

An aerial photograph showing a large-scale industrial project on a river. A massive, golden-colored turbine component, consisting of a central hub and several curved blades, is being assembled on a large wooden barge. The barge is surrounded by other smaller barges and construction equipment. The water is dark and reflects the sky. In the foreground, another similar turbine component is visible, partially submerged in the water.

Jackson

Carbon

Reduction

Plan

Pathway to *Net Zero*

PPN 06/21

An evolving challenge

Civil engineering contractors contribute significantly to the built environment around us.

As an industry we deliver innovative projects that improve daily lives, such as offshore windfarms and flood defences. We also enable the provision of the basics of life, such as clean water, and safe places to live and work.

However, we are also aware that engineering and construction operations can have negative impacts on our local communities and global environment, if managed irresponsibly or without due diligence and care.

A crucial area that all businesses must now focus attention on is the reduction of Greenhouse Gas emissions, often referred to as Carbon, from all of their operations.

Jackson Civil Engineering has pledged to become a Net Zero company by 2035.



Net Zero company by 2035

Each sector clearly faces different carbon reduction challenges, but one thing is clear - *we cannot reduce what we do not actively identify and measure.*

That is why Jackson is committed to practical, demonstrable carbon reduction by:

- Targeting activities that generate the most carbon emissions
- Focusing on achieving meaningful reductions within our own operations and across our supply chain
- Making carbon reduction standard practice in every facet of our business
- Transparently recording our successes, failures and progress against UK standards and goals.

In this living document, we have outlined our carbon commitment in terms of our responsibilities as a conscientious contractor and specific actions we are taking to accelerate change.

We know that this is an evolving challenge that will demand ongoing attention and a willingness to constantly refocus and adapt, but we also believe it is a challenge we must commit to at the earliest opportunity.

Through our work on multiple collaborative frameworks for the Environment Agency, we have worked with our supply chain to trial and implement innovative decarbonising technologies, such as Hydrogen Fuel Cells (HFCs), Solar Arrays and Air Source Heat Pumps (ASHPs)

Our carbon responsibility

Our people are typically delivering vital engineering infrastructure projects at more than 50 live work sites at any given time. Our projects include highways construction, flood protection, structural improvements, residential developments and transport asset maintenance.

Despite every member of each project team - from our head office buyers to our project managers and site engineers - developing and delivering programmes of work planned around efficiency and minimum impact, every one of these schemes directly or indirectly produces carbon emissions.

In order to make significant changes in our own working practices that reduce carbon and combat climate change, we will measure and track emissions at a business, project and activity level.

Broadly speaking, direct greenhouse gas (GHG) emissions are from sources that we own or control, whereas indirect GHG emissions are related to energy use and activities up/down our supply chain.

Together they are categorised into three scopes:

- **Scope 1** covers direct emissions from sources that we own and/or control
- **Scope 2** covers indirect emissions from the generation of purchased energy
- **Scope 3** includes all other indirect emissions, including those of our suppliers, partners and clients

Jackson has had a focus on emission reduction for many years, having first recorded and reported emissions in 2007. We strongly believe that we are accountable for direct emissions under Scope 1 and Scope 2 and that we have some responsibility for encouraging innovation and behavioural changes up and down our supply chain which will contribute to reductions in Scope 3.

We already work with our clients, supply chain partners and procurement teams to encourage sustainable choices of materials and plant, as well as efficient technologies.

Jackson has a history of innovation in the Scope 3 arena, as it constitutes by far the largest source of our overall emissions, particularly the emissions embodied in cementitious products, steel and earthworks.



We work with our clients as early as possible to discuss options for using low-carbon concrete options wherever design and scope allows.

Our Carbon Reduction Plan – PPN 06/21

1st Publication Date:

31st March 2022

Commitment to achieving Net Zero by 2035

Our commitment includes Scope 1, 2 and Scope 3 emissions which we can directly influence, including:

- Purchased goods and services
- Fuel & energy related activities
- Waste generated in operations
- Business travel
- Employee commuting
- Downstream transportation



Our Net Zero strategy supports the *UN Sustainable Development Goal (SDG) 13: Climate Action*, established to combat climate change impact through direct action, by 2030.

We will achieve this commitment by 2035, by focussing on specific areas of the business where we can reduce carbon now. These areas include:

- Fleet – commuting and commercial
- Plant (Construction equipment)
- Site welfare set up
 - Fuel source, and cabins
- Material selection
- Innovation
- Offsetting

Baseline Emissions Footprint 2019:

History

Jackson Civil Engineering Group Limited baseline data includes Jackson Framework Ltd and Jackson Civils Ltd.

Jackson Civil Engineering started recoding our Greenhouse Gas emission baseline in 2009. This baseline acts as a reference point by which we evaluate our progress towards reducing our emissions and therefore achieving Net-Zero, reacting to the Climate Change Act 2008.

Jackson Civil Engineering Greenhouse Gas inventory for monitoring and evaluating our Scope 1, 2 and 3 emissions consist of those presented in *Table 1*, overleaf.



Table 1.

Jackson Civil Engineering, 2019 baseline emission sources.

