remove line markings. Visit:

Electric Machines – Meon-UK ([meonuk.com](https://meonuk.com)) for further information.

For more information please visit: Downloads – Meon-UK ([meonuk.com](https://meonuk.com))

Meon response to the pandemic  
Meon was quick to respond to the Covid Pandemic safety

restrictions by providing a demarking social distancing requirements for customers. Five members of the Meon team volunteer regularly at the OneSchoolGlobal, Hindhead Campus – see below for testimonial from Ben Woodcock, Lead Campus Administrator:

#### **Community for email evidence. -**

*Good morning, Russell,*

*Just a brief note to say we are extremely grateful for the time that Meon UK give to the school on a termly basis, offering the support of the following staff members around the school for the social and moral support of the students. Gary Spencer, Neville Spencer, Bert Spencer, Adrian Smallridge, and Russell Smallridge.*

*A big 'shoutout' to all members of the team. It makes the Campus a happy and productive place with students producing outstanding results in their exams and bringing benefit to future colleagues and establishments following their education.*

*Many kind regards,  
Ben Woodcock*



Meon have also engaged with God in Giving, please see testimonial below:

*"Thank you for your generous gift to GiG. We are thrilled to have your support as a newly established charity with radical initiatives. We can continue working towards reducing the Poverty Premium through our Interest Free Grant Scheme and educating those in Household Budgeting.*

*You truly make the difference for us, and we are extremely grateful!"* — Matt Gard, GiG

Emilie Rous has become a Skillstree Ambassador with the EBP South organisation. EBP South have 20 years' experience connecting businesses and schools and providing established, high-quality programmes which inspire young people about future career options and help them on their journey in the field of work.

Emilie visited the Park Community School 19th July 2022 to volunteer in the Business Speen Networking Event. This session is designed to inspire students (Year 9) about the range of career options and pathways open to them after finishing school.

Students are often not aware of the range of options and can get limited information from sources close



to them for example parents or teachers. By taking part in the Business Speed Networking Sessions, we hope to raise their aspirations and show them the broad range of career opportunities locally and nationally.

In addition to supporting the local community, this volunteering had the added benefits of skills development for Emilie herself in presenting, a networking event with meeting the local council and neighbouring businesses and to inspire other Meon staff who were keen to find out how it went and to get involved next time.

There are already discussions to be involved again with the Park Community School. The Key charities Meon UK support are The Grace Trust and WGHT. The Grace Trust (<https://www.thegracetrust.org.uk/>) purposes included supporting education, especially for young people (where it is taught under a Christian ethos), the furtherance of the Gospel, relief of poverty, aiding the ill, elderly and infirm and disaster relief.

The Grace Trust operates with practically no overheads as it relies almost entirely on its hardworking volunteers. This means that almost 100% of the amounts donated reach the recipients.

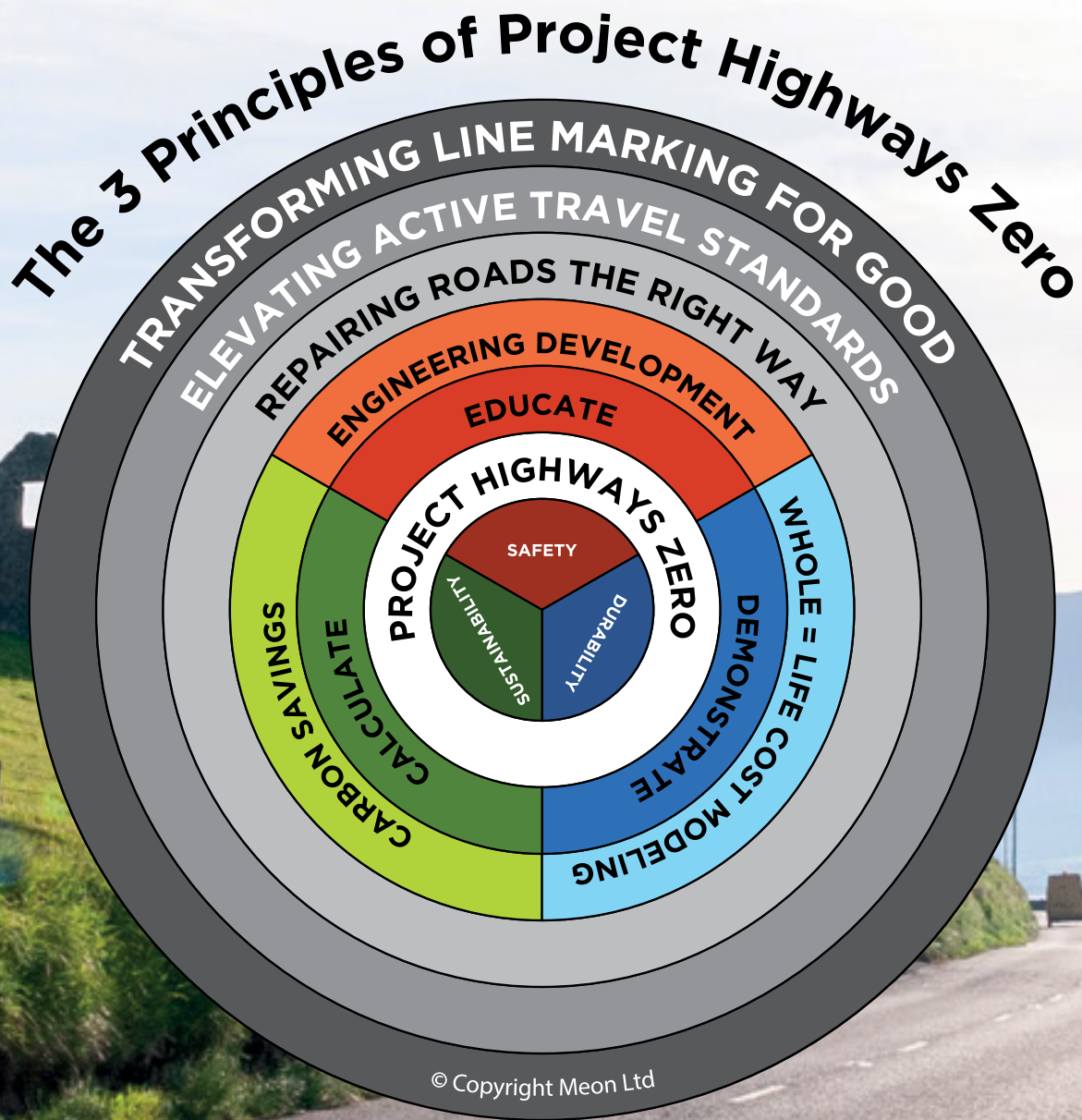






PROJECT  
**HIGHWAYS**  
Net Zero Carbon Highways **ZERO**

**ZERO** | HARM  
CARBON  
DEFECT



SAFETY



DURABILITY



SUSTAINABILITY



[www.netzerocarbonhighways.com](http://www.netzerocarbonhighways.com)



[succeedtogether@netzerocarbonhighways.com](mailto:succeedtogether@netzerocarbonhighways.com)



## NATIONAL GRID

### THE HINKLEY CONNECTION PROJECT

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#### SUMMARY

At National Grid, we're at the forefront of an energy revolution. Our Hinkley Connection Project (HCP) combines the construction of cleaner energy across the UK's southwest, with a community support programme, designed to create a lasting positive legacy, whilst inspiring the next generation of National Grid engineers.

With STEM careers such as engineering often hindered early on by a lack of diversity and poor social mobility, we seek to engage a diverse array of young people in STEM subjects. We're also committed to reducing any potential negative impact driven by the construction within communities along the HCP route.

The HCP community programme provides:

- Funding/resources for local educators, engaging a diverse array of children in STEM subjects and the future of energy.
- Resources to help combat unemployment, including skills training provisions, helping locals find sustainable employment.
- Opportunities for smaller local businesses to win lucrative construction contracts.
- Funding/volunteering for community projects, including conservation and charity activities.

#### To date:

- 320,000+ children have been supported with £844,000+'s worth of STEM activities/funding.
- 300+ adults are engaged with skills programmes.



- £3.5m+ has been reinvested into communities via local construction contracts.
- £1m+ has been donated in community grants.
- Last year, 780 hours of volunteering were completed by National Grid employees along the HCP route.

## IN DETAIL

With ambitious UK-wide targets to reach net zero greenhouse gas emissions by 2050, National Grid – and the energy sector as a whole – is playing a vital part in helping the country make this transformational change.

The Hinkley Connection Project (HCP) – a large-scale energy connection of low-carbon power to homes and businesses across the UK's southwest – is fundamental in our fight for cleaner, more sustainable energy.

Alongside the physical construction, we're also running a programme to support local communities along the HCP route.

### **This includes:**

- Engaging a diverse array of children in STEM subjects via our 'Engineering Positive Futures' programme, with the aim of futureproofing the energy industry.
- Offering opportunities for adults to learn new skills, in turn, increasing their long-term employability.
- Volunteering and donating funds to support various social/environmental/charitable causes.

### **By 2025, we aim to support:**

- 400,000 pupils in STEM education, including 70,000 pupils with special educational needs or from challenging/disadvantaged backgrounds.
- 300 adults by offering valuable qualifications to secure employment. 2022 targets included:
- Supporting 285,000 pupils (50,000

disadvantaged).

- Maintaining positive relationships with communities throughout construction.

With over 400,000 recruits needed between now and 2050 to get the UK to net zero\*, at National Grid, we have a responsibility to engage an array of young, diverse talent to futureproof the energy industry.

