

Modular Designed Solutions | 2024

Towards a Sustainable Future

An ambitious Carbon Reduction Plan
compliant with PPN 06/21

MAKING THE DIFFERENCE

through sustainability and decarbonisation



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Introduction

On Monday 20th March 2023 António Guterres, Secretary-General of the United Nations, said “The world is rapidly approaching catastrophic levels of heating with international climate goals set to slip out of reach unless immediate and radical action is taken. The climate time-bomb is ticking, humanity is on thin ice – and that ice is melting fast”.

The report released on Monday by the U.N. Intergovernmental Panel on Climate Change (IPCC) draws on the findings of hundreds of scientists to provide a comprehensive assessment of how the climate crisis is unfolding. It concludes that the world is likely to pass a dangerous temperature threshold within the next 10 years, pushing the planet past the point of catastrophic warming unless nations drastically transform their economies and immediately transition away from fossil fuels. This is one of the most definitive reports ever published about climate change.

Researchers found that the world is likely to miss the most ambitious climate target 4 limiting warming to 1.5 degrees Celsius above preindustrial temperatures 4 by the early 2030s. The current trajectory is for a 2.2 to 2.4 degrees Celsius of warming. Beyond that threshold, scientists have found, climate disasters will become so extreme that people will not be able to adapt. Basic components of the Earth system will be fundamentally, irrevocably altered. Heat waves, famines and infectious diseases could claim millions of additional lives by the end of the century.

In 2019 the UK became the first major economy to pass a Net Zero emissions law, meaning the UK government is legally required to reach Net Zero emissions by 2050. When the UK government published its procurement policy note 06/21 (PPN 06/21), it was clear that businesses should focus on building back the economy in a sustainable fashion. The scope of this requirement has broadened to encompass the NHS, which has mandated all of its vendors to submit a PPN 06/21 in alignment with the UK Government's goal.



Paul Briars
CEO Lorne Stewart Engineering



“

MDSL is committed to achieving Net Zero by 2050. We have already started in making steps to reduce our carbon footprint and will continue to innovate and implement schemes across our offices, projects and contracts that will reduce the carbon we produce.

We believe collaboration with our customers and supply chain partners is key in us all working together to make sure that we make the necessary impacts to achieve Net Zero.

”

Our Approach

Modular Designed Solutions is part of a wider group; Lorne Stewart Group. MDSL manufacture a range of mechanical and electrical offsite solutions. We provide our customers with innovative and sustainable design solutions throughout the construction industry.

As a value-led and customer-centric business, we recognise that sustainability is not only good for the planet, but it is also good for our customers and our bottom line.

We understand that every species has a vital role to play in maintaining balance within the eco-system. We seek to learn more and more every day to understand how our business can contribute to maintaining this balance.

Our company is conducting a strategic review to ensure that our carbon reduction endeavours are integrated throughout our business, from suppliers to operations, down to our customers. We are prioritising the most valuable areas for reducing our carbon footprint and have set a target to achieve Net Zero by 2050.

Corporate Responsibility and Accountability

Lorne Stewart Group is on a journey to create a sustainable future and we want to ensure that journey is transparent, credible, impactful, and measurable. To this end, we are committed to achieving Net Zero emissions by 2050. To ensure we achieve our aims, we partnered with carbon consultancy Enistic, who calculate and track our carbon emissions in accordance with the GHG protocol.

We firmly believe that our efforts to prioritise sustainability not only align with our core values but also position us for long-term success in an increasingly environmentally conscious society.

In addition, we are not only focusing on mitigating our own environmental impact, but we are also committed to increasing sustainability within our supply chain. We have recently achieved Gold Status in the Supply Chain Sustainability School – a multi-award-winning initiative and industry recognised accreditation. This highest level of membership helps us, as an organisation, to benchmark our progress on key sustainability topics and gives the business targeted learning for our employees and subcontractors.



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Our Carbon Reduction Targets

MDSL is committed to a 100% reduction in all scope 1, 2, and 3 emissions by 2050. Our carbon reduction goals align with the IPCC’s carbon reduction roadmap.