Scope source:

	Emission source
Scope 1: Direct emissions controlled or owned by Jackson	Fleet and Plant fuel, HVO, Gas oil/LPG.
Scope 2: Indirect emissions from electricity	Purchased electricity – regional offices and sites.
Scope 3: Indirect emissions from other sources, not included in our scope 1 or 2 values	Electricity Transmission and Distribution

Going forward

Having gained an increased understanding of the importance of Scope 3 emissions, Jackson Civil Engineering has now included Business Mileage and employee commuting within our inventory.

Furthermore, to ensure we have a complete picture of our emissions profile and how our value chain contributes to Jackson overall emissions, we intend to capture:

- Upstream transportation and distribution.
- Waste generated in operations.

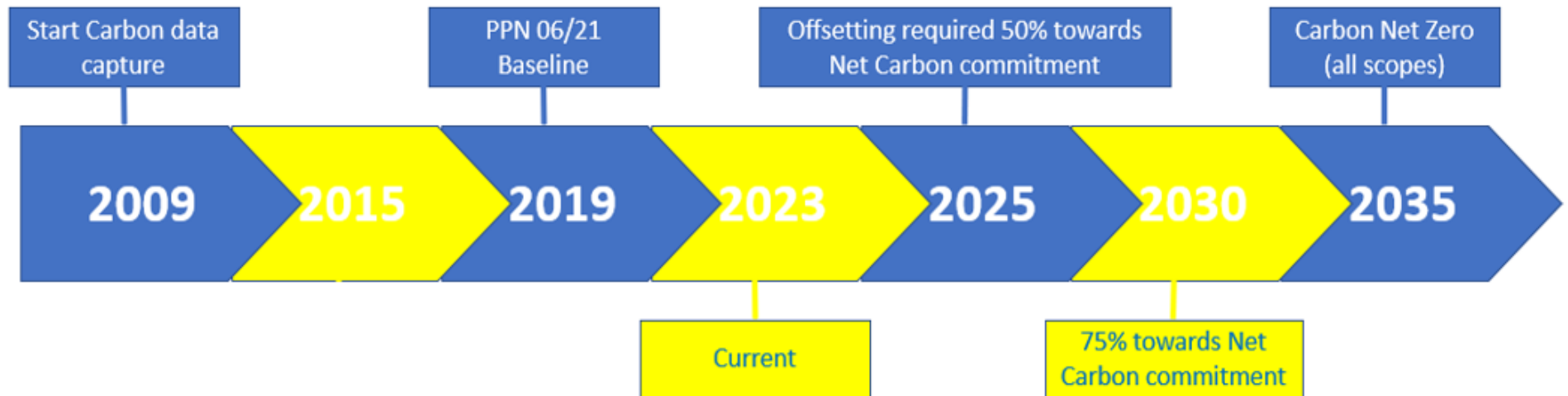


Table 2. Baseline Emissions Footprint 2019:

Scope	Emissions	Total (tCO _{2e})
Scope 1	Fuels - Gas Oil	1,763
	Fuels - Gas Regional Offices	1
	Fuels - LPG	16
	Fuels - Company Cars	106
	Fuels - Commercial Vehicles	276
Scope 1 Total		2,162
Scope 2	UK Electricity – site electricity/Regional office	44
	Scope 2 Total	
Scope 3	Electricity Distribution	6.2
Scope 3 Total		6.2
Total Emissions (Scope 1 ,2 & 3)		2, 212.20

Table 3. Current Emissions Reporting 2022:

Scope	Emissions	Total (tCO _{2e})
Scope 1	Fuels - Gas Oil	6
	Fuels - Gas Regional Offices	2
	Fuels - LPG	14
	Fuels - Company Cars	486
	Fuels - Commercial Vehicles	339
	Fuels - HVO	1
	Fuels - Diesel	1670
Scope 1 Total		2518
Scope 2	UK Electricity – site electricity/Regional office	539
	Scope 2 Total	
Scope 3	Upstream Transportation*	0
	Waste generated in operations*	0
	Business travel	13
	Employee commuting	120
	Electricity Transmission and Distribution	6
Scope 3 Total		139
Total Emissions (Scope 1 ,2 & 3)		3, 196

Current Emissions Reporting

Jackson Civil Engineering has documented our Greenhouse Gas emissions, implementing *Greenhouse Gas Protocol* frameworks pertaining to private sector operations. We use *Department for Business Energy and Industrial Strategy* Conversion Factors to report our Greenhouse Gas emissions.

Table 3 (previous page) presents similar sources of Scope 1-3 emissions that were collected for our baseline, with the inclusion of business mileage. This is calculated from data collected from our Telematic System, relevant to company car, car allowance and personal vehicles users.

All data is from primary sources, with the exception of some of our Regional Offices, where secondary data was relied upon using agreed method for calculating usage based on floor space, where Jackson employees operate within a shared office space.

Scope 1 emissions have reduced in 2022, notably a reduction of red diesel, substituted for white. Similarly, as JCE fleet increases its transition to a Low Carbon Alternative, emissions have increased in Scope 2, from generating the electricity to power our electric fleet. However, absolute emissions have fallen from the previous financial year by 7%, due to these Carbon reduction initiatives.