But to achieve this, we need to acknowledge the relationship between our growing energy industry and diversity/social mobility in the community. STEM fields such as engineering have notoriously lacked diversity.

Recent UCAS research reveals that, whilst the percentage of female graduates with STEM degrees is steadily growing, the proportion entering STEM is just 26% – shockingly, only 24% of the STEM workforce is female.

It's not just gender disparity that impacts our industry. Numerous studies have demonstrated low income and disabled children are noticeably less likely to pursue STEM subjects in higher education.

As well as challenges faced getting young people engaged with STEM, the UK-wide construction of the infrastructure needed to support clean energy can also prove disruptive to local communities. We're continuously striving to minimise this impact, whilst also creating a lasting, positive legacy in communities we operate within, and inspiring the next generation of National Grid engineers.

## WHO AND WHAT BENEFITED?

### ***Engineering Positive Futures***

We want to help positively impact the lack of diversity in STEM by inspiring children from all walks of life to get excited about STEM subjects, ensuring no child gets left behind. Our Engineering Positive Futures programme allows local educators to apply for a £500-£1,200 grant each year of the project





(2018-2025), to purchase STEM resources, essential in engaging young people in these subjects.

The programme is inclusive of disabled and disadvantaged pupils, Pupil Referral Units, and other specialist educators. We also advertise the need for boys and girls to have equal access to resources. We've also teamed up with organisations including STEM Works and Smallpeice Trust to deliver fun, interactive activities, including our 'Energy & You' sessions, which educate children about the energy industry.

We work with the Smallpeice Trust to host 'Smart Build Challenge' workshops, where students design and build a structure with its own energy/clean water supply. National Grid engineers attend to talk about what inspired them to become engineers, and the world-class engineering behind the HCP.

Two pupils per workshop are also offered a week's work experience at our purpose-built training facility.

We also engage young people in better understanding sustainable construction and clean energy advances. For example, in 2021, we ran sessions for seven local schools (250 pupils) to talk about electricity, our new smaller more efficient T-pylons being built nearby and collect time

capsules that the children had been working on.

### **Adult Skills**

Whilst it's important to us to inspire young people, many adults weren't afforded the same opportunities when they were at school, and have subsequently struggled to gain employment in later life.

The HCP also runs engagement programmes for adult skills, whilst also working to promote local businesses, ensuring where

possible they can bid for lucrative construction contracts.

### **Community Grants**

Our Community Grant Programme has been set up to support community groups/charities in areas where National Grid's activity is impacting local people. We fund projects with one-off grants that meet local communities' needs, providing a range of social, economic, and environmental benefits. This programme isn't just about funding.

Whilst we're grateful that we have the capital to support local causes and education, it's also important to us that we play an active role in improving the communities we operate within, beyond construction. Our own National Grid team also volunteers/fundraises locally, supporting many environmental and charitable causes.

### **Engagement**

Since the HCP launched, we've engaged all local authorities on the HCP route, including South Gloucestershire, North Somerset, Somerset County, Sedgemoor District, and Bristol City Council. A working group was formed, including council representatives plus National Grid's HCP team.

This group is responsible for communication, prioritisation, and allocation of resources, in line with our objectives and key priorities for each local area. Engagement channels include a dedicated HCP website, proactive emails, and newsletters.

Participating schools have been actively promoting the benefits of the funding/activities, whilst local media outlets advertise the programme, encouraging schools to apply.

### WHAT DID IT COST?

There's no upper limit to the amount of funding that National Grid can provide for communities. To-date, we've donated:

- £844,000+ in STEM funding.
- £1million+ in community grants.

### Examples of funded projects include:

- £10,000 for Life Education Wessex to purchase LifeSpace, an innovative inflatable classroom and portable teaching kit, to deliver 'skills-for-life' sessions.
- £20,000 to the Portishead Youth Centre, mentoring vulnerable young people and supporting young families in the community.
- £18,000 to Ravenswood School in Nailsea to help create new sensory experiences for children with complex learning needs.
- £10,000 to support The Space, a charity dedicated to protecting the mental health of young people in the Cheddar Valley area, with the reopening of Cheddar Youth Club.

£3.5million has also been reinvested into the local economy by awarding construction contracts to local businesses instead of larger suppliers.

### IF QUANTIFIABLE, WHAT DID THE PROJECT ACHIEVE IN TERMS OF SUSTAINABLE DEVELOPMENT, ECONOMY, ENVIRONMENT AND/OR EQUITY?

### IMPACT – ENGINEERING POSITIVE FUTURES

- 320,000+ pupils, from more than 1,200 local schools supported to date.
- 64,800+ were disabled/disadvantaged.
- 150,000+ were female.

### Funds have been used for various STEM-related resources, including:

- A 3D printer.
- A science fair.
- Excursions to science-themed attractions.
- Nature/wildlife habitats.
- Lab/robotics equipment.
- Computer equipment for distance learners – e.g., Bristol Hospital Education Service purchased a digital optical microscope, iPad, and pre-prepared slides, so children whose illnesses made social-distancing essential could complete their Biology GCSE remotely.

Our funds purchased many essentials to support virtual learning, including computing equipment and digital learning content/games.

### We surveyed schools/teachers in 2021 about their experience with Engineering Positive Futures, and results revealed:

- 100% agreed/strongly agreed that they would recommend the programme.
- 88% agreed that it's unique/innovative.
- 90+% acknowledged a positive impact on children's engagement/enjoyment of STEM subjects.
- 81% uplift in awareness of National Grid/ the HCP, following engagement with the programme.

### Other Achievements

- Between 2018 and 2022, National Grid identified local skills gaps in the construction industry, and designed targeted training programmes to fill them.

### To-date, 300+ unemployed adults have received training on skills including:

- A two-week construction short course.

- Pearson BTEC Level 1 Certificate in Construction.
- CSCS IQ Level 1 Award in Health and Safety in a Construction Environment.
- Highways/Traffic Management (TTMBC & T1/T2).
- Last year, our teams also donated 784 hours of their time, carrying out regular volunteering days – from litter picking to tree planting – to give back to communities impacted by the route.

#### **LONGER TERM BENEFITS?**

- The HCP construction plays a vital role in delivering cleaner energy safely and efficiently, supporting the UK's 2050 net-zero ambition.
- We know it'll be a while before we can fully understand the impact the 'Engineering Positive Futures' programme has had on young peoples' choice of future vocation, but we can say with certainty that we've made a concerted effort to engage children from all walks of life, ensuring no child gets left behind.
- We've also helped over 300 adults learn skills that will help them gain meaningful employment now and, in the future, combatting pockets of unemployment in rural/low-income areas.
- Projects funded by our community grants, will be enjoyed by generations to come, and many of them will provide safety and education for the most vulnerable members of the community.

#### **WAS THERE ANYTHING INNOVATIVE ABOUT THE PROJECT?**

As well as contributing to a reduction in harmful carbon emissions, the Hinkley Connection Project is one of the largest community engagement campaigns in National Grid's history. The real differentiator lies in the scale, ambition and sustainability of this project.

There's no fixed budget for how much we will spend on schools and communities. Plus, we grant educators the freedom to choose exactly how we help them. Although there are checks in place to ensure the legitimate use of resources, it's ultimately up to the schools and communities to decide how they use their funding.

Since the pandemic, we know educators needed to focus on creating engaging virtual learning and supporting physical social distancing in classrooms. That's why any educator who'd applied for a grant in previous years was automatically provided with a renewed grant in 2021/22.

We're also trying to be inclusive as possible and not gatekeep funds from less-advantaged, or less-conventional educators. Special schools for children with disabilities, Pupil Referral Units and even a children's hospital have benefitted from our support.

#### **CAN OTHER ORGANISATIONS/ COMMUNITIES BENEFIT FROM IMPLEMENTING YOUR METHODS?**

This type of engagement programme can be duplicated for any future, wide-scale construction or energy project owned by National Grid. For example, throughout our London Power Tunnels project, we've partnered with social enterprise Connectr, to deliver a STEM and careers outreach programme to over 100,000 pupils across South London.

The programme reaches secondary school pupils across the project's 32.5km tunnel route and is being delivered in partnership with our contractors. It builds on the success of our London Power Tunnels phase 1 project, which engaged with over 30,000 school children across the Capital. Connectr are experts at the design, outreach, and delivery of national STEM engagement programmes, geared specifically towards young people.

The social enterprise has also developed a learning and engagement platform that supports young



people to take the next step in their transition to work, as well as tracking their progress.

**WHAT DID YOU LEARN FROM THE PROJECT AND ARE YOU PLANNING ANY FURTHER DEVELOPMENT?**

This project and the associated community engagement, commencing originally back in 2018, will run until construction is scheduled to end in

2025. However, the equipment we've been able to fund, and the activities we've been able to provide, will hopefully leave a considerably longer legacy.

We plan to sustain the already considerable success of this campaign by seeking further support opportunities as they arise.



## PARC TROSTRE RETAIL PARK - CBRE

### ENCOURAGING WILDLIFE THROUGH NATURE

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#### SUMMARY

Since I started at the park in January 2020 we have steadily increased our efforts to help the environment and wildlife, in our own small way. I have implemented new planting for year round coverage as well as Bee and Butterfly friendly plants. I have introduced a variety of areas over that last 3 years including areas such as a British wooded area using native plants, and logs/ chippings from trees felled on the park.

