

# LOWERY

## Lowery Group Carbon Strategy 2024



# Executive Summary

This Carbon Strategy outlines how the Lowery Group will work to meet the net zero target and contribute to the global efforts to address the climate emergency.

This document sets out action with intermediate and short-term measures to reduce Lowery's emissions from use of fuel and electricity. The Strategy and Action Plan focuses on five key sectors of the business:

- Engineering, Design and Materials
- Supply Chain
- People and Training
- Carbon Reporting (SBTi targets) and Governance
- Fleet, Plant and Equipment and Site Set-Up

Whilst there is a clear goal of reducing carbon emissions, Lowery will also continue to keep up with innovation and best practices for national critical infrastructure, including rail, power and other sectors to ensure we continuously create sustainable value for our clients.

Over previous years, Lowery Group has made changes in their fleet and signed up to 74% renewable energy in the main offices to reduce emissions from our operations.

Lowery recognises that the scale of the challenge to reduce our carbon emission must not be underestimated. Cross-functional collaboration within Lowery and further with our supply chain partners will be critical to successful realisation of our net zero outcomes; we are confident that Lowery will achieve the carbon reduction targets set in this strategy.



[Mark Gubbins \(Aug 2, 2024 08:55 GMT+1\)](#)

**Mark Gubbins**  
Managing Director

# 1.0 Introduction

The Climate Change Act 2008 forms the basis for the UK's approach to tackling and mitigating the effects caused by climate change. The Act requires the UK to reduce greenhouse gases, most notably carbon dioxide. It commits the UK, by Law, to become carbon neutral by 2050. This means that all greenhouse gas emissions are required to be reduced to a net zero level.

This strategy document outlines the steps that Lowery will take to achieve the legislated net zero target by 2040.

An intermediate milestone of a 45% reduction from 2022 emission levels has also been set which is to be achieved by 2030; 3% above the 42% advised by the SBTi.

Achieving the milestones will be done through the implementation of change across the business and engaging with clients and stakeholders and working with the industry as a whole. The carbon strategy and the other associated communications consider the targets set by the UK government and our infrastructure-owner and major contractor clients.

This document sets out how Lowery's Leaders and Project Managers are to implement the strategy and how and when the outputs will be assessed.

## 1.1 References

- PAS 2060 - Carbon Neutrality – UK document guidance
- PAS 2080 - Carbon Management in Infrastructure UK document guidance
- The Committee on Climate Change
- HM Government – Environmental Reporting Guidelines: including streamlined energy and carbon reporting

## 1.2 Definitions

Carbon emissions	Carbon is a collective term for the total amount of greenhouse gases produced by the organisation, expressed in equivalent tonnes of carbon dioxide (CO <sub>2</sub> )
Equivalent carbon (CO <sub>2</sub> eq.)	Equivalent carbon (CO <sub>2</sub> eq.) A metric measure used to compare the emissions. Other greenhouse gases are converted to the equivalent amount of carbon dioxide with the same global warming potential (GWP).
Greenhouse gas	A gas that contributes to the greenhouse effect by absorbing infrared radiation. Carbon dioxide and chlorofluorocarbons are examples of greenhouse gases.
Net zero (carbon)	Making or resulting in no net increase of greenhouse gases into the atmosphere, this may include the results of carbon offsetting This is also known as carbon neutral.

Scope 1 Emissions	<p>Scope 1 covers direct emissions from owned or controlled sources:</p> <ul style="list-style-type: none"> <li>• Fuel combustion – diesel &amp; HVO</li> <li>• Company fleet</li> </ul>
Scope 2 Emissions	<p>Scope 2 covers indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the reporting company:</p> <ul style="list-style-type: none"> <li>• Purchased electricity, heat and steam</li> </ul>
Scope 3 Emissions	<p>Scope 3 includes all other indirect emissions that occur in a company's value chain:</p> <ul style="list-style-type: none"> <li>• Purchased goods and services</li> <li>• Business travel</li> <li>• Employee commuting</li> <li>• Waste disposal</li> <li>• Use of sold products</li> <li>• Transportation and distribution (up- and downstream)</li> <li>• Investments</li> <li>• Leased assets and franchises</li> </ul>

### 1.3 Abbreviations

Abbreviation	Abbreviation Definition
CCC	Committee of Climate Change
CSL	Carbon Sector Lead
HVO	Hydrotreated Vegetable Oil
SMART	Specific Measurable Achievable Realistic Timely
tCO <sub>2</sub> eq	Tonnes of equivalent carbon
tCO <sub>2</sub> eq/100K	Tonnes of equivalent carbon per £100,000 turnover.

