



# GOAL 13

Our climate action strategy

2025



# Introduction from our MD

Our Goal 13 climate action strategy has been a priority for us since its launch in April 2021, so I am pleased to see it receive so much support.

During this time, we have deepened our understanding and made significant progress towards our initial objectives. We have now updated the strategy to align with the business's anticipated future direction as we continue to evolve.

Building on our efforts to reduce in-house emissions, we are introducing a new focus on understanding the environmental impact of the waste we generate and the goods and services we purchase.

We have established commitments and targets for two priorities: waste & materials and climate & nature. These priorities are aligned with the United Nations Sustainable Development Goals (UN SDGs), specifically SDG 12 Responsible Consumption and Production, and SDG 13 Climate Action.

As we embark on this next stage of building a more responsible and sustainable business, we recognise that fulfilling our commitments and achieving our objectives will require a combination of collective effort, innovation, collaboration and technology. By working together, we know we will create a more sustainable future for the long term.

**Kevin Valentine**  
Managing Director  
April 2025

# Goal 13 Strategy

Priorities

Waste & Materials

Climate & Nature

| UN SDG             | GOAL 12<br>Responsible Consumption & Production  | GOAL 13<br>Climate Action   |
|--------------------|--|---|
| <b>Commitments</b> | <p>Eliminate non-hazardous excavation waste<sup>1</sup> to landfill by 2030.</p> <p>Eliminate avoidable waste to landfill by 2040<sup>2</sup>.</p>   | <p>Reduce scope 1 &amp; 2 emissions by 42% by 2030, and measure and reduce scope 3s.<sup>4</sup></p>            |
| <b>Targets</b>     | <p>Benchmark total non-hazardous excavation waste and the % reused or recycled, setting an improvement target by April 2026.</p> <p>Benchmark all construction waste, the % of avoidable waste, and % of all waste reused or recycled, setting improvement targets by April 2026.</p> <p>Analyse 12 months of purchased goods and services, categorise these and apply emissions factors to calculate emissions per category by December 2025.</p> <p>Rank top suppliers by spend.</p> | <p>Set a reduction target for scope 3 (waste and purchased goods &amp; services) emissions by April 2026.</p>   |
| <b>KPIs</b>        | <p>Tonnes of all construction waste.</p> <p>% non-hazardous excavation waste reused or recycled.</p> <p>% avoidable construction waste.</p> <p>% reused or recycled.</p> <p>Spend on high impact materials<sup>3</sup> categories (%).</p> <p>Spend on lower impact materials alternatives (%).</p>  | <p>Scopes 1 &amp; 2 tCO2e (% +/-).</p> <p>Scope 3 (waste and purchased goods &amp; services) tCO2e (% +/-).</p> |

1. Soil and rock materials removed during site preparation works, where technically and practically possible.
2. Within the capacity of our responsibilities.
3. High emissions, high spend categories.
4. Validated by Science Based Targets Initiative (SBTi), measured against 2020 baseline year.

Priority

# Waste & Materials



## Commitments

2030

Eliminate non-hazardous excavation waste to landfill.<sup>1</sup>

2040

Eliminate avoidable waste to landfill.<sup>2</sup>

By targeting a systematic approach to eliminating initially, non-hazardous excavation waste and ultimately, all avoidable construction waste, we are committing to using resources responsibly.

Subjectively, we are already reusing a high percentage of excavation waste, typically by crushing rock into aggregate and using it as fill or capping for haul routes. Our ambition now is to prove this. By routinely recording and making visible what we do, we can push ourselves to reach 100%.

In embracing the principles of the circular economy, we aim to minimise waste and maximise resource efficiency. While recognising the limitations within the scope of

our responsibilities, compliance is mandatory wherever possible, and exceptions must be justified and recorded.

With back-office systems in place that make analysing our supply chain spend possible, we have the opportunity to fully understand and scrutinise what we buy the most of, its environmental impact, and from whom and where we buy it. With that knowledge, we can ask ourselves how we could make more sustainable choices.

# Barry Waste Transfer Station

Typically, we place business locally to minimise transportation and support local economies. By analysing and reporting what we do, we can aim to do more. This is what we are now setting out to do.

Opportunity also arises from identifying our biggest supply chain partners. By using this knowledge, we can build closer relationships, understand how others approach sustainability and engage with them to improve their environmental performance, aligning ourselves with companies that will help us achieve our goals.

Benchmarking the environmental impact of waste and the goods and services we purchase, is a crucial step towards understanding and reducing our scope 3 emissions, which as a whole, will represent the largest proportion of our total emissions.



## Earthworks

We identified an opportunity to reduce the depth of the stone capping layer and the site's overall construction depths by 350mm. By undertaking trial holes, we produced CBR values that proved a thinner layer of stone would achieve the required strength. This resulted in significant environmental and programme benefits, as well as a saving of approximately £300,000.

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## Mobile crushing and screening machine

With a large quantity of excavated rock and soils on site, we took the opportunity to hire a mobile crushing and screening machine. This separated the rock from the soils and crushed it to create 6F2, which we then used as capping material.

The investment meant there was no need to import 3,000t of capping material, or export materials arising on site, reducing emissions and achieving cost and programme benefits.



## Ecocrib retaining wall

Initially, it was intended to construct three reinforced concrete retaining walls. However, our value engineering proposal resulted in swapping these for a 100% recycled mixed polymer retaining crib wall system. This saved over 500kg of CO2 compared to the initial concrete design.

# Climate & Nature

## Commitment

2030

Reduce scope 1 & 2 emissions by 42%, measure and reduce scope 3s.<sup>4</sup>



## Climate

Since we began measuring and reporting our emissions, our focus has rightly been on diesel, our largest direct source.