Wildlife flower areas, bee friendly plants, chippings and logs to encourage insect habitats, which will provide added food sources for the birds (situated on the coast - we have a variety of species). Recycling timber and trees has allowed us to be more sustainable as well as the introduction of a rainwater harvesting tank, cycle shelter and EV units contributes to our local community and our tenants.

My site team has become more and more involved and have taken a lot of pride in the work we have done, customers have had some very positive comments and through my social media platforms I have strengthened our community engagements with competitions such as Nature photography, scavenger hunts which encourage them to go out into Nature/countryside as well as highlighting what they could do at home.

This links in my tenants as they may donate a prize for the winner or be the location to find correct products such as bird food etc. We have succeeded in implementing a lot in a short period of time, which has contained 4 lockdowns for us here in Wales during Covid19. As a result we have won 2 Green apples, 1 green ambassador and shortlisted for a World Green Apple award.





## IN DETAIL

The aim of our current sustainability initiative is to further develop / enhance our contribution to nature and bring more wildlife to the park, such as birds, bees, bats, hedgehogs & other insects to engage with our local community / customers in becoming more proactive in how they can support the natural environment.

Our role is not only in what we can do and achieve to protect and promote wildlife, but also in showing others what they can enjoy & contribute locally as well. In both 2021 we won a Green Apple 'bronze' for our project & in 2022 we won a Green Apple 'silver' and a Green ambassador award, we have also been shortlisted for a World Green Apple award in 2023, we continue to develop & create further wildlife habitat/food areas for year round use as well as using recycled products which helps our sustainability focus.



As part of our continual growth & development we have introduced new wildflower areas which we hope will attract an increasing number of birds, butterflies / bees to the area. We have natural as well as introduced/installed manmade bird boxes, bug & bee hotels, bat and hedgehog housing into our wooded areas. We offer the added benefit of various food sources around the park for insects, in terms of strategic planting.

Birds currently nesting on the park include Woodpeckers, Blue Tits, Wagtails, Finches and Seagulls. Visiting birds include Blackbirds, Birds of Prey, Crows, Robins and Sparrows. We hope to encourage more species with the variety of flowers that we have planted which will give year-round habitats / food sources.

We are situated within 22 acres, with approximately 6 acres around the site being landscaped, wooded, natural and planted areas. Our site team maintain these areas, cultivating planted stock, tending to native floral and ground covering plants as well as grass cutting.

Our team has become very involved in our initiatives and have won several internal awards for their work. We are now using used coffee grounds as fertiliser donated free by one of our tenants, which have combined with the parks own biodegradable green waste to be used around the park.

We have built a composed bin out of reclaimed wood that was sourced from contractor works & tree felling. This houses our new fertiliser ready for use as required. We have also used these timbers/ woods to erect fences, build plant pots, trees that have been felled are cut down into logs and have



been placed into new garden areas to encourage wildlife/insects (food sources) and some logs were cut down into chippings which have been used as ground cover, again helping to protect plants as well as cover / habitats for insects etc

Using recycled timber/trees has also saved us money for our tenants. Our landlords liked our initiatives so much they are rolling these out to the wider portfolio. A water basin/area placed high on one of our cabins is available for birds to bath/drink from.

We have a variety of wildflowers and plants at the retail park, including bee loving plants such as Butterfly Bush, California lilac, Cotoneaster and Red Claws, as well as a selection of lavenders, flowering shrubs, heathers, and native trees.

Lavender was cut and dried and gathered into bunches which was then handed out to our customers for Purple Tuesday, which highlights accessibility awareness, bringing in our local community for 2 initiatives (environmental and accessibility) . As part of engagement with our local community & customers, we launched our 2nd Nature photographic competition in 2022 (1st being in 2021) via our social media, with prizes donated by our tenants.

Our intention is to highlight some of the beautiful local scenery & wildlife and to encourage, support & care for what we have on our doorstep. We have added links to local nature walks & parks to our social media platforms to encourage customer and the wider local community to go outside and explore nature to see what they can find.

To help encourage this we have posted scavenger hunts & blogs highlighting Ways to encourage Birds, Butterflies and Bees into your garden. The team at Parc Trostre are committed to this cause and continue to look for new ideas that will continue our growth and development in this area. The dialogue we have instigated with our shoppers and local stakeholders is testament to the whole team's passion in the area.

We all want to celebrate and protect what we have on our doorstep, whilst still running a busy commercial shopping park. We have continued to develop our Environmental green programme, 2021 saw the installation of additional cycle shelters, working with the local council/community to help the further development of cycle tracks in Llanelli.

Thus, helping to reduce the carbon footprint for fossil fuels as car users are encouraged to use greener forms of transport. I was able to source Welsh Government funding for this saving tenants and my client money. During 2022 we have also installed 2 electrical twin charging point for customers with electric powered vehicles.

This will assist in reducing carbon emissions that contribute to climate change at a local and macro level. Improving public health and supporting the reduction in ecological damage as well as directly contributing to the protection of the local natural environment.

I was again able to source Welsh Government funding for this project. As well as a rainwater harvesting tank which will allow us to store 15,000ltr of water, this gives us 2 weeks of landscaped watering through dry periods, as well as the water having more minerals and benefits for our environment than tap water and will also allow us to save money on our utility bills thus saving our tenants money. 2023 and 2024 will see us continue to further develop our efforts as well as adding some new projects to help protect our environment.



# Parc Trostre Retail Park, Llanelli

**Parc Trostre** is a large outdoor retail park in Llanelli that comprises retail and F&B units inhabited by well-known high-street brands with external common space and landscaped areas, situated on the South Wales Coast.

Since 2021 we have worked on and further developed our project '**Encouraging wildlife through nature**' by adding Bee & Butterfly friendly plants, native planted areas, winter foliage. Bee and Insect hotels, Bird, Bat and Hedgehog housing in various areas.

Annual tree felling gave us logs & chippings that we have used to create areas for insects to shelter under, which provides not only areas for colonies to grow and additional sources of bird food. Chippings also help protect plants in both cold and dry weather.

Using timbers from various works around the park, we have created fenced areas, plant pots and a compost bin which uses both our biodegradable green waste but also used coffee beans donated by one of our tenants to create fertilizer which we use on the park.

A rainwater harvesting tank which holds 15'000 litres was installed. This not only saves costs, but also by using rainwater we are delivering water with natural minerals etc to our plants through dry periods.

EV units have added another service for our customers, along with additional cycle shelters we offer greener alternatives for transport.

We have recently introduced green cleaning products which not only help the environment, with greener runoff going into landscaped areas etc but also saved us costs.

Social media and events on the park have contributed to increase our engagement with our local community/customers and tenants. Such as our green weekend in 2023 where green companies such as electric car supplier and green energy companies came and showcased their products to our customers.



# Parc Trostre.

RETAIL PARK



Address:

Parc Trostre Retail Park, Llanelli, SA14 9UY



Open Today:

8am to 8pm



Contact Site Security:

01554 775 344

## PT PLN (PERSERO)

### PLN'S NEW CSR STRATEGY: BEST CASE PRACTICE FOR LARGE-SCALE SOCIAL PROGRAMS

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#### SUMMARY

PLN's New CSR Strategy: Best Case Practice for Large-Scale Social Programs PLN is the largest company in Indonesia's electricity sector and has more than 82 million customers spread throughout Indonesia. In addition, PLN has implemented units spread across all provinces in Indonesia to reach electricity needs throughout Indonesia.

Until now, PLN has consistently provided its role in developing the quality of life for people in Indonesia, not only through the electricity business process but also by playing an active role in implementing CSR programs. In implementing the CSR program, PLN uses references from the Ministry of Indonesian state-owned enterprises, sustainable development goals, and ISO 26000 so that the process of implementing CSR programs is by applicable regulations and plans on a national and international scale.

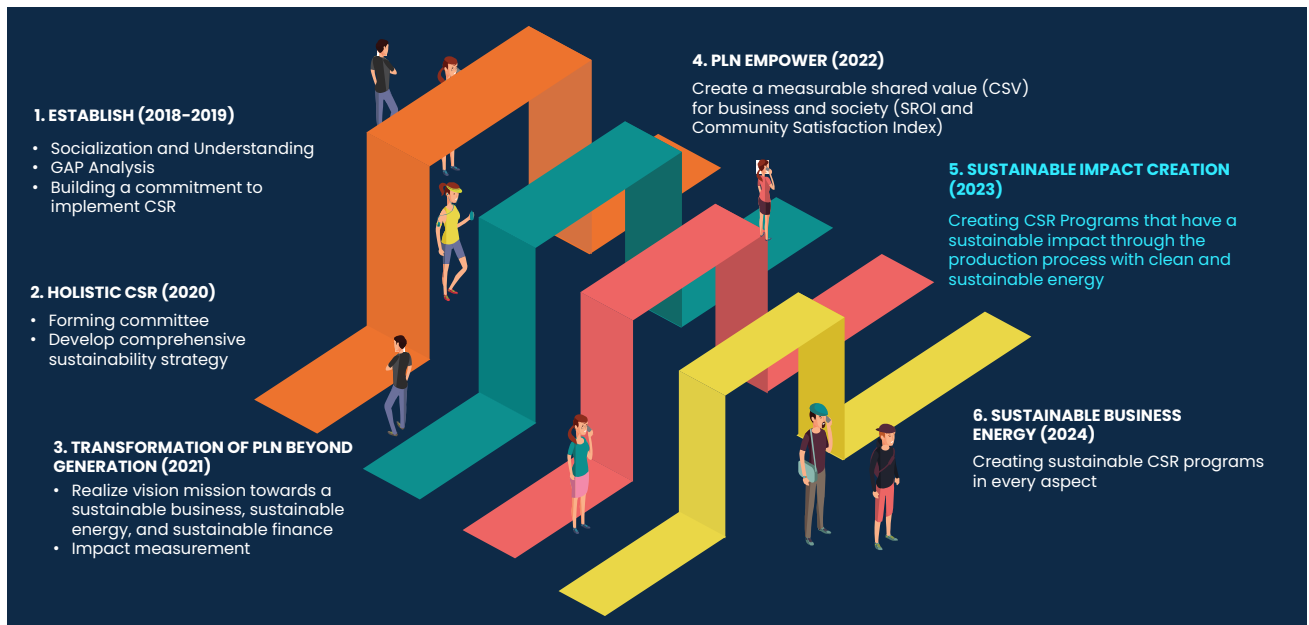
We have detailed procedures regarding clear and specific planning, implementation, reporting, and evaluation methods. The CSR program implementation method adopted by PLN is universal and can be implemented by various companies, especially companies engaged in the energy sector. PLN uses this event as a forum for exchanging information and learning about implementing CSR programs.

