

PPN 06/21 - Roke

Carbon Reduction Plan

Roke Manor Research Ltd
Publication Date: 28 February 2023

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Commitment to achieving Net Zero

Roke Manor Research Ltd is committed to achieving Net Zero emissions by 2050.

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: 2020¹

ADDITIONAL DETAILS RELATING TO THE BASELINE EMISSIONS CALCULATIONS

Roke uses EcoOnline, EHS reporting system to gather data from across the business to provide CO₂e data on its operations and apply the UK Government “Greenhouse gas reporting: conversion factors” for the year of reporting.

Roke uses both location and market-based emission data in line with GHG Protocol Scope 2 guidance which recommends a dual reporting structure, in which Scope 2 emissions are calculated using both market-based and location-based accounting processes in tandem.

Roke was already monitoring and recording Scope 1 and 2 emissions for its operations, but a suitable robust and verifiable system was not in place to accurately capture Scope 3 emission at this point, but a future date of October 2023 has been set as the point in which a suitable Scope 3 system will be implemented.

Roke’s Scope 3 emission data is crucial to our road map to Net Zero and as such several systems are being assessed for suitability, viability and validity to ensure we can accurately capture our Scope 3 emission and ensure the data is suitable for independent third-party verification.

Roke uses ERM CVS consultancy to audit our system and record to ensure independent third-party assurances to ensure transparency in our emissions data, ERM use a ISAE 3000 assurance process for the GHG audits.

REPORTING YEAR: 2020	
EMISSIONS	TOTAL (tCO ₂ e) ⁱⁱ
Scope 1	
Natural Gas	0
Liquid Fuels	177.8 (Diesel)
Refrigerants	52.2
Scope 1 Total	230
Scope 2ⁱⁱⁱ	
Electricity Market Based	0
Scope 2 Total	0
Scope 3	
Upstream transportation and distribution	Not currently measured
Business travel	Not currently measured
Employee commuting	Not currently measured
Waste generated in operations	Not currently measured
Downstream transportation and distribution	Not currently measured
Scope 3 Total	Not currently measured
TOTAL EMISSIONS	230

Current Emissions Reporting

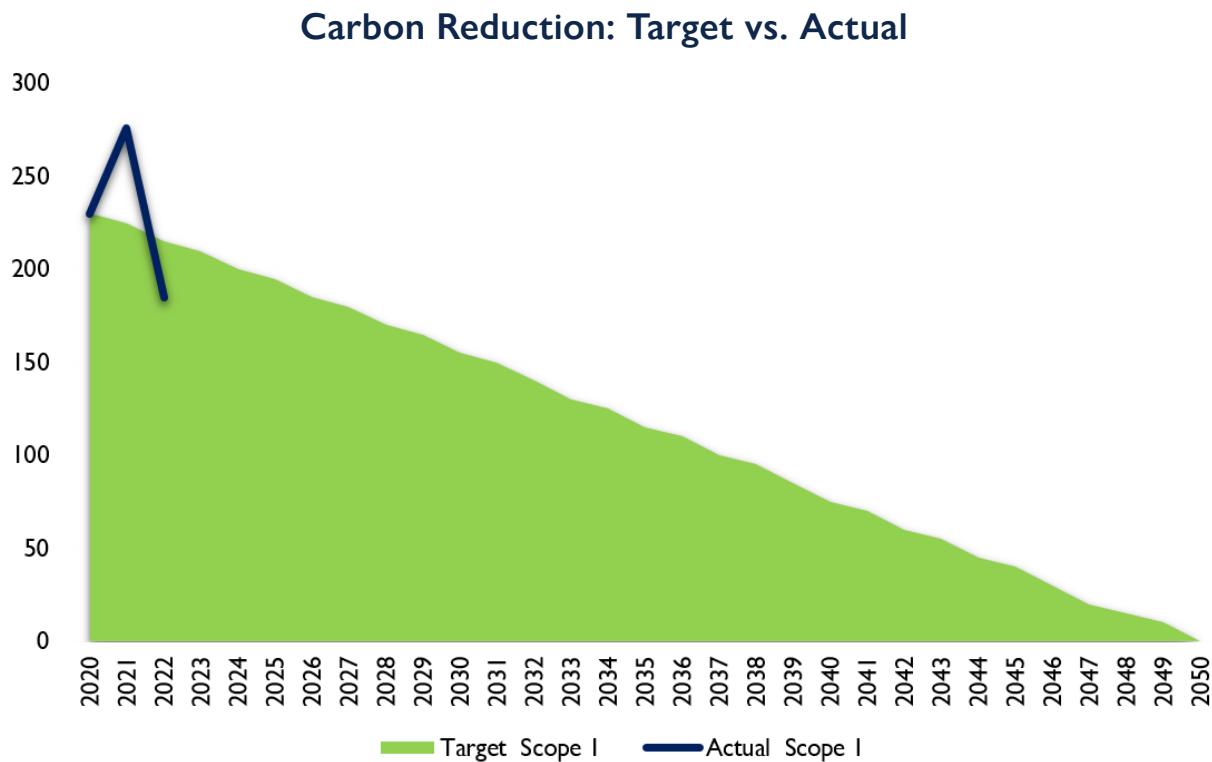
REPORTING YEAR: 2022 ^{iv}	
EMISSIONS	TOTAL (tCO ₂ e) ^v
Scope 1	
Natural Gas	0
Liquid Fuels	108.62 (Diesel) 0.21 (Petrol) 0.28 (HVO)
Refrigerants	75.56 ^{vi}
Scope 1 Total	184.69
Scope 2	
Electricity Market Based	0
Scope 2 Total	0
Scope 3	
Upstream transportation and distribution	Not currently measured
Business travel	Not currently measured
Employee commuting	Not currently measured
Waste generated in operations	Not currently measured
Downstream transportation and distribution	Not currently measured
Scope 3 Total	Not currently measured
TOTAL EMISSIONS	184.69