Through actions such as our anti-idling campaign and prioritising mains connections over generators, in 2024 we reported a 38% reduction in emissions since 2020. This puts us on course to exceed our target, approved by the Science Based Targets initiative, of a 42% reduction by 2030.

While this is a great achievement, it is not job done. Maintaining an annual reduction in absolute emissions as our turnover grows is difficult. Indeed, 38% was a slight increase on 2023's result, even while the overall trend remains downwards.

### **Hydrotreated Vegetable Oil (HVO)**

As we consider these challenges, we continue

to monitor developments with HVO. To date, we have only used HVO when our customers have mandated it, partly due to commercial and logistical issues and a lot due to a lack of transparency in supply chains.

There has though, been progress in all these areas. HVO now typically carries a 5p/pl premium, down from the initial +17p/pl. We have confirmed that adequate supplies are available and can be reliably delivered to most UK locations within required timeframes.

Certas Energy is one of the UK's largest distributors of fuel and lubricants. They are ISCC (International Sustainability and Carbon Certification) accredited, only supplying ISCC

approved HVO. 100% of their HVO derives from certified sustainable raw materials. A fully validated and auditable supply chain means the raw materials used are traceable and meet strict criteria for greenhouse gas emissions and sustainability. Certas ensures a fully transparent and deforestation-free supply chain and the protection of land with high biodiversity, while minimising indirect land use change.

The origin of raw materials will vary, however improved inspection, audit and test regimes have been implemented, including mandatory ISCC approved auditor on site inspections at high risk points of origin.

We are satisfied, as far as we can reasonably expect to be, of the integrity of this supply chain and in the absence of evidence to the contrary, will now support the use of ISCC certified and RFAS approved HVO from Certas Energy or wholly equivalent verified and approved supplier, as a transitional fuel.

#### **Benefits of HVO:**

- Greenhouse gas savings of 80%+ compared to diesel.

- Reduced tailpipe emissions of NOx, SOx, PMs and CO, improving air quality.
- Full drop in diesel replacement solution.

#### **Energy Management System**

To further target emissions from fuel and energy, we will be piloting an energy management system, Gaia Automate. Automate uses AI to streamline power consumption on site, cutting costs while reducing fuel/energy use and emissions by up to 80%. Actual savings vary depending on how the site is powered, with greater savings being achieved when supplied by generator. It is offered with a cost neutral guarantee, eliminating financial risk even while emissions are proactively reduced.

#### **Benefits of Automate:**

- Cuts fuel costs by up to £300 per week, based on a typical 6 to 8 cabin site setup.
- Reduces generator size by up to 50%.
- Weekly/monthly reports on fuel and carbon savings.

Both initiatives will enable us to continue making big strides in the downward flightpath of our scope 1 and 2 emissions, even as our business continues to grow.

### Case study

## TH200 Ecolite Tower Light Trial at Dover Cruise Terminal

We conducted a trial to compare the cost and carbon savings of hydrogen powered tower lights with diesel ones.

Each 50-hour period of hydrogen powered lighting saved 107kg of CO<sub>2</sub> emissions, at an additional weekly cost of £150.



## Nature

Protecting and restoring the natural environment has always been an ambition of Goal 13.

Limiting global temperature rise, will help preserve habitats, protecting wildlife and nature. Similarly, excessive resource consumption contributes to pollution, and the loss of biodiversity. As part of our sustainable workplaces plan, we identified actions to favour biodiversity and give back through volunteering and adding social value.

We have been a supporter of the Bumblebee Conservation Trust since 2019, persuading our local town council to introduce pollinator-friendly planting on the roundabout we sponsor. We have seen inspiring site initiatives, from using surplus materials to build mini gardens that help wildlife to flourish, to a full scale eco-engineering project that now provides essential habitats for marine life.

Our support for nature will continue to thrive under this strategy as we take steps to formalise how we document our impact.



### Site compound complete with welfare and seating area at Barry Waste Transfer Station.



The area outside the site compound offices was transformed into an ecological wellness garden, growing fruit, vegetables, and bee friendly flowers in concrete manhole chamber rings. Picnic benches provided an outside seating area for sunny days and a relaxation area for breaks. Connecting to mains power, water telecoms and drainage, meant there was no requirement for a generator, saving on fuel deliveries and maintenance.

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## Bug Hotel at Cardiff Coastal Defence Scheme

Bug hotels provide a safe habitat for insects such as pollinators and decomposers, which play a critical role in maintaining healthy ecosystems. After being introduced on site in Cardiff, an information leaflet was produced providing guidance on how to build one, where to place it, and explaining the positive environmental impact they have, as part of an initiative to encourage other sites to build their own.



## Eco-engineering Sea Hive project

At Mumbles Coastal Defence Scheme, comprising a 1.2km seawall, we supported and collaborated with Swansea University on the Mumbles Sea Hive 'eco-engineering' project. This included a year-long trial to compare 13 different designs of concrete panel surface texture, to identify which would be most attractive to marine life. We then drew on these findings to decide which concrete panel to incorporate into the sea wall. Sections of the wall then incorporated ridged and patterned concrete panels, mimicking the rough contours of the natural coast and providing gaps and crevices for sea creatures to populate. Mumbles Sea Wall is one of the first major engineering projects in the UK to incorporate this kind of research.

# Governance

Knights Brown's leadership team provides board level accountability through its review, approval and monitoring of the Goal 13 strategy.

A steering group, attended by our MD, members of our leadership team and department heads, together with representatives from our two divisional Goal 13 support groups, meets every six weeks to review progress against the strategy and proposals from the divisional support groups.

The support groups meet bi-monthly to advance their divisional strategies and shortlist proposals to be presented to the steering group. Successful proposals are then rolled out companywide.





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