2050



All our emissions reductions will be primarily achieved through ambitious carbon reduction projects and offsetting carbon emissions will only be considered in cases of unavoidable emissions. MDSL will work with its partners to establish a yearly emission reduction target and this KPI will be integrated into our reporting system to ensure annual targets are met.

Emissions Categories

Currently, we measure all our scope 1 and scope 2 emissions following the GHG protocol, and we measure a subset of scope 3 emissions (PPN 06/21 requirement) following Corporate Value Chain Scope 3 Standard.

| GHG Scope | Emissions sources |
|----------------|--|
| Scope 1 | Direct emissions resulting from sources that are owned and controlled by MDSL |
| Scope 2 | Indirect emissions from purchase of electricity and onsite EV charging |
| Scope 3 | Indirect emissions from other sources not included in Scope 1 and 2 categories |





Modular Designed Solutions Carbon Reduction Plan

in accordance with requirements
for PPN 06/21



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Commitment to Net Zero

MDSL is committed to become net zero. Our carbon reduction goals align with the IPCC’s carbon reduction roadmap.

This report sets out a Net Zero roadmap, detailing the strategies we have put in place to achieve this goal.

Emissions Comparison

The table below shows remissions from our baseline year (Jan-Dec 2022) and reporting year (Jan- Dec 2023). Baseline emissions are a record of the GHGs that have been produced in the past – before introducing any strategies to reduce emissions – and are the reference point against which emission reductions can be measured.

2022 was the first year where we had a complete GHG inventory, which is required for PPN 06/21 compliance. Our current reporting period is 01 Jan 2023 - 31 Dec 2023.

| Emissions | Total (tCO2e) for 2022 baseline period | Total (tCO2e) for 2023 reporting period | % Difference |
|------------------------|--|---|--------------|
| Scope 1 | 8.6 | 8.3 | -3% |
| Scope 2 | 10.8 | 15.8 | 46% |
| Scope 3 | 189.9 | 43.6 | -77% |
| Total Emissions | 209.3 | 67.7 | -68% |
| Intensity Ratio | 7 kgCO2e per sqft | 2 kgCO2e per sqft | -68% |

Calculation Assumptions

Delivery data was calculated by sending a survey to suppliers and extrapolating the responses.
Assumed 98% of employees travel to/from work by car.

Used expense system to estimate train mileage.



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Emissions Breakdown

| Scope 1 | Total (tCO2e) for 2022 baseline period | Total (tCO2e) for 2023 reporting period | % Difference |
|------------------------|--|---|--------------|
| Natural Gas | 8.6 | 8.3 | -3% |
| Company Vehicles | 0.0 | 0.0 | - |
| Total Emissions | 8.6 | 8.3 | -3% |

| Scope 2 | Total (tCO2e) for 2022 baseline period | Total (tCO2e) for 2023 reporting period | % Difference |
|------------------------|--|---|--------------|
| Electricity | 10.8 | 18.8 | 46% |
| Total Emissions | 10.8 | 15.8 | 46% |

| Scope 3 | Total (tCO2e) for 2022 baseline period | Total (tCO2e) for 2023 reporting period | % Difference |
|----------------------------|--|---|--------------|
| Water | 0.1 | 0.0 | - |
| Deliveries (Upstream) | 47.7 | 8.9 | -81% |
| Waste | 71.5 | 3.2 | -96% |
| Commuting and Home-working | 25.6 | 11.8 | -54% |
| Deliveries (Downstream) | 22.7 | 9.3 | -59% |
| Grey Fleet | 13.7 | 3.1 | -77% |
| Well-to-Tank | 7.4 | 5.9 | -21% |
| Electricity T&D | 0.9 | 1.4 | 56% |
| Total Emissions | 209.3 | 67.7 | -68% |



