



Carbon Reduction Plan

Kier Group plc

4th October 2023



Introduction

Supplier name: Kier Group PLC

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This carbon reduction plan conforms to the requirements of Procurement Policy Note PPN06/21: “Taking Account of Carbon Reduction Plans in the Procurement of Major Government Contracts” and the supporting “Technical Standard for the Completion of Carbon Reduction Plans”.

Our Purpose

Kier’s purpose is to sustainably deliver infrastructure which is vital to the UK. We are a leading provider of infrastructure services, construction, and property developments, and committed to delivering for communities and leaving lasting legacies through our work. At the core of our project delivery is technical excellence, using the latest building methods, innovations and technology to ensure we offer the best value for our clients.

Our Business

The data, targets, and initiatives presented within this carbon reduction plan apply to and are structured in line with all divisions within our organisational boundary.

In May 2023, we announced a re-alignment of our Infrastructure Services segment to support our growth ambitions and align our capabilities, skills and expertise to the evolving needs of our clients. From 1 July 2023, our three business divisions, Highways, Utilities, and Infrastructure Projects became two:

- **Transportation:** this business division provides design, engineering, delivery, and maintenance to support the movement of people, goods, and equipment by land, sea, and air. It includes our existing highways business and infrastructure projects relating to rail, ports and air.
- **Natural Resources, Nuclear, and Networks:** this business division includes our existing utilities business and infrastructure projects related to water, energy, and networks.

As the data included in this carbon reduction plan covers the reporting period prior to this restructure, this document refers to our former structure and is structured in line with the core business operations and bidding entities:

- Kier Construction (Kier Construction Limited, Kier Graham Defence Limited, Kier Business Services Limited, Kier Education Services Limited) - regional building and strategic projects
- Kier Infrastructure (Kier Infrastructure and Overseas Limited) - infrastructure and rail projects
- Kier Utilities (Kier Integrated Services Limited, Kier Infrastructure and Overseas Limited, McNicholas Construction Services Limited) - water, energy and telecoms
- Kier Highways (Kier Highways Limited, Kier Integrated Services Limited) - local and national highways
- Kier Places (Kier Services Limited, Kier Facilities Services Limited, Heart of Wales Property Services Limited, Pure Recycling (Warwick) Limited) - housing maintenance and facilities management
- Kier Property (Kier Property Developments Limited, Watford Health Campus Partnership LLP) - development

Reporting Standards and Scope

The calculation of Kier's carbon footprint is in line with the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard. Our current carbon footprint accounts for carbon emissions over which Kier has financial control, and an equity share of joint venture contracts.

Kier employs Energise as a climate consultant, providing accountancy services and support in strategy development and implementation. Energise undertake a series of quality assurance checks in line with industry best practice to ensure the Greenhouse Gas statements are as accurate as possible. The process follows the principles of ISAE 3410, Assurance Engagements on Greenhouse Gas Statements standard, but is not a formal assurance to that standard. It is undertaken to ensure that the statement is considered materially correct, a fair representation of the greenhouse gases emitted and is prepared in alignment with the Greenhouse Gas Protocol and the relevant scope of activities of Kier as a group. We are currently working towards GHG verification in line with ISO 14064.

Changes from Previous Carbon Reduction Plan

In line with the requirements of PPN06/21, this Carbon Reduction Plan is updated annually to present the most recent financial year of data. The next planned revision of this carbon reduction plan is September 2024, which will align the data, targets, and initiatives within this document to our new business structure as defined above.

Commitment to achieving Net Zero

Kier Group PLC is committed to achieving Net Zero emissions by 2045.

This commitment includes scopes 1, 2 and 3, however in the interim we are aiming to achieve net zero for scopes 1 and 2 by 2039.

These targets are supported by a series of near-term greenhouse gas reduction targets and various industry commitments. These targets apply to all divisions as per our organisational boundary as defined in the introduction. Our targets and commitments are discussed in more detail under 'Emissions Reduction Targets'.