## 2.0 Mission and Objectives

### 2.1 Mission

The overall target of the strategy is for Lowery to become 'carbon neutral' by 2040 and ensure that Lowery comply with current UK legislation.

To achieve the overall target, shorter term SMART objectives have been identified and allocated to the appropriate persons.

### 2.2 Success Criteria

The success of the Carbon strategy will be to achieve Net Zero Carbon emission by 2040 as well as the intermediate milestone of 45% reduction of 2023's scope 1 and 2 emission levels by 2030. Many of Lowery's clients are public bodies that increasingly regard carbon neutrality as a key component of a successful project. Lowery will benefit from a successfully implemented carbon strategy by remaining competitive, as clients become more proactive and have legally enforceable public sector carbon reduction obligations.

Accomplishing the shorter-term SMART objectives (Section 4) will not only provide momentum to achieve the current legislated carbon requirements but will also ensure Lowery are better placed to meet any future and more stringent carbon reduction legislation.

### 2.3 Project Description

The strategy aim is to achieve carbon neutrality by 2040, as well as the intermediate target of 45% reduction of scope 1 and 2 emissions by 2030.

The SMART objectives are set to achieve the overall target. These will need to be reviewed, as a minimum, annually and new SMART objectives identified. The SMART objectives have been set for five different sections of the business. Each sector has one carbon sector lead who are responsible for achieving the objectives and setting new objectives.

These areas are:

- Engineering, Design and Materials
- Supply Chain
- People and Training
- Carbon Reporting (SBTi targets) and Governance
- Fleet, Plant and Equipment and Site Set-Up

The objectives and timescales of each section is set out in section 4

### 3. Current Data

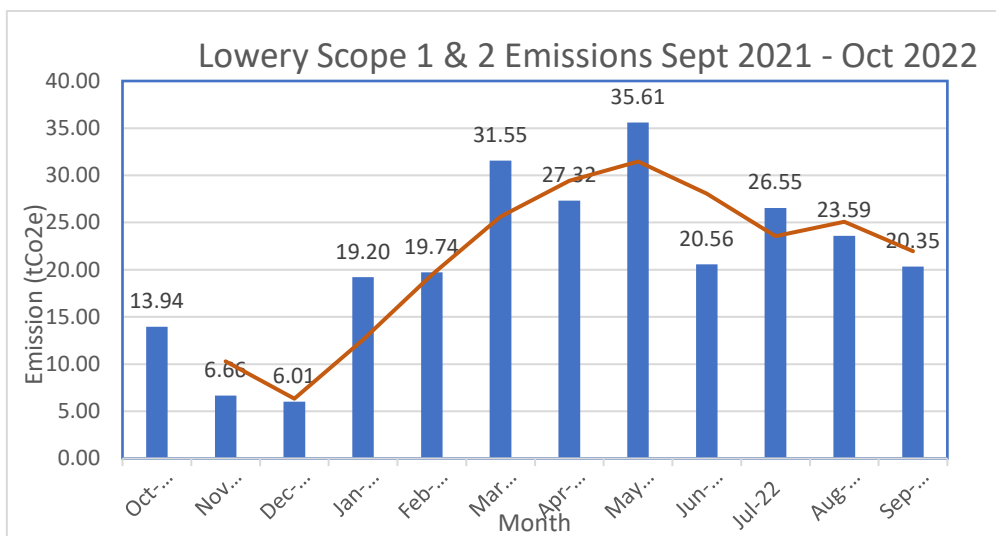
#### 3.1 Reporting

Lowery currently reports the scope 1 and 2 carbons emissions for all its projects using the Lowery Diesel & Electricity tracker module, part of our company intranet. The tracker captures diesel used by fleet, HVO fuel delivered directly to site and electricity consumption in the Norley Farm and Staines offices.