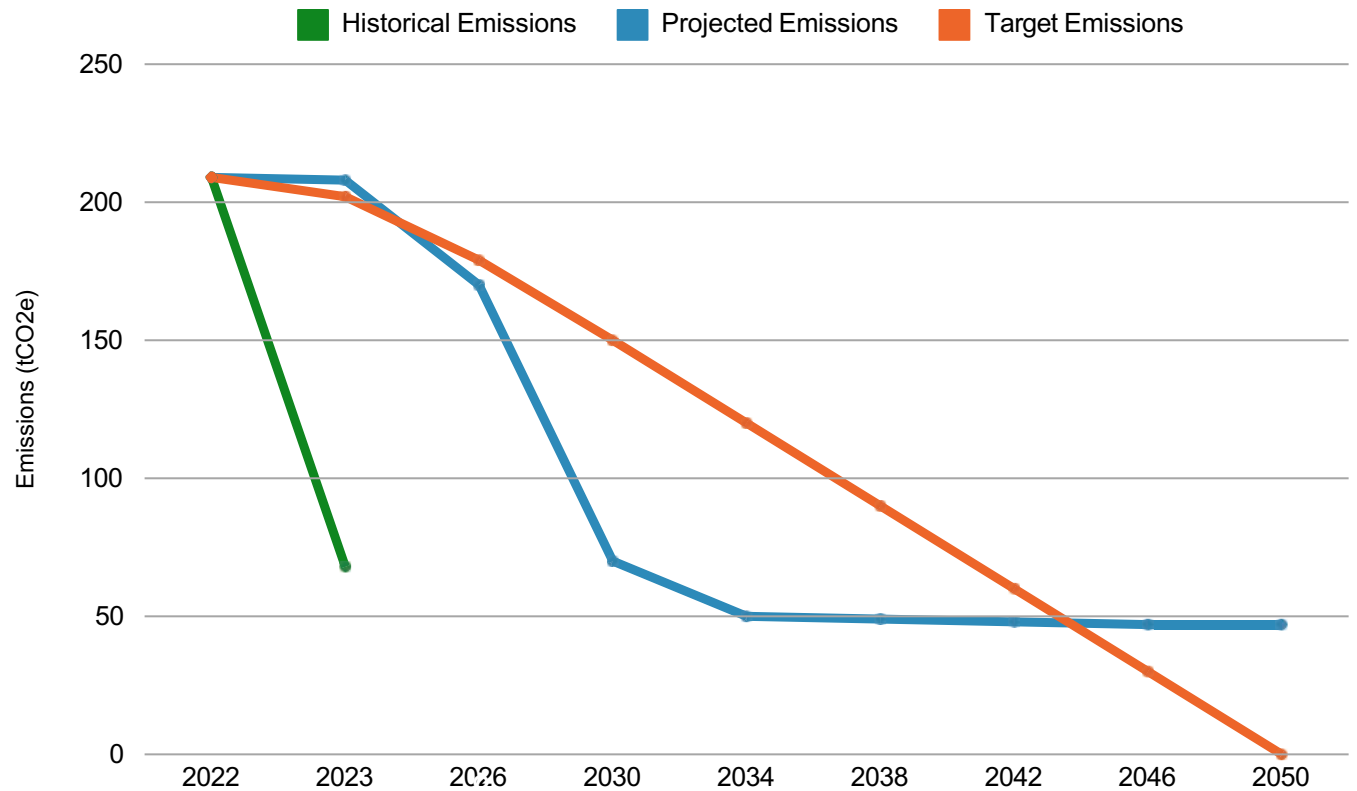
Emission Reduction Targets (1)

To continue our progress towards achieving Net Zero, we have developed a Net Zero target for 2050.

We project an absolute linear reduction in our emissions from our baseline year to Net Zero emissions by 2050. These targets may change as new projects are implemented. Prior to our baseline year, we tracked scope 1 and 2 emissions.

The graph on the right depicts our projected vs targeted emissions. Starting with our baseline emissions from 2022, the projected (blue) line shows our potential emissions as we introduce carbon reduction plans. In addition, the target emissions (orange) shows a gradual reduction until 2050. The green line demonstrates our historical emissions to date.