Baseline Emissions Footprint

Baseline emissions are a record of the greenhouse gases that have been produced in the past and were produced prior to the introduction of any strategies to reduce emissions. Baseline emissions are the reference point against which emissions reduction can be measured.

Baseline Year: Financial year 2021/22 (1st April 2021 – 31st March 2022)

Additional Details relating to the Baseline Emissions calculations.

In other public disclosures, our base year for scope 1 & 2 and scope 3 are defined as FY19 (1st April 2018 – 31st March 2019) and FY22 (1st April 2021 – 31st March 2022) respectively. To present a consistent base year for PPN 06/21 compliance, we have reported FY22 as our base year for all scopes in this document only. Our targets, strategy, and actions use the baseline years defined in our other disclosures.

The scope 3 categories included in the figure below include upstream transportation & distribution, waste generated in operations, employee commuting, and business travel. Downstream transportation & distribution is not included as it is not relevant to our operations. We have included 'teleworking' within the 'employee commuting' category.

Aligned with our commitment last year to continue to improve our reporting practices and provide increased accuracy in our scope 3 emissions, we have improved our screening methodology for purchased goods and services. As this methodology is linked to upstream transportation and distribution, this has resulted in an increase in the total reported base year scope 3 emissions within this carbon reduction plan. As a result of this improvement, the base year scope 3 emissions have been restated below to ensure we track our strategy progress against a comparable baseline.

Baseline year emissions:

EMISSIONS	TOTAL (tCO _{2e})
Scope 1	38,643
Scope 2	4,569 (location based) 328 (market based)
Scope 3 (Included Sources)	61,676
Total Emissions	104,888 (location based) 100,643 (market based)

Divisional Breakdown

The table below presents our scope 1, 2 and scope 3 (included sources) emissions data in tCO₂e broken down by division. Data which is unallocated to any division, such as overhead emissions and emissions associated with our international business have been excluded from the table below but included in the total emissions presented above.

	Construction	Infrastructure	Highways	Utilities	Places	Property
Scope 1	3,558	2,599	11,695	13,414	2,780	10
Scope 2	887 (LB)	301 (LB)	1091 (LB)	155 (LB)	1,612 (LB)	48 (LB)
	81 (MB)	0 (MB)	217 (MB)	4 (MB)	4 (MB)	0 (MB)
Scope 3 (included sources)	20,192	3,999	8,767	19,269	1,709	1,659
Total scope 1, 2 & 3	24,637 (LB)	6,899 (LB)	21,553 (LB)	32,838 (LB)	6,101 (LB)	1,717 (LB)
	23,831 (MB)	6,598 (MB)	20,679 (MB)	32,687 (MB)	4,493 (MB)	1,669 (MB)

Note: 'LB' refers to 'location based' and 'MB' refers to 'market based'

Current Emissions Reporting

Reporting Year: Financial year 2022/23 (1 st April 2022 – 31 st March 2023)	
EMISSIONS	TOTAL (tCO₂e)
Scope 1	31,340
Scope 2	3,600 (location based) 328 (market based)
Scope 3 (Included Sources)	68,955
Total Emissions	103,895 (location based) 100,623 (market based)

Divisional Breakdown

The table below presents our scope 1, 2 and included scope 3 emissions data in tCO₂e broken down by division. Data which is unallocated to any division, such as overhead emissions and emissions associated with our international business have been excluded from the table below but included in the total emissions presented above. Note: in the table below, 'LB' means 'location based' and 'MB' means 'market based'.