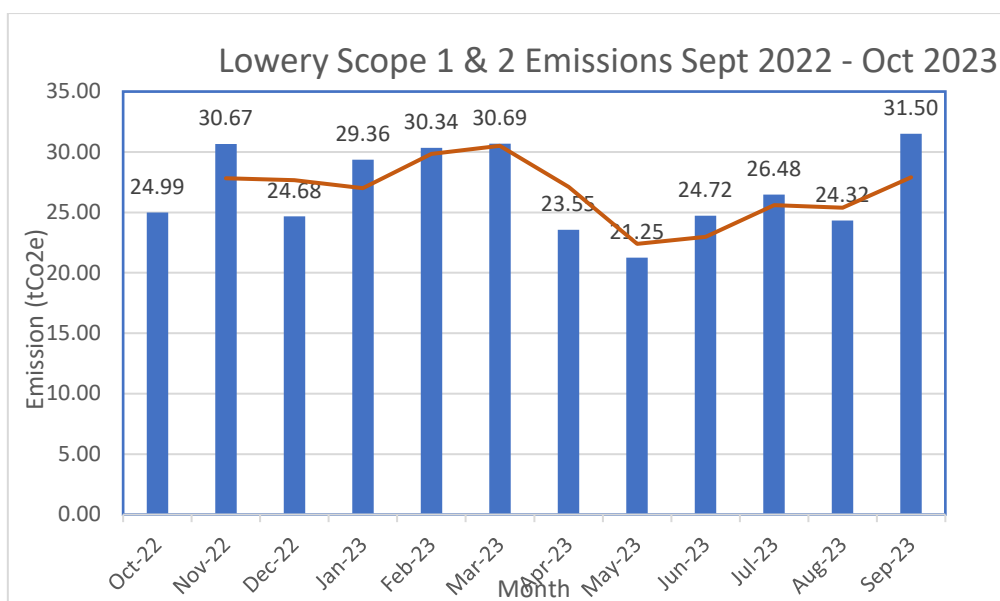
Capturing scope 3 emissions is not at present a legal requirement, however it is increasingly required by our clients and their sponsors and is necessary to achieve our Net Zero targets through science-based means. Lowery will begin capturing scope 3 information in 2024/25 to prepare benchmarks.

#### 3.2 Current Carbon Emissions

The following figures show Lowery’s scope 1 and 2 emissions for 2022 to 2023. Note: Lowery’s financial year for 2022 was from October 21 to September 2022. For proper comparison data for 2023 will be from October 2022 to September 2023.



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Deisel usage from fleet contributed to over 90% of the CO<sub>2</sub> emissions in 2022 and 2023. The overall emissions increased by approximately 6% in 2023 compared to 2022 due to increase in white diesel usage. Electricity usage increased by less than 1% between 2022 and 2023 possibly due to more people using the offices.

To have accurate data the total scope 1 & 2 emissions has been normalised per 100K turnover.

### 3.2.1 Scope 1 & 2 Emissions baseline and current

2022	October 2021 to September 2022
Emission	tCO <sub>2</sub> e
Scope 1	228.08
Scope 2	22.99
Total	251.07
October 21 to September 2022 Turnover	£14,673,021
Total/100k turnover	1.71 tCO <sub>2</sub> e

Current Year: 2023	October 2022 to September 2023
Emission	tCO <sub>2</sub> e
Scope 1	299.35
Scope 2	23.06
Total	322.54
October 22 to September 2023 Turnover	£16,844,424

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<b>Baseline Year: 2022</b>		
Emission	tCO <sub>2</sub> e	
Scope 1	288.08	
Scope 2	22.99	
Total Scope 1 & 2	251.07	
Total/100k turnover	1.71 tCO <sub>2</sub> e	
45% Reduction by 2030	112.98	
40% reduction in Scope 1	reduce scope 1 emission by 115.23 tCO <sub>2</sub> e	Equivalent to using = $(115.23/2.7) * 1000 = 42,678L$ less white diesel.
25% reduction in Scope 2 emissions	reduce scope 2 emission by 5.75 tCO <sub>2</sub> e	Equivalent to using 29,726.25 Kw/hr less electricity

### 3.3 Carbon targets

In addition to the legislated UK target of becoming Carbon Neutral by 2050, intermediate targets have been set by Lowery. Our target is to reduce scope 1 and 2 emissions by 45% from the 2022 baseline. This shall be achieved by:

- 40% reduction through use of an electric fleet and HVO fuel
- 25% reduction through use of renewable energy and energy saving initiatives
- 5% reduction due to specific actions taken by individual projects - reduction due to engaging with industry best practice and innovation e.g. use of HVO, battery powered tools and electric plant. This reduction target will serve as a back-up if the above targets are not achieved.
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#### 3.3.1 Change to Electric fleet

To achieve a 35% reduction in scope 1 emissions from the use of white diesel in Lowery's fleet. 23 site vans are to be changed to an (Z)EV equivalent by 2030. With the high-levels of innovation and technology improvements in the (Z)EV market, we are continuously monitoring the availability and planned introduction of higher-payload and longer distance vans and plant most suited to our business needs.