Moving forward, additional carbon reduction measures may become more feasible and so more emission mitigation will occur - altering these current projections. As a last case scenario, we plan on offsetting our emissions where there is absolutely no feasible alternative. This is where any residual emissions, that we are unable to mitigate, will be offset in order for us to achieve our net zero target.



| | 2022 | 2023 | 2030 | 2040 | 2050 |
|----------------------|------|------|------|------|------|
| Historical Emissions | 209 | 68 | | | |
| Projected Emissions | 209 | 208 | 70 | 49 | 47 |
| Target Emissions | 209 | 202 | 150 | 75 | 0 |

Emission Reduction Targets (2)

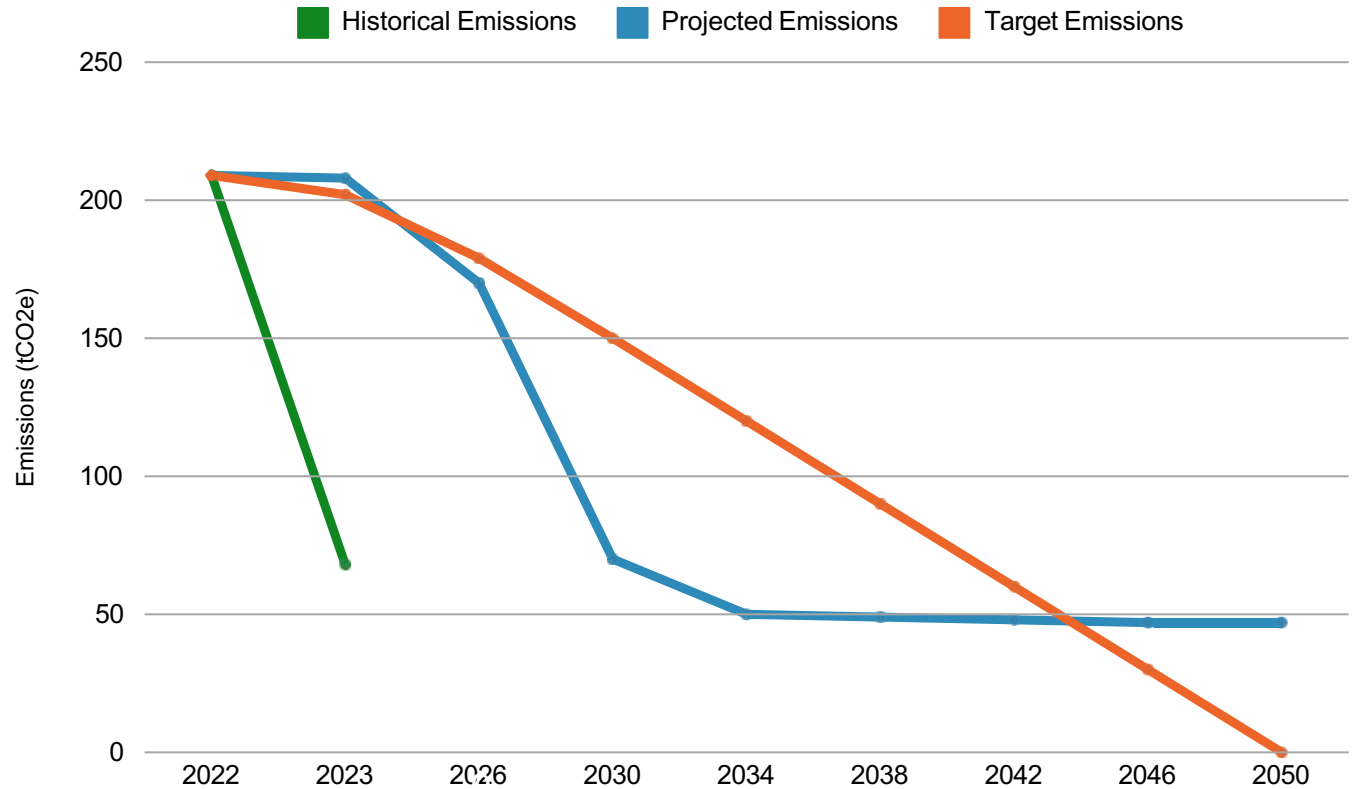
The projected emissions (blue) bar portrays our emissions after reduction targets have been implemented. The reduction targets considered in the projection are listed below:

- Renewable electricity tariffs
- Energy efficiency analysis
- Supply chain analysis

Our 2022 emissions do not account for any renewable tariffs. Since the end of 2023, all sites purchase electricity through renewable tariffs. Therefore, we this reduction has been projected from 2024 onwards.