Emissions Reduction Targets

In order to continue our progress to achieving Net Zero, we have adopted the following carbon reduction targets.

We project that Scope 1 carbon emissions will decrease over the next five years from 2020 figure of 230tCO₂e to 80tCO₂e by 2025. This is a reduction of 65.2%

We will set a combined Scope reduction target once we are able to fully report and verify Scope 3 emissions as of October 2023.



Carbon Reduction Projects

Carbon Reduction Update

The following environmental management measures and projects have been implemented by Roke since the 2020 baseline.

73.74% of all Roke's Scope 1 & 2 emissions are from Scope 2 use of electricity; to which Roke is ensuring its Electricity requirements are coming from reputable and verifiable RECs/REGO/ROCs providing a market-based figure of 0 tonnes of CO₂e emission.

Roke's remaining emissions are Scope 1 which is mainly from fuel oil usage. To address these emissions Roke have sourced and used Hydrotreated Vegetable Oil (HVO) since April 2022 to reduce the emission from Scope 1 by 80% to 35.6 CO₂e.

Carbon Reduction Initiatives to date:

- Independent ESOS 2 - Project No. P303325 August 2019
- British Gas, reputable and verifiable RECs/REGO/ROCs for Scope 2
- BSI Certified ISO14001 Environmental Management System, (certificate EMS 580346)
- Replace Diesel with Hydrotreated Vegetable Oil (HVO) from April 2022
- 12 Electric vehicle charging points
- Refurbishment of Pavilion to include better insulation, temperature control, PIR lighting
- Refurbishment of 140 seat Hub space in leased building LED and PIR lighting, close to public transport hubs EPC C

Continuance Carbon Reduction Initiatives:

- BSI Certified ISO 14001 Environmental Management System Continued assessment and recertification
- British Gas, reputable and verifiable RECs/REGO/ROCs for Scope 2
- Replace Diesel with Hydrotreated Vegetable Oil (HVO), 100% by April 2023

Future Carbon Reduction Initiatives:

- Tusker car benefit scheme offering Hybrid, PHEV and EV cars for Roke staff
- ESOS 3 Report H2 2023
- LED lighting replacement ongoing - potential reduction 45.1 tCO₂e
- PIR light controllers, ongoing - potential reduction 4.2 tCO₂e
- Environmental engineering feasibility survey for alternative integrated environmental power supplies
- Replacement of boiler plant – potential reduction 16.4 tCO₂e
- Implementation of a suitable and verifiable systems for Scope 3 emissions data to enable baseline to be established
- Review set point temperature in IT servers and data centres – potential reduction 11.4 tCO₂e
- Reduce UPS active capacity, rebalance – potential reduction 15.0 tCO₂e

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 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) Standard.

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:



Paul MacGregor

Managing Director - Roke Manor Research Ltd

Date: 28 February 2023

- i Baseline year covers the period 01 November 2019 to 31 October 2020
- ii UK Government "Greenhouse gas reporting: conversion factors 2020
- iii Scope 2 emissions for 2020 were 645.7 tonnes (Location based) but through the purchasing of green energy /REC/ROC/REGO this now stands at 0 tonnes
- iv 2022 year covers the period 01 November 2021 to 31 October 2022
- v UK Government "Greenhouse gas reporting: conversion factors 2022
- vi Refrigerant leak – repair and maintenance June 2022
- vii Scope 2 emissions for 2022 were 866 tonnes (Location based) but through the purchasing of green energy /REC/ROC/REGO this now stands at 0 tonnes

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We do it by bringing the physical and digital together in
ways that revolutionise industries.**

That's why we've fostered an environment where some of the world's finest minds have the freedom, support and trust to succeed.

Roke is a team of curious and deeply technical engineers dedicated to safely unlocking the economic and societal potential of connected real-world assets. Our 60 year heritage and deep knowledge in sensors, communications, cyber and AI means our people are uniquely placed to combine and apply these technologies in ways that keep people safe whilst unlocking value. For our clients, we're a trusted partner that welcomes any problem confident that our consulting, research, innovation and product development will help them revolutionise and improve their world.

If you're bringing the physical and digital worlds together, we'd love to talk.

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