#### 3.3.2 Renewable energy

Currently all Lowery offices use a 74% renewable energy mix provided by British gas. By changing the renewable mix to 100%, a 25% reduction in CO<sub>2</sub> emissions from scope 2 will be achieved.

#### 3.3.3 Innovation and industry best practice.

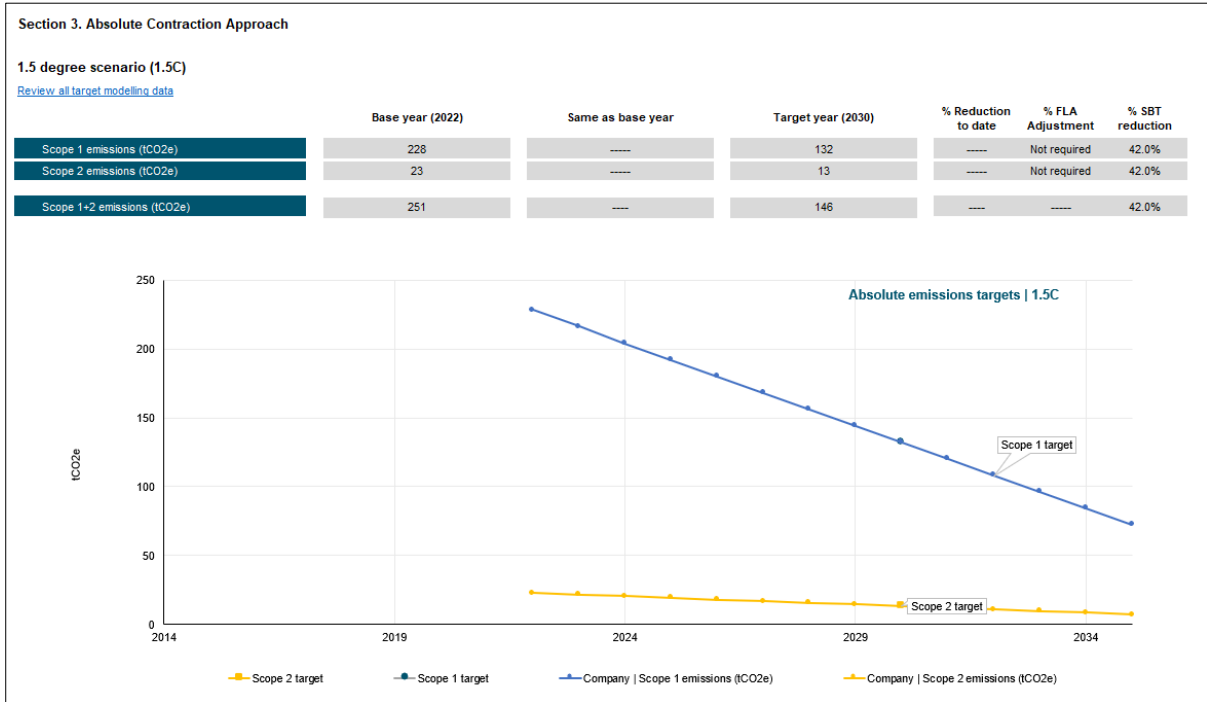
Lowery will also continue to keep up with innovation and best practices for national critical infrastructure, including rail, power and other sectors and monitor best practices to achieve reduction in CO<sub>2</sub> emissions. The use of HVO fuel for example can reduce Scope 1 emissions by at least 75%.



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## 3.3.4 SBTi targets

Using the SBTi target setting tool, for Lowery to achieve a net zero target by 2040, an intermediary target of at least 42% reduction by 2030 is necessary. Lowery has set a 45% target to encourage overperformance and protect our data-based path to net zero overall.