Moreover, PLN transparently provides open-source data that various companies worldwide can access as a learning module for implementing CSR programs. Winning international awards will increase the credibility of CSR programs, making it easier for companies to collaborate with other large companies in implementing CSR programs.

Even though PLN has coverage throughout Indonesia, there are still many problems that PLN







has not touched, and solving these problems requires even greater synergy from third parties.

## IN DETAIL

### PLN's New CSR Strategy: Best Case Practice for Large-Scale Social Programs

PLN carries out strict standard operational procedures in implementing CSR activities in planning, implementing, and evaluating program activities. So that PLN can produce program output that is by the standards that have been used in the implementation of its CSR program.

The basis for implementing CSR programs is based on sustainable development goals (SDGs), ISO 26000, applicable law, and the vision and mission in Indonesia. PLN also has a CSR roadmap for the period 2020 – 2024, where PLN is currently focusing on improving the quality of reporting on its CSR activities while the ultimate goal of this roadmap is to become a company that can run its business lines using sustainable energy and becomes the customer's top choice as an energy provider.

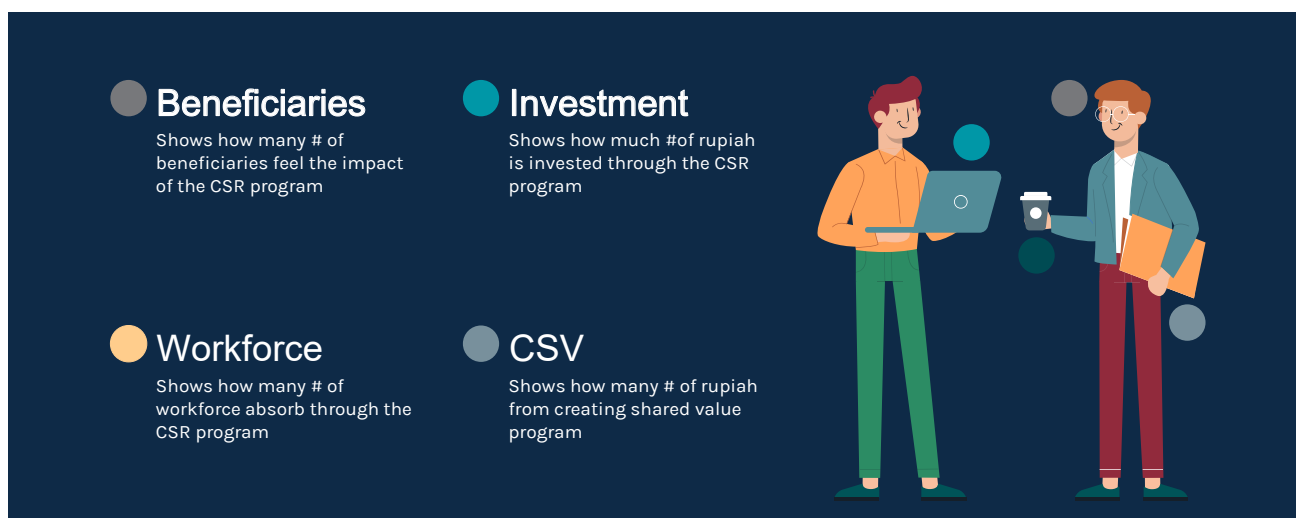
### Electricity in Indonesia.

In identifying problems, PLN conducts priority program mapping based on the existing core business and SDGs. At this early stage, PLN made two types of programs, namely programs aimed at improving the quality of people's lives and programs that mitigate losses that might arise from PLN's business processes.

In the generation business process, PLN runs programs aligned with SDGs 1,2,6 and 10. Entering the electricity transmission and distribution process, the program will focus on implementing the SDGs 3,4,5,9,11,16 program and 17.

The last business process is customer service, where the programs implemented refer to programs 7, 8, 12, 13, 14, and 15. Therefore all mapping and selection of priority programs will be carried out following existing program implementation guidelines.

In addition, PLN also evaluates the impact measurement on CSR programs using calculation methods such as social return on investment (SROI) and Community Satisfaction Index (CSI). Both ways can be used to report to stakeholders in PLN.



Currently, many CSR programs are still charitable, and the impact of these programs will only be felt in a short period, so PLN decided to change the method of implementing its CSR programs. Since 2019, PLN has focused on developing a sustainable CSR program that aims to create a culture of independence for beneficiaries to meet their needs, especially financially, independently in the long term.

So that the entire program implementation process will run well and be in line with these references, apart from carrying out CSR programs under the SDGs objectives, PLN is also running a flagship program following the company's capacity as the largest electricity company in Indonesia so that the ongoing program will Creating Shared Value (CSV) which is in line with the company's core values such as the agricultural electrification program, free electricity installation, and electric vehicle assistance for MSMEs.

So that the originality of PLN's CSR program will be very prominent and able to solve various social problems in Indonesia. As a result, PLN has created an electricity-based economic ecosystem that can support the economies of the beneficiaries. For example, dragon fruit farmers in Mojokerto who received assistance through an agricultural electrification program could triple their income in one year.

After the program's success, PLN replicated the program in other areas with great potential for development. This method is also used in other PLN flagship programs spread throughout Indonesia. The size of PLN's position as state property is inseparable from the role of synergy between stakeholders in the implementation of its CSR program.

Involving stakeholders in carrying out CSR programs is also a top priority for PLN, which significantly influences the future program's direction and development. Before implementing the CSR program, PLN will carry out a stakeholder mapping activity that analyzes PLN's stakeholders based on power, legitimacy, and urgency.

After obtaining the list of stakeholders, PLN will then persuade the objectives and methods of approach to be taken to include these stakeholders. So that clusters A, B, and C are created according to the priority level of PLN stakeholders in implementing the CSR program.

Not only that, but PLN also pays special attention to the involvement of its employees in implementing CSR programs through the employee volunteering program (EVP). The results of this realization are also one of the company's key performance indicators in engaging with its employees.

The importance of employee involvement in implementing the CSR program is a form of PLN's responsibility as a company operating as a government agency. With this program, PLN hopes that every employee with a culture can contribute to Indonesia, even though the involvement of employees outside the CSR program implemented by PLN.

This effort cannot be separated as one of PLN's roles in increasing the value of its stakeholders both individually and as an organization. Implementing the CSR program at PLN must align with the goals of sustainable development and equate with the company's capacity so that the program implementation will run effectively and efficiently, especially in assisting with the impact of benefits for recipients.

Community-based and social programs implemented by PLN throughout 2022 are implemented in several programs for communities, such as assistance to disabled communities, vulnerable groups, and indigenous people. Other social programs implemented by PLN are educational assistance, assistance for natural disasters, women's empowerment, health assistance such as healing for pregnant women, vaccines, drugs, and others.

The coverage area covered by PLN is based on the SDGs regarding a prosperous life, gender equality, and improving the quality of education without hunger and poverty. PLN hopes that in the future, these social development programs will benefit the community and can be implemented sustainably. In the economic pillar, the programs implemented



Throughout 2022, PLN has implemented programs covered in SDG 1 – 16. These programs are categorized into several pillars: environmental, economic, social, legal, and governance. Throughout 2022, PLN has implemented more than 4,000 CSR programs in Indonesia, benefiting more than 149,000 beneficiaries and channeling funds of more than 935 billion rupiahs or 62.5 million USD.

are CSR activities closely related to community economic development.

PLN has several priority programs that support economic growth, such as free electricity connection, growth of tourist villages, electrifying agriculture, training and education for MSME development, and empowerment of disabled/ indigenous MSMEs.



Throughout 2022, PLN managed to distribute assistance of 67 billion rupiahs or 4 million USD to stimulate economic growth in Indonesia. This economic-based program absorbs 6,438 workers, provides development and direct service to 8,683 MSMEs, and reaches 34 provinces throughout Indonesia.

Since 2021, PLN has also offered a special place for MSME-fostered partners to sell their wares on the marketplace in the PLN mobile application. So that the reach of MSMEs to sell the goods or services offered is wider. The benefits of implementing the economic improvement program are also directly felt by PLN through creating shared value.

This program aims to develop the community's quality of life through CSR programs based on the company's core values. The program implemented is related to the use of electricity which can improve the community's economy, and the company can also feel the benefits of the rupiah. Through this program, PLN has channeled a CSV of 9 billion rupiahs back to the company throughout 2022 so that the ongoing economic-based CSR program positively impacts the community and the company.