	Construction	Infrastructure	Highways	Utilities	Places	Property
Scope 1	2,460	2,082	10,134	13,912	1829	2
Scope 2	638 (LB) 37 (MB)	179 (LB) 0 (MB)	504 (LB) 262 (MB)	107 (LB) 12 (MB)	2,086 (LB) 2 (MB)	36 (LB) 0 (MB)
Scope 3 (included sources)	12,633	7,077	9,471	35,378	371	198
Total scope 1, 2 & 3	15,730 (LB) 15,129 (MB)	9,338 (LB) 9,159 (MB)	20,109 (LB) 19,867 (MB)	49,397 (LB) 49,302 (MB)	4,286 (LB) 2,202 (MB)	236 (LB) 200 (MB)

Note: 'LB' refers to 'location based' and 'MB' refers to 'market based'

Emissions Reduction Targets

Kier is committed to achieving net zero greenhouse gas emissions (GHG) for scopes 1, 2 and 3 by 2045, and net zero scope 1 and 2 GHG emissions by 2039. We will reduce our absolute GHG emissions by at least 90% from the baseline by our target year, with a maximum of 10% of our baseline emissions being neutralised through certified carbon offsets.

Further to this, we are members and signatories to various industry commitments with outcomes supporting our strategy, including:

- EV100: A global initiative aiming to accelerate a transition to electric vehicles.
- Race to Zero: A campaign to build momentum towards a decarbonised economy.
- Supply Chain Sustainability School Plant Charter: A charter leading the way to drastically reduce onsite emissions to reach net zero by 2040.
- Contractors Declare: A public declaration of our climate and ecological crises and a commitment to take positive action.

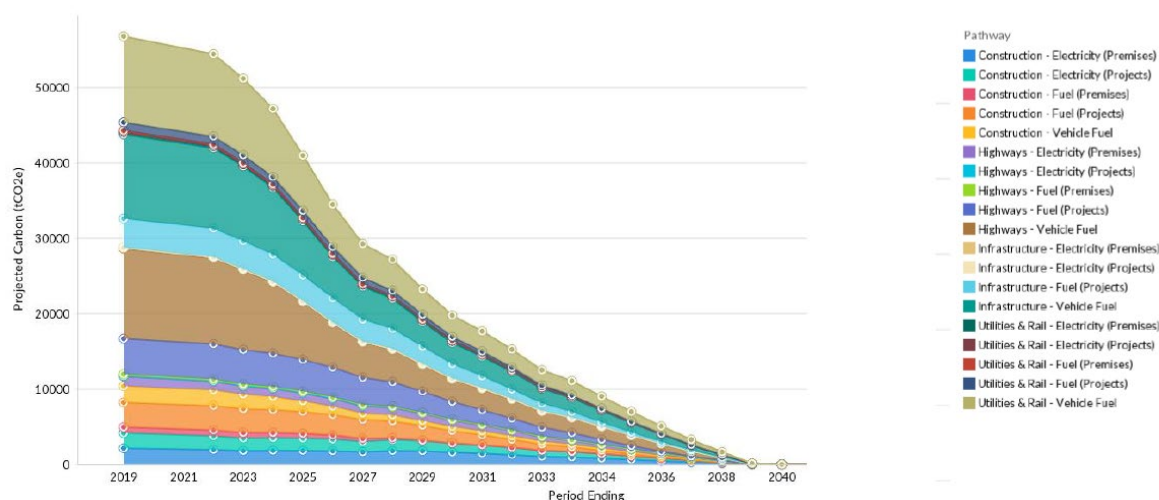
To progress towards our net zero targets and align with the commitments above, we have committed to the following near-term targets:

- 66% reduction in absolute scope 1 & 2 emissions by 2030
- 42% reduction in absolute scope 3 emissions by 2030

In 2023, these targets were submitted to the Science Based Targets Initiative for validation. These targets are supported by our carbon budgets and carbon milestone plan.

Carbon budgets

Annual scope 1, 2 and 3 carbon budgets are set out for each emission source at divisional level, defining the minimum annual reduction required to align with our trajectory towards net zero. Action plans are in place to achieve these annual budgets, and progress against the action plans and the pathway are monitored and reviewed regularly with the divisions and our carbon consultant, Energise. Our carbon budgets are currently being revised to account for our business restructure and recent performance to ensure that the budgets remain ambitious and relevant.



Milestone Plan

To achieve our carbon budgets, near-term targets, and net zero targets, we have developed a medium-term milestone plan, setting out our strategic actions to improve efficiency and reduce emissions. This plan is detailed below and further information on these initiatives is provided under 'Carbon Reduction Projects'.