# 4. Execution

This section of the document details the strategies that the business needs to implement to achieve Net Zero Carbon by 2050.

The Carbon Sector Leads are crucial to the strategy's success. The Carbon Sector Leads are key individuals within Lowery leadership team who have an opportunity to influence others and have extensive knowledge of their assigned sector; they will be supported by Lowery's Sustainability Manager. They will set and monitor the SMART objectives detailed in section 4.1.

To achieve the SMART objectives, input and support from all Lowery teams and projects will be needed. Accomplishing the SMART objectives in each carbon sector will allow Lowery to succeed in reducing carbon emissions down to a net zero level.

The Carbon Sector Leads will monitor, review and set new SMART objectives as appropriate on an annual basis. The strategy will be reviewed on a yearly basis to reflect the progress in each carbon sector.

## 4.1 Carbon Sector Objectives

The following section details the five carbon sectors of Lowery, viz:

- Engineering, Design and Materials
- Supply Chain
- People and Training
- Carbon Reporting (SBTi targets) and Governance
- Fleet, Plant and Equipment and Site Set-Up

Each section details the following.

- The scope of each sector and the way it impacts the business
- The allocated carbon sector leads
- The SMART objectives

### 4.1.1 Engineering, Design and Materials

Although Lowery is currently not setting targets for the reduction of scope 3 emissions, this sector will have a major impact on the overall scope 3 emissions.

The carbon efficiency of a design is to be considered at all stages of the design process and at the earliest opportunity. The earlier the opportunities are identified, the less they are likely to cost both in monetary terms and design effort. Engineering decisions and choice of construction method can also impact scope 1 and 2 emissions.

The materials of a structure can account for approximately 50% of the structure's total carbon emission. This makes the selection of materials and distance from manufacturer and supplier important considerations when choosing, ordering and managing materials.

Materials will as far as possible be planned so that the number of deliveries can be minimised while also managing materials delivered to minimise material wastage.

To fully understand how choices relating to components, materials and design processes affect scope 1 and 2 emissions (indirectly) and scope 3 emissions, Lowery will decide on how to measure, report and review the data objectively using a standardised approach which

limits individual interpretation. Example carbon calculators/databases available such as the Inventory of Carbon and Energy (ICE) and Rail Carbon Tool calculator which allow for the carbon of a material to be calculated. The choice of carbon calculator will depend on the type of project and will be defined by the Carbon Sector Lead.

Carbon emissions throughout the life cycle need to be considered to produce a carbon efficient structure regardless of project phase. Lowery will engage at the earliest possible opportunity with both client and designers to achieve this.

<b>Design, Engineering and Materials</b>		
<b>Sector Lead: Head of Engineering</b>		
<u>Sector</u>	<u>Immediate actions</u> <u>2024 - 2025</u>	<u>Short term action</u> <u>2026 - 2030</u>
<b>Design, Engineering and Materials</b>	<ul style="list-style-type: none"> <li>• Collate Lowery scope 3 emission data (2025)</li> <li>• For tenders won (£5M and above), establish project carbon baseline for scope 1, 2 and 3 emissions based on project tender design using current assessment methods (2025)</li> </ul>	<ul style="list-style-type: none"> <li>• Establish a carbon baseline at tender stage for projects £5M and above (2028)</li> <li>• Every project to demonstrate one design carbon saving made through each design stage (2030)</li> <li>• Establish how to assess the carbon efficiency of a design/engineering solution and how a design/engineering solution could be value engineered to improve (2030)</li> <li>• Offer our clients at least two low carbon solutions per tender for consideration (2030)</li> </ul>

**4.1.2 Supply chain**

Although Lowery is currently not measuring its scope 3 emissions, data to ensure an accurate figure is derived is to be collated from 2024. These emissions are indirect emissions that occur in Lowery’s supply chain. It is important to work with the supply chain to reduce these emissions.