In the final process of implementing CSR activities, PLN will calculate the quality of the programs that are already running using several theoretical measures or methods that aim to evaluate future CSR program development. PLN has four methods for calculating the impact of its CSR program, namely traditional impact measurement, social return on investment (SROI) measurement, community satisfaction index (CSI) measurement, and Environment, Social, and Governance (ESG) score.

Calculating these impacts and benefits involves independent third parties such as academics, experts, beneficiaries, and impact measurement organizations. So that the CSR reporting issued by PLN can be accounted for and transparent for all existing stakeholders.

The measurement results will be poured into routine reports such as management, annual, company, and ESG pieces. Everyone can access this information and find out the progress and achievements that PLN has made.

After the reporting is done, PLN will analyze according to input from each stakeholder, which will have a considerable influence as evaluation material in future decision-making by PLN's top management in determining the direction of CSR program policies. The quality of CSR activity reporting can be proven by PLN's success in getting various awards both on a national and international scale.

Since 2018 PLN has had a roadmap for determining the company's direction in carrying out its CSR program. PLN conducts studies according to the needs of the community and the company in deciding this direction. The CSR program development stage is divided into six steps that PLN will take up to 2024.

This year PLN has the ambition to create community programs that can have a positive impact sustainably based on the implementation of clean energy innovations. This program will be stored in creating a CSR program that restrains the use of clean energy or energy that trash can recycle, providing solutions to various problems.

Program planning to be carried out includes managing waste into energy, utilizing waste products in PLN's business processes as raw materials and energy, and involving the community in the clean energy process through training and education.

Apart from having corporate goals, PLN is also constantly trying to support the SDGs program until 2030. PLN will always use these big goals to continue to adapt and create CSR programs that are always relevant according to the needs of the existing community. Apart from that, PLN will also cooperate with other third parties to produce a program with an enormous impact. The big goal

of PLN's CSR is to become a company that can provide solutions to solve problems in all aspects of society.

PLN believes an organization must work with others to carry out CSR activities. To maximize the impact of existing CSR activities, PLN has made various efforts to develop its CSR program. One of the firm steps taken by PLN is to implement a program of cooperation with other state-owned enterprises as well as the private sector.

PLN's flagship transparency program can quickly be learned and implemented by other parties. So that PLN does not feel that the CSR program will become a competition between companies but a coordinated, collaborative activity for community development. To maintain the quality and quantity of CSR programs, PLN has strict procedures for implementing its programs.

The first is a monitoring activity in which all implementing units across all provinces in

Indonesia monitor CSR programs from planning, implementation, and evaluation. In each performance, the executing team has a standard operating procedure that they must follow.

Reporting programs are carried out periodically, such as reporting to the Ministry of SOEs and reporting obligations to all stakeholders through management reports, stakeholder reports, and ESG reports.

PLN also carries out CSR activity programs based on state objectives, SDGs, ISO 26000, ESG reporting, and GRI reporting to maintain accountability.

Another important thing is the transparency of the activity process through meetings with stakeholders so that they get new perspectives regarding the implementation program, audit work internally and externally, and make activity bidding reports accessible to all stakeholders.





## SABANCI HOLDING

### SABANCI REPUBLIC DAY CAMPAIGN

#### SUMMARY

This campaign is our way of protecting the Republic and these lands. It is a path we set out to keep alive and glorify the principles of the Great Leader Mustafa Kemal Atatürk.

At Sabancı Group, our most valued principle is always to empathize: 'Sharing what we have obtained from this land with its people.' This is our top priority; as a Group almost as old as the Republic, protecting the Republic's values is an indispensable element of this principle.

As we protect the Republic, we will come closer to our future goals as a country. Because what we call the Republic actually represents the journey of modernization, the vision of continuous progress.

#### IN DETAIL

##### SABANCI HOLDING Company Introduction

Sabancı Group unites Turkey and the World, for a sustainable life with leading enterprises through its performance culture, dynamic capital allocation and data driven ecosystem. Hacı Ömer Sabancı Holding A.Ş. (Sabancı Holding), Turkey's leading conglomerate, is a holding company engaged in a wide variety of business activities through its subsidiaries and affiliates, mainly in the banking, financial services, energy, industrials, building materials and retail sectors.

Sabancı Holding is domiciled in the Republic of Turkey, with its headquarters in İstanbul, Turkey. The objective of Sabancı Holding is to coordinate







and support the finance, strategy, business development, legal, human capital and sustainability functions of Group companies in order to ensure that they operate in a manner which is profitable and sustainable with favorable competitive conditions, and to set and monitor the corporate governance practices which apply across Sabancı Group.

Having a value-focused, data driven ecosystem, Sabancı Group companies were operating in 13 countries as of 2021 year end and were supplying their products to regions throughout Europe, the Middle East, Asia, North Africa and North and South America.

Sabancı Holding's multinational business partners include prominent global companies such as Ageas, Bridgestone, Carrefour, E.ON, Heidelberg Cement, Marubeni and Skoda.

#### **Sabancı Republic Day Campaign 2021**

Sabancı Group's highest priority since the day it was founded is to keep the values of the Republic alive. After the country's fire and flood disasters last year,

Sabancı initiated the Republic Day Campaign with the mission to support restoration and healing in the aftermath of environmental disasters and to be a pioneer and example for sustainable living.

The primary purpose of the campaign is to ensure that nature, living things, and new generations have a beautiful future and in the process protect Atatürk's legacy.

In this context, Sabancı Group carried the enthusiasm of the Republic to 11 cities: Adana, Aydın, Aksaray, Ankara, Antalya, Balıkesir, Bursa, Çanakkale, İstanbul, Kocaeli, and Mersin.

For 13 days between October 29 and November 10, all Sabancı Volunteers not only celebrated the Republic but also, through their altruistic actions, contributed towards keeping it alive.

Finally, on November 10, the events held during this period were presented to the Great Leader Atatürk. In the campaign which was carried out on a completely voluntary basis, many beneficial activities were organized, from soil regeneration to planting

saplings, environmental cleaning, supporting biodiversity, and renovating schools.

This campaign, in which the Sabancı Volunteers in the field devoted a total of 35 thousand hours for 13 days, added up to 1,458 days, or four years when calculated. 2022 Within the scope of the campaign realized for the second time this year, the 99th anniversary of the Republic of Turkey was celebrated, as it was last year, with great enthusiasm by all the benevolent volunteers working in the field.

In 2022, the campaign became Turkey's most extensive social responsibility event.

The campaign was carried out in four main areas:

- "Preparing the youth for the future,"
- "Women's participation in the workforce,"
- "Permanent fight against the climate emergency," and
- "Supporting biodiversity."

32 social projects and 242 events were implemented by 16 companies and institutions from Sabancı Group within the scope of the campaign that spanned a total of 48 cities. The cities were Adana, Ayfonkarahisar, Aksaray, Ankara, Antalya, Aydın, Balıkesir, Bartın, Batman, Bilecik, Bolu, Bursa, Çanakkale, Çankırı, Çorum, Denizli, Diyarbakır, Düzce, Elâzığ, Eskişehir, Gaziantep, Hatay, Isparta, İskenderun, İstanbul, İzmir, Kahramanmaraş, Karabük, Kastamonu, Kayseri, Kırıkkale, Kırklareli, Kilis, Kocaeli, Konya, Manisa, Mersin, Muğla, Ordu, Osmaniye, Samsun, Sivas, Şanlıurfa, Tekirdağ, Tokat, Trabzon, Yalova, and Zonguldak.

All the works carried out within the scope of the campaign were presented to the Great Leader Mustafa Kemal Atatürk on November 10, just like last year, and his memory was kept alive by these exceptional volunteers working hard for our country.

Turkey's largest social responsibility movement 'Sabancı Republic Day Campaign'

2021	2022
7.000 volunteers	15.000 volunteers
11 cities	48 cities
28 events	242 events
15 days	All year
15 companies and institutions	16 companies and institutions
35.000 hours by volunteers (equal to 4 years of work days)	81.500 hours by volunteers (equal to 9 years of work days)
	41 NGO (TOG, Darüşşafaka, TEGV, Teknolojide Kadın (Women in Technology), Bilim Virüsü (Science Virus), TOBB, Habitat, Çevko etc..)

## 2022 Sabancı Republic Day

### *Campaign Results with Theme Breakdown*

#### Preparing young people for the future:

We have provided digital and sustainability training to 12 thousand young people.  
We have renovated schools and established classrooms so our children can receive education in better conditions.

#### Bringing women into the workforce:

We have provided training in technology to 1,400 women.  
We have created gender equality awareness among 4,200 young people.

#### Permanent fight against the climate emergency:

We have taken measures to restore 75 thousand hectares of forest area -  
We have established artificial intelligence-based early fire detection systems (40 Kozalak covering an area of 5,000 hectares) -  
We built eight fire pools, each with a capacity of 600 tons, for rapid response to fires (1 in Adana, 3 in Antalya, 3 in Muğla, 1 in Çanakkale, to cover an area of 70 thousand hectares)  
We planted 208 thousand saplings  
We collected 8 tons of waste

#### Supporting biodiversity:

We enriched the honey forests, setting up 2,500 hive stands  
We created habitats for 300 million creatures  
We delivered 10 tons of fruit and vegetable products left in the fields to the needy during the food rescue harvests.  
We established permaculture gardens  
We made 1,350 people aware of biodiversity

#### 'Running for good':

With 2,000 Sabancı

Volunteers, we became the largest group to participate in the İstanbul Marathon. We collected donations for 23 NGOs and touched the lives of approximately 2,200 people. The total donation amount collected by Sabancı Holding is 516,530 TL. Donations will continue to be collected until November 21.