2023	<ul style="list-style-type: none"> Introduce carbon budgets and action plans for scope 3 emissions Commence subcontractor engagement to improve data quality and target setting Introduce targets for minimum EPC ratings of buildings delivered by our Property division
2024	<ul style="list-style-type: none"> Obtain Science Based Targets Initiative verification Obtain ISO 14064 verification for organisational quantification and reporting of greenhouse gas emissions and removals Introduce fleet sustainability strategy Contribute to and conclude the Supply Chain Sustainability School's research investigation into Hydrotreated Vegetable Oil (HVO) and confirm position on use Introduce minimum EPC rating requirements for new office leases Enhance minimum sustainability requirements for site accommodation Explore opportunities for renewable electricity self-generation Introduce timeline to mandate lifecycle assessments Introduce targets for low carbon concrete and steel use
2025	<ul style="list-style-type: none"> Develop a strategy for internal carbon pricing Expand our CDP disclosure to include forests and water Introduce land use change targets and obtain SBTi Forests, Land Use and Agriculture (FLAG) verification
2026	<ul style="list-style-type: none"> 100% of company car options to be EV/PHEV Introduce renewable energy self-generation targets
2030	<ul style="list-style-type: none"> 100% renewable electricity 100% electric/PHEV company cars 50% electric/PHEV/alternative fuel LCVs 66% reduction in absolute scope 1 & 2 emissions 42% reduction in scope 3 emissions
2039	<ul style="list-style-type: none"> Net zero scope 1 & 2 emissions (at least 90% absolute reduction since baseline)
2040	<ul style="list-style-type: none"> Net zero for on-site plant and equipment
2045	<ul style="list-style-type: none"> Net zero scope 3 emissions (at least 90% reduction since baseline)

Performance to date

Kier has a proved track record in reducing carbon emissions and has delivered targets set through previous successful sustainability strategies. Since our baseline year (FY22), we have achieved an 18.7% reduction in our scope 1 & 2 emissions (using a market-based methodology*) and a 6.7% reduction in our scope 3 emissions.

This equates to a 19.6% reduction in emissions intensity for scope 1 & 2 and a 7.8% reduction in emissions intensity for scope 3.

*We use a market-based methodology to compare performance for our scope 2 data to ensure alignment with our submitted Science Based Targets and to reflect the impact of our renewable energy sourcing.

Carbon Reduction Projects

Environmental Management Measures

Kier has obtained or is working towards the following certification and disclosure schemes to support delivery of our net zero and near-term carbon reduction targets:

- ISO 14001:2015 (original certification achieved in 2005): Our environmental management system (EMS) includes policies, standards, guidance, and processes to identify and reduce environmental impacts, including carbon emissions.
- Science Based Targets Initiative (Highways – certification achieved in 2023; all divisions - working towards verification): We have submitted our net zero and near-term targets to the Science Based Targets Initiative (SBTi) for validation in 2023 and aim to receive validation in 2024. To meet the expectations of our clients, our Highways division has separately submitted their near-term, long-term, and net zero targets to SBTi and received validation in 2023.
- ISO 14064 (working towards certification): We are working towards ISO 14064 certification for GHG quantification and management and aim to achieve certification in FY24.
- PAS 2080 (working towards certification): We are working towards PAS 2080 certification for carbon management in buildings and infrastructure and aim to achieve certification in FY24 which will cover our construction, natural resource, nuclear and networks, and transportation divisions.
- ESOS (ongoing compliance): We continue to comply with the requirements of the Energy Saving Opportunities Scheme (ESOS) by undertaking regular energy audits of our sites, offices, and fleet, and implementing the recommendations of these audits.
- CDP (disclosure since 2010): Each year (except 2019) we have disclosed details relating to our climate management, strategy, targets, performance, and various other climate-related matters to CDP. In our most recent scored disclosure (2022) we achieved a score of B, representing effective management.