<b>Supply Chain</b>		
<b>Sector Lead: Head of Finance</b>		
<u>Sector</u>	<u>Immediate actions</u> <u>2024 - 2025</u>	<u>Short term action</u> <u>2026 - 2030</u>
<b>Supply Chain</b>	<ul style="list-style-type: none"> <li>Achieve compliance with ISO 20400 sustainable procurement (2025)</li> </ul>	<ul style="list-style-type: none"> <li>Include in all subcontracts (£M above) a requirement to suggest a reasonable carbon efficient design option (2026)</li> <li>Requirement for reporting scope 1, 2 and 3 carbon emissions written into all subcontracts. Reporting tool for scope 1 and 2 to be agreed with Carbon Reporting Sector Lead. Supply chain input also to be considered (2026)</li> </ul>

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### 4.1.3 People and Training

A key component to achieving Net Carbon Zero by 2050 are the individuals working for Lowery.

Without a culture striving towards 2050 carbon neutrality we will not achieve the Net Zero Carbon. We must develop and maintain a culture where carbon savings are important. This will be achieved by developing every employee's understanding of why this is important and the role they play in achieving the goal.

Lowery's commitment to reaching Net Zero Carbon by 2040 and all intermediate targets will be promoted from the top down by the Carbon Sector Leads. It is important that individual awareness and understanding of Net Zero Carbon is improved through formal training, e-learning and awareness events.

<b>People and Training</b> Sector Lead: Head of HR		
<u>Sector</u>	<u>Immediate actions</u> <u>2024 - 2025</u>	<u>Short term action</u> <u>2026 - 2030</u>
<b>People and Training</b>	<ul style="list-style-type: none"><li>• Include carbon slide and questions in the company induction (2025)</li><li>• Role out sustainability training that includes carbon to the Lowery team (2025)</li><li>• Review possible training for all grades (operational staff) and produce training plan (including plant operator training etc) (2025)</li><li>• Become actively involved in at least one external carbon working groups e.g. Supply Chain Sustainability School (2025)</li></ul>	<ul style="list-style-type: none"><li>• Extend carbon training to all our subcontractors (2028)</li><li>• Include carbon competency into all job description(2026)</li><li>• Implement training plan (2028)</li></ul>

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### 4.1.4 Carbon Reporting and Governance

Lowery must ensure accurate scope 1, 2 and 3 emission data is collected from all projects. Data needs to be collated in a consistent manner across all projects.

Changes to policies to ensure the carbon targets are achieved need to be agreed and managed by the carbon reporting sector lead.

SBTi will be notified and scope 1 and 2 targets publicly set in 2024.

<b>Carbon Reporting and Governance</b>		
<b>Sector Lead: Head of Compliance</b>		
<u>Sector</u>	<u>Immediate actions</u> <u>2024 - 2025</u>	<u>Short term action</u> <u>2026 - 2030</u>
<b>Carbon Reporting</b>	<ul style="list-style-type: none"><li>• Carry out an assessment to become compliant to PAS 2060 (Carbon Neutrality) and PAS 2080 (Carbon Management in Infrastructure) (2024)</li><li>• Produce a carbon and energy policy</li><li>• Set SBTi targets of 1.5°C by 2040 for scope 1 &amp; 2 and make a commitment (2024)</li><li>• Review tools for measuring scope 1, 2 and 3 agree upon a preferred tool for use across the business (2025)</li><li>• Collate scope 3 data and understand the impact on overall emissions for the business (2025)</li></ul>	<ul style="list-style-type: none"><li>• Scope 3 reporting across the business following setting of effective baselines</li></ul>

### 4.1.5 Fleet, Plant, Equipment and Site Set Up

This sector has the biggest opportunity impact to our scope 1 and 2 emissions and will therefore significantly contribute to achieving a 40% reduction of scope 1 and 2 emissions by 2030.

A key focus for this sector will be to reduce or eliminate the use of red diesel from our operations. This will be achieved by engaging with our fleet and plant providers to identify innovative and clean green technology and by eliminating diesel generators and connecting our sites to the grid.

This is to be replaced by renewable energy sources on longer running projects which have the added benefit of reducing operating costs. By completing the immediate and short-term actions in the tables below it is estimated that the following carbon emission reductions can be made to the business.

- Reduce fleet fuel consumption by 30% by 2030
- Reduce plant fuel consumption by 5% by 2030

These reductions are based on the baseline detailed in section 3.2.