#### Corporate Teams Ranking in the Fundraising Campaign

İGA: <https://ipk.adimadim.org/team/view?id=5652>

HSBC: <https://ipk.adimadim.org/team/view?id=1321>

Sabancı: <https://ipk.adimadim.org/team/view?id=4887>

#### Top 6 among the NGOs for which donations were collected:

Koruncuk Foundation  
Darüşşafaka Society  
Mother Child Education Foundation  
Association for Combating SMA Disease  
Tohum Turkey Autism Early Diagnosis and Education Foundation  
UNICEF

#### Sabancı Republic Day Campaign Info

Last year, we went through challenging times as a country during the summer months. In July 2021, we were hurt by disasters in the form of severe floods





and fires that lasted for days.

We have suffered significant losses as a nation. We have stood by the teams fighting these disasters and our injured citizens from the very first day.

Our Board of Directors, Holding company, and Group companies have mobilized all the means at their disposal.

On the first day, we said: “We will not leave until all wounds are healed. Utilizing science, we will support the restoration of the ecosystem with the most accurate methods.”

What we experienced that day ignited the flame of the Sabancı Republic Day Campaign. We quickly established a project committee.

Then, with our teammates’ endless determination and passion, we completed all our preparations in a very short period. We started the Sabancı Republic Day Campaign last year in Adana, where our group was founded and one of the regions where the fires started.

This year we were in Çanakkale. As you know, Çanakkale is an important place for the Republic of Turkey. Introducing our nation’s independence and struggle for existence into world literature, Çanakkale represents the triumph of faith and dedication over impossibilities.

This campaign is our way of protecting the Republic and these lands. It is a path we set out to keep alive and glorify the principles of the Great Leader Mustafa Kemal Atatürk.

At Sabancı Group, our most valued principle is always to empathize: ‘Sharing what we have obtained from this land with its people.’ This is our top priority; as a Group almost as old as the Republic, protecting the Republic’s values is an indispensable element of this principle.

As we protect the Republic, we will come closer to our future goals as a country.

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## THREE SNOWHILL CBRE

### THREE SNOWHILL CSR PROGRAM

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#### SUMMARY

At CBRE, we take our leadership role in the real estate industry to heart. We recognise the impact we have on our communities, clients, employees and stakeholders, so we've made responsible practices the foundation of our global operations.

#### Our Aim

- A – Environment (estates and environment) We're committed to reducing our direct impact on the environment by actively managing our waste, emissions and consumption of natural resources.
- B – People (human resources, health and wellbeing) We aim to create Three Snowhill a workplace that encourages diversity and equal

opportunities for all. Provide a space to support employee health and well-being.

- C – Procurement (finance and purchasing) As the world's largest manager of commercial buildings, with a portfolio of 7 billion sq. ft. under management, CBRE takes our role in minimizing negative environmental impacts in the built environment very seriously.

We recognise that Three Snowhill is a significant contributor to global carbon emissions. From resource management and procurement initiatives to employee training and academic collaboration, our sustainability programs help reduce the impact of buildings on the environment and, at the same time, create a positive effect on the communities in which we live and work.

- D – Community (volunteering, skills matching and fundraising) To play a positive role in society, we've built a culture that promotes employee volunteering, skills matching and fundraising.

We actively support local businesses and the communities in which we operate Birmingham and UK Three Snowhill to be a member and ambassador for an organisation that supports and promotes green initiatives to help combat climate change.



#### IN DETAIL

##### Environment

Three Snowhill Commitments In July 2021, Three Snowhill has joined The Green Organisation to

become a gold member. The gold membership status ensured we signed up to the code of green conduct.

The conduct includes the following commitments:

- This enabled Three Snowhill to be committed to good environmental practice, we met standards set by the environmental law and we fulfil the legal duty of care requirements for waste and disposal.
- It confirms that Three Snowhill reduces, reuses, and recycles to improve environmental performance.
- Priority will be given to buying locally, sustainably, and ethically
- Three Snowhill will take responsibility for its environmental actions
- Three Snowhill recognises its long-term commitment to continually improve and update environmental practice

### Three Snowhill Award Achievements

As a result of working with the green organisation and fulfilling our environmental and sustainability obligation we have achieved the following:

- Green apple Environmental Award 2021 - Silver and Bronze winner for 2021
- Green apple Beautiful Building Award 2021 - Gold winner for regeneration projects - Silver for the Urban commercial category
- Regional Winners for the BCO awards
- BREEEAM Excellent.

### Three Snowhill Net Zero Goals

CBRE is working to create a sustainable future for all, and that starts with the impact of the workspaces and buildings we occupy and manage for clients. Buildings are responsible for nearly 40% of carbon emissions globally, so CBRE's 7.1 billion square feet of managed property gives us an outsized opportunity to help reduce greenhouse gas emissions through our own operations, services for our investor and occupier clients and throughout our entire value chain.

In 2021, CBRE set a goal to achieve net zero carbon emissions by 2040. This commitment encompasses carbon emissions from our own operations, the properties we manage for investors and occupiers, and our supply chain.

All of our sustainability efforts ladder up to this net zero goal, including our 2035 science-based targets to reduce emissions and our strategic initiatives on renewable energy and fleet electrification.

Invest in innovation that will aid planning, support, and tracking sustainability initiatives.

We have committed to reaching Net-Zero by 2040 at Three Snowhill, but more importantly for assets, we manage on behalf of our clients.

We have the responsibility to create this roadmap for our clients. To be able to qualitatively and consistently measure consumption and we have decided to expand the successful roll-out of the Deepki platform to accommodate our client's needs for standardisation and automation whilst easing the operational delivery.

We have invested in Deepki as part of our Environmental Social Governance (ESG) commitment.

- To ensure we have a single-point portal to manage our environment initiatives action plan that demonstrates saves and confirms commitment.
- The system captures data from utilities to review consumption and identify savings and reductions
- The system also provided data for innovation and fund investment required to support Three Snowhill in its environmental and suitability commitment.

Three Snowhill plants trees to help fight climate change and help the environment. Global warming is happening at a faster rate than ever. Our polar ice caps are melting, and our forests are burning.



At Three Snowhill we have committed ourselves to plant over 450 trees by 2023.

We are well on our way to achieving this. In 2022 we have planted 363 trees.

Host events at Three Snowhill to create and promote awareness of climate change. To encourage tenants and users of the building to be more environmentally sustainable.

### **Earth Hour**

Three Snowhill and the occupiers have taken part by switching everything off for one hour during Earth hour. During the hour we have saved £486.22 in cost which equates to 348.13KWh. Earth Day On Earth Day on the 22nd of April 2022, Three Snowhill teamed up with tenants in the building and local community members to little pick plastic around the

local community.

It was a fantastic event that Three Snowhill was able to promote environmental awareness amongst the Birmingham community and Tenants.

We have managed to collect over 1,000 Kg of plastic to be recycled.

Creating awareness – Reduce, Reuse and Recycle plastic Event

- We had a zero plastic day event at Three Snowhill in April 2022. We promoted the need to reduce, reuse and recycle plastic.
- We issued to visitors and tenants in the building Tote bags, instead of using plastic bags.
- We issued visitors and tenants china mugs instead of using plastic cups
- The site staff all wore green clothing and



green earth badges to promote and create environmental awareness

To sustainably procure utilities for Three Snowhill  
We have worked with the CBRE energy team to procure an energy provider that is sustainable and renewable.

We have since changed supplies from EDF to Total Energies in June 2021. Three Snowhill, CBRE utilises Total Energies' 'Pure Green' Electricity Tariff. Pure Green is electricity that comes from 100% renewable sources such as solar, wind and hydro, but does not include biomass.

To achieve zero landfill waste disposal.

To invest in innovation to help depose waste effectively and reduce carbon emissions. The aim was to ensure we have reports created that can monitor waste disposal on site. We engaged our soft service provider to provide regular environmental reports and evidence of waste generated at Three Snowhill is being recycled and not going to landfills.



The result of this meant we have achieved zero landfills from 2021 until the present. We also added the waste figures to our Deepki action plan system to monitor progress. We have introduced a waste administrator on-site to manage the waste streams for the building and the occupiers.

This is to enable the site to achieve a 100% recycling waste stream by 2030.

## OUR PEOPLE

### Three Snowhill Ethics & Compliance

The Ethics & Compliance organisation enables our people, businesses and partners to act ethically, stay in compliance with our policies and the law, and live by our RISE values. We do this by creating and sustaining best practice programs and procedures that enhance CBRE's brand as an ethical company and move us toward our world-class aspiration.

Ethics to assist our people, businesses and partners to act ethically, stay in compliance with our policies and the law, and live by our RISE values. We do this by creating and sustaining best practice programs and procedures that enhance CBRE's brand as an ethical company and move us toward our world-class aspiration.

CBRE has the accreditation ISO 9001:2015 Diversity, Equity & Inclusion. As the global leader in commercial real estate, we recognize the impact we have on our communities, clients, employees and stakeholders.

In 2022, we matured our inclusion strategy to include equity. This change reflects the importance of fair treatment, access and opportunity for all. Adding "equity" signifies our expanded commitment to not only encourage diverse perspectives and an inclusive workplace but also identify and eliminate barriers that could prevent the full participation of any group.