Furthermore, after conducting an energy efficiency analysis, and implementing reduction measures, it is assumed that we will see a 10% reduction across our gas and electricity emissions by 2030. In addition to this, we assume another 10% reduction, by 2030, will occur from installing more efficient office equipment.

As we work with our supply chain, we estimate that our upstream deliveries will see a 20% emission reduction by 2030.



| | 2022 | 2023 | 2030 | 2040 | 2050 |
|----------------------|------|------|------|------|------|
| Historical Emissions | 209 | 68 | | | |
| Projected Emissions | 209 | 208 | 70 | 49 | 47 |
| Target Emissions | 209 | 202 | 150 | 75 | 0 |

Completed Carbon Reduction Projects

The following environmental management measures and projects were implemented before or during 2022.

ISO50001 Energy Management System Accreditation Certification to ISO 50001 highlights our commitment to continual improvement in energy management, allowing us to lead by example within our industry and ensure related legislative and regulatory requirements are met. Therefore, we will continue striving to achieve optimum energy efficiency across our sites.

Renewable Energy Suppliers

All of our sites use green electricity suppliers. Green tariffs promote the use of clean and renewable energy sources, which significantly reduces greenhouse gas emissions and dependence on fossil fuels. By choosing green energy, we are contributing to a cleaner environment and combating climate change.

Installation of Sensors on Plant and Office Equipment

We have recently installed sensors on many of our high energy consumers, such as our plant machinery and air conditioning. Consequently, we are able to accurately measure when energy is being wasted and therefore counteract this behaviour.



Future Carbon Reduction Projects

We aim to implement the following carbon reduction projects to reach our emission goals.

Supply Chain

We are currently working closely with our supply chain to reduce carbon emissions for upstream deliveries. We aim to encourage our suppliers to begin integrating electric vehicles into their fleet. Additionally, we will work with our suppliers to organise our deliveries so that our products are delivered in larger quantities and therefore less mileage will occur as a result.

Purchasing Products

We also aim to replace incoming goods with low carbon alternatives. Our procurement team is working to understand the embodied carbon in the products we currently purchase. Where possible, we hope to find more environmentally friendly alternatives.

Low Carbon Office Equipment

Moving forward, we aim to upgrade our current office equipment with more efficient alternatives. For example, we have plans in place to ensure all of our lighting is upgraded to LEDs. In addition, we're also aiming to upgrade other equipment such as our air conditioning to ensure it has optimum efficiency and no gas leaks.



Future Carbon Reduction Projects

We aim to implement the following carbon reduction projects to reach our emission goals.

Efficient Driving

We will regularly be sending our employees on Eco-Driving courses to ensure they are using fuel-efficient driving techniques. In addition, there will be better planning to ensure routes are optimised.

Installing Low Carbon Technology

In the future, we aim to install low carbon technology in our offices. This will consist of more efficient laptops, printers, monitors, etc. As a result, our office energy consumption will reduce as much as is currently technologically possible.

Installing Energy Management Sensors

We will also be installing additional energy management sensors on our office equipment so that we can analyse when energy is being wasted. This will ensure we can mitigate unnecessary energy usage.






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 standard and uses the appropriate Government emission conversion factors for greenhouse gas company reporting.

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

This Carbon Reduction Plan has been reviewed and signed off by the Board of Directors for Modular Designed Solutions.

| | |
|-----------------|--|
| Signed |  |
| Position | Paul Briars, CEO Lorne Stewart Engineering |
| Date | 28 January 2025 |



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