Completed Carbon Reduction Initiatives

The following environmental management measures and projects have been completed or implemented to support the delivery of the targets and pathway defined in this carbon reduction plan. This is not an exhaustive list, but details some of our most notable initiatives within the reporting period.

All Divisions

- Battery Storage Units (BSUs): We mandated the use of BSUs alongside generators where feasible to reduce generator run time, generator sizing, and energy wastage, resulting in an estimated annual GHG reduction of 829 tCO₂e.
- Flywheels: Following successful trials in our construction division, flywheels are now offered with every hire request for tower cranes to enable generator downsizing and therefore minimise fuel consumption. In a trial in our construction division, this initiative resulted in a GHG reduction of 11 tCO₂e over a 6-month period.

Transportation (formerly Highways and Infrastructure Rail)

- Plant and equipment electrification: we have transitioned to electric alternatives to traditionally petrol- and diesel-powered plant and equipment for certain operations within the transportation division. This

has included the switch to an electric forklift fleet within the operation of Ayton Products, resulting in an estimated annual GHG reduction of c.71 tCO_{2e}, and a switch to electric handheld equipment within the operation of our Highways business unit, resulting in an estimated annual GHG reduction of 46 tCO_{2e}.

- Energy efficient operations: we have trialled various products which improve energy efficiency and reduce emissions, including Eco Welfare Cabins. Several brands of solar powered cabins have been trialled, the best of which resulted in savings of around 105 kgCO_{2e} per week when compared to older, diesel models.
- Lower carbon materials: we have worked with our supply chain, clients, and other stakeholders to trial various low carbon materials to reduce our largest emission source: purchased goods and services. This has included:
 - Tarmac from the footway improvement schemes was recycled by a local waste contractor and used in the binder layer of the footway improvement schemes and some carriageways in one of our Highways contracts, resulting in an estimated GHG reduction of 668 tCO_{2e}.
 - Biogenic Binder was trialled as a potential replacement for fossil fuel content in Polymer Modified Bitumen (PMB), resulting in a saving of 4.55 tCO_{2e} per km laid.
 - AgeSafe Asphalt has been trialled which slows down the oxidation rate in asphalt, extending road lifespan with estimated increases in longevity by up to 25%.

Construction (including Places)

- Plant and equipment electrification: we have transitioned to electric alternatives to traditionally petrol- and diesel-powered plant and equipment for certain operations within the transportation division. This has included an electric pedestrian operated tower crane, electric MEWPS, and solar hybrid lighting towers.
- Alternative fuels: we have trialled alternative fuels to replace diesel for off-grid operations. This has included a hydrogen fuel cell generator and an LPG generator, both of which delivered carbon reductions without compromising operations.
- Lifecycle carbon consultancy: purchased goods and services and use of sold products are the most significant scope 3 emission sources for our Construction division, therefore we have developed an in-house carbon consultancy team which works with our wider construction business to undertake lifecycle assessments using One Click LCA, supporting throughout design and delivery to reduce lifecycle GHG emissions.
- We have introduced a 'project scorecard' to reflect project-level compliance, performance, best practice, and innovation. This scorecard is used to raise awareness of sustainability at project level and drive engagement and performance.

Natural Resources, Nuclear, and Networks (formerly Utilities and Infrastructure (excl. Rail))

- We have introduced a sustainability performance index which provides straightforward and tangible actions which deliver change. This index is used to identify the effectiveness of our practices at a project, contract, business unit, and divisional level. This index is currently being rolled out.
- To raise awareness of sustainability topics and share innovative solutions with our sites, we host monthly 'sustainability tech talks', inviting suppliers to present on innovative goods and services.

- In collaboration with the client and supply chain, we trialled the use of 'Eco-Armour Units'. These were made using a combination of low carbon alternatives to concrete, including recycled materials, GGBS, etc., ultimately reducing embodied carbon by ~91% in addition to supporting algae and marine life growth which can therefore create a carbon sink while providing protection to Infrastructure.