## Employee Network Groups

The Employee Network Groups are now known as Employee Business Resource Groups (EBRGs). An integral component to advance CBRE's DE&I strategy, the EBRGs create impact by helping advise on professional development, as well as recruiting and retaining diverse talent.

Membership offers our people at Three Snowhill and CBRE in general:

Career and professional development opportunities through a variety of programs;

Connections and networking possibilities with colleagues across all business lines and regions. Globally, CBRE has 16 EBRGs with more than 17,000 members

## SAFETY AND WELLBEING

### Safety

Our Workplace Safety & Wellbeing vision is to ensure our people experience a caring workplace culture and are safe and well at the end of every workday. Our mission is to drive a culture where safety and wellbeing are integrated into every business decision enabling CBRE to achieve superior outcomes.

We define well-being across these five dimensions:

- Occupational: Contributing in our careers to make a positive impact in our organisation
- Social: Connecting with our colleagues and developing positive relationships
- Environmental: Creating a safe, productive and comfortable workplace
- Physical: Supporting good health, awareness and vitality
- Intellectual: Learning new concepts, improving skill sets and contributing positively to CBRE's culture

### Health

Staying healthy is more important than ever, and the right benefits can make a real difference when it comes to our people's well-being. CBRE has a full range of programs to help employees and families thrive. CBRE Launched our new employee benefits platform, myBenefits, to all CBRE Limited, REI employees (CBRE Investment Management/Telford Homes) and PMFM employees 2022.

This includes a host of new employee benefits such as, Private Health Care, Cycle to work, Dental insurance and discounted gym memberships, discounts; all in addition to the host of benefits

### Wellbeing

Here at CBRE the wellbeing of our people is our number one priority. We are committed to creating a safe and secure environment and enabling everyone to thrive mentally and physically.

### Mind

We provide our people with support Our mental health first aiders are all trained by MHFA England and are available to meet, talk on the phone, connect by Zoom or to text with you and provide support, signposting and reassurance.

CBRE employees can reach out to any one of us to talk about how you are feeling, if you have concerns about a colleague or if you are supporting someone who is experiencing a period of mental ill-health

### Body

Our aim at CBRE is to promote and encourage a positive difference to physical health and well-being, to empower all of our people to manage their workload and boundaries, to create opportunities to keep active and move more before, during and outside of work.



We have worked with our client and service partner MK Health, to offer people at Three Snowhill a wellbeing package that includes the following:

Three Snowhill Gym Access Procurement (finance and purchasing) CBRE takes very seriously our role in minimising negative environmental impacts in the built environment. We recognise that buildings are a significant contributor to global carbon emissions.

From resource management and procurement initiatives to employee training and academic collaboration, our sustainability programs help reduce the impact of buildings on the environment and, at the same time, create a positive effect on the communities in which we live and work.

CBRE's Sustainable Procurement Program spans three main areas Decarbonise the Supply Chain by building a baseline of Scope 3 emissions and working with our supply partners to monitor reductions.

Responsible Sourcing where the supply partners we use exceed our supplier code of conduct has high ethics, labour and human rights, compliance and a health and safety focus.

Use of Diverse Suppliers to bring in diverse thinking and innovation, provide economic opportunities for minority groups and better reflect the society we live and work in.

### **Supply Diversity, Equity and Inclusion**

At CBRE, diversity, equity and inclusion (DE&I) for our company, employees, clients, and the communities we serve are key elements of our culture... CBRE is committed to strengthening our diverse supplier base and developing mutually beneficial relationships with ethnic/minority, women, disadvantaged/disabled, veteran, Indigenous, and LGBTQ+ - owned businesses and with small business enterprises globally.

It is CBRE's policy for diverse and small businesses to have an equal opportunity to participate in our strategic sourcing and procurement process.

### **Community (volunteering, skills matching and fundraising)**

At CBRE, we are committed to fulfilling our role as a responsible corporate business by supporting and adding value to the communities where our employees live and work, as well as the communities where the need is greatest.

Our areas of focus will include:

- supporting people facing poor housing and homelessness
- helping tackle loneliness, including mental health, elderly care and social infrastructure, and
- promoting the rights and education of young people.

Below are the different ways Three Snowhill get involved with our charitable work:

**World Cancer Day 2022 (4th February)** – a raffle event was hosted to raise funds for Cancer Research UK. We raised over £1k.

**Earth Day 2022 (2nd April)** – staff participated in a litter pick surrounding the estate. On Earth Day on the 22nd of April 2022, Three Snowhill teamed up with tenants in the building and local community members to litter pick plastic around the local community. It was a fantastic event that Three Snowhill was able to promote environmental awareness amongst the Birmingham community and Tenants. We have managed to collect over 1,000 Kg of plastic to be recycled.

**Earth Week (12th – 2nd April)** – Eco-Friendly items were offered to tenants including Three Snowhill tote bags and the branded bottles made from ocean-recovered plastic.

**Creating awareness – Reduce, Reuse and Recycle plastic Event**

- We had a zero plastic day event at Three Snowhill in April 2022. We promoted the need to reduce, reuse and recycle plastic.
- We issued to visitors and tenants in the building Tote bags, instead of using plastic bags

**Plastic Free July 2022** – occupiers participated in a litter pick around the Three Snowhill area.

**Macmillan Cancer Support (October 12th 2022)** – we hosted a cake raffle and raised a total of £1k for the charity.

**Three Core Challenge (October 2022)** – raising money for Great Ormond Street Hospital and Birmingham Children’s Hospital £800 was raised in cash donations

**Wear it Pink** – Breast Cancer Now (22nd October 2022) - in support of breast cancer awareness, we encouraged tenants to wear pink and hosted a cake raffle, which raised a total of £863.00 for charity.

**Birmingham City Mission and CBRE engineers (December)** - onsite engineers at Three Snowhill created a reindeer collection box for foodbank donations using recycled pallets and building materials. The food was donated before Christmas to Birmingham City Mission.

**Donation of Reindeer to Acorns Hospice (December)** – Acorns filled the reindeer with presents for the children

To use void roof space to grow plants and vegetables.

To offset carbon emissions and contribute to the local community. The aim is to use and maximise redundant roof

space to grow plants and vegetables.

To use the vegetables grown on the roof space, in our site restaurant and to supply produce to our local food shelters as part of CSR commitment.

We achieved this by engaging with our planting supplier to provide the service required, but also to provide reusable items to grow the produce in. We have managed to produce enough vegetables, that we have been able to supply our on-site restaurant to use in their menu at Three Snowhill.

This created awareness that the vegetables were grown sustainably in the building instead of having them produced external and delivered to the site. This concept achieved zero carbon emission as a result.

We also donated the vegetables grown at Three Snowhill to the local Birmingham food shelter, as part of our CSR commitment to engage with the local community and create environmental awareness.

St Basils veg donation (October)- collected a bountiful harvest of spring onions, tomatoes and cucumbers from our Three Snowhill veg garden.



## TILLEY AND BARRETT GROSVENOR GARDENS

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### SUMMARY

Tilley and Barrett's latest project, Grosvenor Gardens is situated in the heart of Westminster, London, situated just northwest of Victoria Station. Formerly known as Grosvenor Gardens House, it was built in 1867 as one of Britain's first serviced apartment blocks known as Belgrave Mansions as a whole, before the building was converted for commercial use.

The whole development encompassed the comprehensive refurbishment of Grosvenor Gardens House, a Grade-II listed building. The sensitive redevelopment involved partial fabric removal and remodelling to the rear, along with the sensitive reinstatement of residential use at upper floor levels providing 42 high quality residential apartments and retail units on the ground floor, along with a two-

level basement providing car parking facilities, a wellness facility and cycle parking.

We were appointed by the Principal Contractor Ardmore for the enabling works and deconstruction works for our expertise in working in challenging central city environments surrounded by highly sensitive receptors.

One of the key concerns raised throughout the planning process was the noise impacts for both residents and business, including a live hotel, particularly during the deconstruction phase. The residents and hotel business situated to the north and west were of particular concern as they were sheltered from traffic noise, unlike the other two elevations on Buckingham Palace and Grosvenor Gardens Road.

For this reason, they have low background noise levels. Unfortunately, this was also where all of our logistics – large HGV's servicing both deliveries and removals of site needed to be positioned, as the other locations are TFL red routes with no permissible use or disruption allowed.

### IN DETAIL

Tilley & Barrett was established in 1951 to provide the best possible level of deconstruction services and now forms an integral part of the Toureen Group of companies.

As a founding member of the prestigious National Federation of Demolition Contractors since







1971, our history and experience has allowed us to provide services on high profile, complex, and sensitive projects. From our 70-year history we also understand that it's about much more than what we do directly on site, it's also about the environment and surrounding area.

We are committed to deliver a legacy we're proud of, being a business that is considerate to both the environment and communities in which we work, while investing in our teams and younger generations coming through the company, to ensure that we're a resilient business for years to come. Tilley and Barrett's latest project, Grosvenor Gardens is situated in the heart of Westminster, London, situated just northwest of Victoria Station.

Formerly known as Grosvenor Gardens House, it was built in 1867 as one of Britain's first serviced apartment blocks known as Belgrave Mansions as a whole, before the building was converted for commercial use. The whole development

encompassed the comprehensive refurbishment of Grosvenor Gardens House, a Grade-II listed building.

The sensitive redevelopment involved partial fabric removal and remodelling to the rear, along with the sensitive reinstatement of residential use at upper floor levels providing 42 high quality residential apartments and retail units on the ground floor, along with a two-level basement providing car parking facilities, a wellness facility and cycle parking.