<b>Fleet, Plant, Equipment and Site Set Up</b> <b>Sector Lead: Head of Fleet</b>		
<u>Sector</u>	<u>Immediate actions</u> <u>2024 - 2025</u>	<u>Short term action</u> <u>2026 - 2030</u>
<b>Fleet, Plant, Equipment and Site Set Up</b>	<ul style="list-style-type: none"> <li>• Run an internal campaign in 2024 to show cost savings and benefits of using electric vehicles.</li> <li>• Ensure telematics is included in the data provided by all plant hire companies to understand how human behaviour impacts carbon emissions (2024)</li> <li>• Produce a minimum standard site set up and communicate to all (2024)</li> </ul>	<ul style="list-style-type: none"> <li>• Change 30% of the Lowery fleet to electric by 2030</li> <li>• Installation of photovoltaic charging points at all permanent office locations and site compounds by 2030 (where parking is available)</li> <li>• Ensure the latest and cleanest fuel technology is understood and the use of alternative fuel, such as HVO fuel, or fuel additives to reduce emissions of plant is implemented on all projects (2030)</li> <li>• All Lowery projects connect to the grid, using renewable energy sources as their primary option of electricity sources (2030)</li> </ul>

### 4.2 Delivery

The intention is that the Carbon Sector Leads will manage, monitor and implement the Carbon Strategy.

The Carbon Coordinator will support the monitoring and reporting on the objectives. Input from project teams, suppliers and design consultants will be key to the implementation of the strategy. Much of the work required for the success of the Carbon Strategy lies with the project teams but overall accountability will be with the Carbon Sector Leads. To successfully monitor progress the baseline needs to be fully defined.

The way that carbon is measured on all types of projects must be established at an early stage to ensure all data collected is comparable. It is important that the reporting process is objective and the scope for subjective interpretation is reduced to a minimum. The relevant Carbon Reporting Sector Lead will lead the reporting and baselining of each project.

Whether the management and implementation of the strategy requires a full-time role, or it can efficiently be carried out by individuals already in the business, in addition to their current responsibilities, will need to be continuously monitored by the Carbon Strategy Owners. The Carbon Coordinator will assist the Carbon Sector Leads in the monitoring of progress against set targets in a similar way as currently used for other business targets. The Net Zero Carbon strategy and reporting will be added to the existing business report.

### 4.3 Reporting

Project reporting and forecasting takes place quarterly, this involves commercial results, programme, productivity and Health and Safety. Carbon emissions must become a reporting requirement and all project leads made accountable in the same way as they are for the other areas. The Carbon Sector Leads will review and report progress to the Carbon Coordinator on a 6-monthly basis (September and March of each year).

### 4.4 Change and continuous improvement

As a business we are progressing to achieve the Government mandate to bring our greenhouse gas carbon emissions to net zero by 2050. With several initiatives, funding opportunities and technologies it is expected that there will be regular updates to our strategy to reflect and incorporate such findings. Already within Lowery in our management system, we have processes to manage change and continuous improvement. These processes will be adhered to in the event of any change to this document.



4.5 Risk Register

	Risk Description	Likelihood of risk occurring	Impact if the risk occurs	Severity (Rating based on the impact & likelihood)	Owner (Person who will manage the risk)	Mitigating action (Actions to mitigate the risk e.g. reduce the likelihood)
1	Resources to implement and deliver carbon strategy are insufficient e.g. cost of changing fleet to EV vehicles, purchasing renewable energy etc.	High	High	High	Company Operations Director	<ul style="list-style-type: none"> <li>Company director to ensure resources to implement and deliver the carbon strategy are sufficient.</li> <li>Carbon Sector Leads to drive change within each area and report to the OD if resources are lacking.</li> <li>Review accreditation to industry specifications like PAS2060 Carbon Neutrality and audit against compliance</li> <li>SMART Targets have a measured outcome that can be reviewed against performance.</li> </ul>

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2	Legislation changes may mean that we need to accelerate our strategy to enable us to stay competitive in the wider market	High	High	High	All sector Leads	<ul style="list-style-type: none"> <li>• Sustainability Manager to continually monitor legislation and keep strategy up to date with changes</li> </ul>
3	Profit margin is adversely affected by implementing the changes within the strategy	High	High	High	Company Directors	<ul style="list-style-type: none"> <li>• Sector Leads to review targets in line with our competitors to ensure that they are ambitious but reasonable</li> <li>• Reporting of carbon data to be added to Management Meeting agenda so that it can be reviewed alongside commercial data</li> <li>• Commercial teams to take an active part in carbon data reporting</li> </ul>