Property

- To reduce emissions arising from use of sold products, we have introduced the following targets which will be applied to future developments:
 - Industrial sector: all of our industrial schemes will achieve EPC A rating and target BREEAM Excellent.
 - Commercial sector: all new office buildings will target an enabled 5 star DfP NABERS rating.
 - Residential sector: all apartment sites will target a highly efficient building fabric with a target air leakage rate of 3 m³/h/m².

Planned Carbon Reduction Initiatives

The following environmental management measures and projects are being implemented, planned, or being considered to support the delivery of the targets and pathway defined in this carbon reduction plan. This is not an exhaustive list, but details some of our most notable planned initiatives within the reporting period.

All Divisions

- We are currently developing a strategy to introduce an internal carbon pricing mechanism to inform decision making and accelerate reductions in GHG emissions.
- We are developing a fleet sustainability strategy, supporting operational delivery and our EV100 targets, including awareness, training, mobility solutions, electrification, alternative fuels, and other opportunities.
- After carrying out research into potential indirect impacts of HVO production within the supply chain, we engaged with the Supply Chain Sustainability School (SCSS) to initiate a collaborative industry research project. We are supporting this project and, in the meantime, our previously defined actions relating to HVO use have been paused pending the outcome of this research.
- We are planning to introduce minimum EPC ratings and other sustainability requirements for new office leases.
- Following successful trials of various energy efficiency enhancements, we are planning to enhance the minimum sustainability requirements for hired site accommodation.
- To improve the additionality of our renewable electricity sourcing, we are planning to explore renewable electricity self-generation opportunities through our Property division.

Transportation (formerly Highways and Infrastructure Rail)

- Our Highways business unit is currently working with a hydrogen partner, Protium, to undertake a feasibility study into operating a depot powered by green hydrogen.
- 45 no. electric commercial vehicles are now in daily use across Highways as part of a transition towards a low emission commercial vehicle fleet.

- Since the success of completed trials, eco welfare cabins have now become the standard across some contracts with plans to implement on further contracts.
- We are exploring several trial opportunities to test feasibility of biochar in a number of adaptation/mitigation scenarios (carbon sequestration, water retention, etc.)
- A sustainable sourcing strategy is being rolled out to all contracts, requiring the development of resource efficiency plans which will also meet local contract/client needs

Construction (including Places)

- To address the carbon intensive materials we use, we are aiming to set targets relating to the use of low carbon concrete and low carbon steel.
- Following the launch of our internal carbon consultancy service, we are aiming to roll out lifecycle assessments and optioneering with commercial integration to our projects.
- We are reviewing opportunities to transition to a net zero site setup for our projects, with plans to make this standard by 2030.

Natural Resources, Nuclear, and Networks (formerly Utilities and Infrastructure (excl. Rail))

- We are planning to make use of green hydrogen on some projects as a zero-emission diesel alternative.
- We are currently investigating the opportunity of using a fugitive methane generator using methane captured from a farm slurry pit.
- We are looking at making use of a circular economy waste re-use platform to reduce emissions from both waste generated in operations and purchased goods and services.
- We are currently working alongside our digital transformation team to review opportunities to use digital solutions to achieve sustainability ambitions, including better visibility of performance up and down the organisation.

Property

- We are developing a net zero carbon plan which will likely involve undertaking whole life carbon assessments for all projects where Kier has design responsibility.
- We will use our pre-purchase checklist to implement minimum internal environmental quality and site selection standards that incorporate measures to mitigate against overheating and flooding from 2024.

Declaration and Sign Off

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard¹ and uses the appropriate Government emission conversion factors for greenhouse gas company reporting².

Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard³.

This Carbon Reduction Plan has been reviewed and signed off by the board of directors (or equivalent management body).

Signed on behalf of the Supplier:



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Andrew Davies, Chief Executive Officer

Date: 4 October 2023

¹<https://ghgprotocol.org/corporate-standard>

²<https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

³<https://ghgprotocol.org/standards/scope-3-standard>