We were appointed by the Principal Contractor Ardmore for the enabling works and deconstruction works for our expertise in working in challenging central city environments surrounded by highly sensitive receptors. From the outset of the project, we worked collaboratively with the surrounding stakeholders, Local Authority and client to understand the needs and expectations of all interested parties to the project.

This was key to the overall development, as the first contractor on the ground for the deconstruction phase, it is crucial to set a positive tone for the ongoing development once our works are complete. One of the key concerns raised throughout the planning process was noise impacts for both residents and business including a hotel, particularly during the deconstruction phase.

The residents and hotel business situated to the north & west of the project were of particular concern as they were sheltered from traffic noise, unlike the other two elevations on Buckingham Palace and Grosvenor Gardens Road.

For this reason, they have low background noise levels. Unfortunately, this was also where all of our logistics – large HGV's servicing both deliveries and removals of site needed to be positioned in closed off Eaton Lane, as the other locations are TFL red routes with no permissible use or disruption allowed.

We completed visual noise mapping of our proposed methodology to depict the anticipated noise from works as a tool to enable us to choose the least disruptive methods, equipment, sequencing, and mitigation controls. There were also concerns that the retained façade, keeping the shell of the building up but opening and deconstructing top down the middle and western side would cause noise to be more directional to these most sensitive receptors.

In light of this, we took the proposals from the planning process and developed them into a fully designed acoustic vehicle tunnel and full building height acoustic screen. Something we are not aware of having been done on any other London Project before.

The screen was designed to come down with our deconstruction scaffold floor by floor. And the vehicle tunnel was fully encapsulated for the loading of waste lorries and unloading of deliveries, internal misters to manage dust and track out.

The innovative enhanced acoustic mitigation measures were tested ahead of works commencing by an acoustic consultant independent to the project. Paceconsult conducted an in-situ test to evaluate the sound performance of both the tunnel and acoustic screen test provide 25dBA sound reduction during the floor by deconstruction and a 35dBA reduction when works reach ground floor and basement level.

Considering that noise works in a logarithmic scale and so 3dBA is a doubling or halving of noise, this is incredibly substantial. We had three 24/7 real-time noise, vibration, and dust monitors placed around the project, as depicted below. These are set up with parameters, which, in the event of an exceedance sends a text and email notification too all operational management team members so that works can be identified, stopped and reviewed for alternative methodology or further controls, where practicable.

However, the enhanced acoustic measures and low noise and vibration strategy meant that the deconstruction phase was delivered successfully and well below set parameters (-15-20 dBA).

Outside of the extensive noise mitigation and liaison work that the project did, the team also successfully achieved improved circular outcomes for building components as below:

- 400,000 bricks salvaged
- 82 fireplaces removed
- 60 doors and doorframes
- 4000m2 of floorboards and structural timber deconstructed and sent to salvage company
- 90 radiators salvaged
- All salvaged items catalogued and sent for storage
- 99.7% diversion from landfill to date for remaining waste

The cost of the enhanced noise mitigation measures delivered where borne on the project, but the value has been gained by satisfying the high expectations and requirements; with no exceedances and



elevated levels, delivering acoustic measures that we have not seen on another construction site in London on this scale before.

The measures were so successful that background noise levels recorded from the monitors at the residential and hotel buildings behind the screen and tunnel, were 15-20 decibels lower than the levels agreed through planning, and that would usually be expected on a construction site.

To put that into context, noise is a logarithmic (not a linear) scale so +3dB is a doubling of noise, and + 6dB a doubling again. This enabled the ongoing operations of surrounding businesses and residents with minimal disruption, which went a long way to establish good relationships.

We pride ourselves on being a considerate contractor, and like our other projects we have also facilitated work-stoppages, special delivery access requirements, and requests for special events for the hotel and surrounding businesses.

This again has set the good intentions for the following contractors for the rest of the development. We will certainly take lessons learnt away from the measures installed and tested in regard to the design, products used, and real-world installation in order to achieve desired results.

Although no two projects are the same, each individual element can be replicated in different circumstances.





# TOUREEN GROUP

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## TRUSTGREEN

### COMMUNITY CHAMPION ROOTED IN NATURE

#### SUMMARY

In 2022 we were delighted to introduce the role of the Community Champion. This is a new initiative and one that was developed to improve links between existing and new communities, leading to greater social coordination and cohesion.

Our first Community Champion, Emma Hills, is based on a brand-new development in Gaydon, Warwickshire. Emma encourages the delivery of activities within the community which contributes to the health, wellbeing, and safety of the residents.

This enables a smoother integration of the new settlement, with the existing and future communities in the vicinity of the new town. Emma is helping to develop a strong community which is rooted in nature.

The aim is for people to feel part of a thriving community through connection and purpose, with the environment and green spaces at its core.

#### IN DETAIL

As an organisation, honesty, integrity, and compassion are at the heart of everything we do. We are guided and driven by creating a positive, long-lasting impact regionally and nationally for our people, stakeholders and the developments we manage.

We view sustainability as a spectrum – not just environmentally but across everything we do, including our CSR performance. We offer complete



transparency when it comes to diversity, equality and sustainability and always behave ethically and professionally.

In 2022 we were delighted to introduce the role of the Community Champion. This is a new initiative and one that was developed to improve links between existing and new communities, leading to greater social coordination and cohesion. Our first Community Champion is based on a brand-new development in Gaydon, Warwickshire.

Following a successful tender process and having received approval for use from Stratford District Council, Trustgreen were appointed by the developer consortium as their nominated Management Company to undertake all management responsibilities for the open space and associated features.

A working party was set up to ensure successful integration of the new development and the existing local community.

Trustgreen appointed a Community Champion to act as a focal point for enquiries and to liaise with the consortium whilst enabling the successful integration



of the new settlement with the existing community to achieve social cohesion across the development.

Emma Hills is our Community Champion, and she encourages the delivery of activities within the community which contributes to the health, wellbeing, and safety of the residents. Her local knowledge and contacts are invaluable and help to create and maintain local activity groups.

Emma works in partnership with many organisations in the area to help facilitate and support community activities and education for new and existing residents. Having been in the role for over a year, Emma has seen the impact a Community Champion has made on the new community in Gaydon.

She has discovered how to access appropriate services to support and enrich her work, gaining an understanding of how to share this information with others and making every contact count. Joining up with partners who have the same commitment to finding and promoting the community assets and connecting them to resources has given Emma an insight into how a Community Champion can work at both an operational and strategic level.

Emma said: "It is a huge motivator to know that you are really making a difference at a grassroots level and hopefully these small differences show other community members that they can collaborate and

make a difference too. It is still early days, but I have been enjoying meeting and greeting both new and existing community members at the local village hall, school, children centre and at the sales offices.

I have also been getting invited to delivery steering groups, committee meetings, Parish Council meetings and PR meetings - which is a new one for me! These meetings have enabled me to understand some of the barriers and actions required, for achieving any shared community goals. I'm looking forward to the green spaces opening so the community can get stuck in and really make the most of these amazing assets.

I think there are many ways in which community cohesion and harmony can be achieved but I am most looking forward to seeing the positive partnerships that will emerge through engaging with and developing the communities' green spaces.

Whilst some endeavours can seem fruitless, working with a system of partners it starts to emerge, much like any eco system, that can be a thriving community lead idea or activity that will benefit the whole system in the longer term and needs feeding and nurturing not eradicating."

Partnership working has been the most useful tool in this endeavour, and it has enabled the community to establish initiatives such as the 'Warm Hub'. With

the rising cost of living, funding was secured to open the Village Hall one day a week to provide free hot drinks, soup, cakes and a warm haven for residents to gather.

A further grant of £3,500.00 for digital equipment will enable the hub to provide people of all ages with access to the internet, printing and charging as well as somewhere warm to watch TV and to come and engage in on-line learning.





The key roles and responsibilities of the Community Champion include, but are not limited to:

- Preparation of a Community Engagement Strategy (CES) to enable integration of the new settlement, with existing and future communities in the vicinity of the new settlement, which is agreed with the District Council following consultation with key stakeholders.
- Lead delivery of the community engagement targets, and vision set out in the CES
- Plan and implement community activities and schemes, developing local relationships with key stakeholders through a variety of events and engagement techniques within the new settlement and the surrounding area.
- Provide analysis of engagement events and activities through annual monitoring and evaluation within the CES.
- Develop key community involvement opportunities that engage a broad range of people including hard to reach and unrepresented audiences.
- Identify, develop, and maintain active partnerships with local schools, user groups, volunteer groups, stakeholders, and external organisations

The positive impact and measurable benefits of the Community Champion includes, but are not limited to:

- Addressing barriers to engagement

- Supporting the uptake of services
- Meaningful investment into programmes, both in terms of time and resource
- Building trust and a 2-way flow of information
- Open dialogue with face to face and virtual meetings
- Creating connections in the neighbourhood
- Increasing knowledge, awareness and understanding of local issues
- Undertaking successful outreach and engagement activities
- Increase use of community insight to address barriers
- Facilitate open 2-way dialogue around any concerns community members may have
- Work with champions from different areas or groups to promote cohesion
- Create a sense of agency with mutual learning and cooperation

Emma is our first Community Champion, and she's been working hard to develop the blueprint for future Community Champions. As and when we're awarded strategic sites that have a requirement for a Community Champion, we'll be apply this model to future developments and encourage others to do the same.

We freely share this knowledge with other professionals within our industry, encouraging others to utilise this model.