Why we do not record the non-mandatory parts of Scope 3 and what our plan is to cover these going forward:

Category 9: Downstream Transportation and Distribution in the Scope 3 emissions standard, has not been accounted for, because Jackson Civil Engineering is not a manufacturer, and therefore doesn't provide products to the market or end users.

During 2023 we plan to collect the remaining Scope 3 emissions presented in *Table 3*. We will do this by implementing assured methodologies from the *Greenhouse Gas Protocols*, where we have already consulted our employees to understand their commuting behaviours.



Our integrated site teams of Jackson leaders and supply chain specialists are meticulous in their monitoring and recording of emissions.



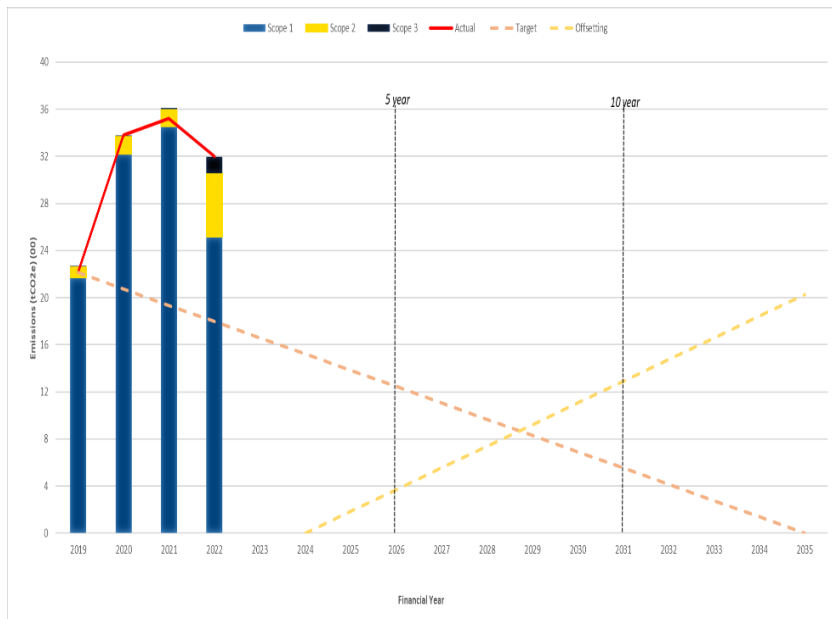
Emission reduction targets

In 2021, Jackson Civil Engineering committed to being Net-Zero across Scope 1-3 within our direct control by 2035. We develop plans to support suppliers to reduce their emissions and therefore our indirect Scope 3 emissions.

In order to facilitate our Net- Zero target, we project that our emissions will decrease over the next five years to 2,056 tCO_{2e} by 2028. This would represent a reduction of 42%.

Progress against these targets can be seen in *Figure 1* and *Figure 2* below.

Figure 1. JCE Absolute GHGe- 2019-22.



While *Figure 1* shows our emissions have increased year-on-year from our baseline year, this is due to data collection

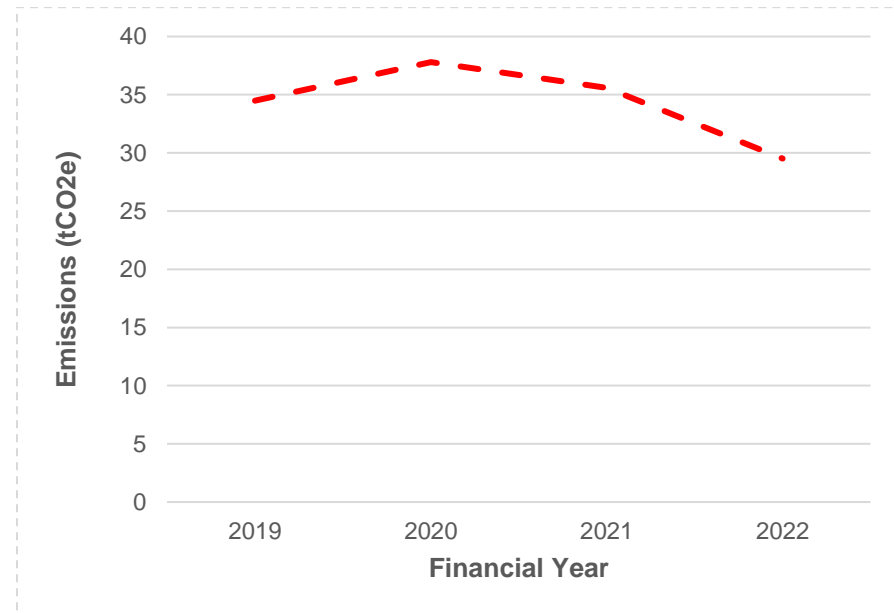
becoming more rigorous, and the introduction of data collection from our regional offices.

Progress against these targets:

Figure 2 below provides an indication of our carbon emissions normalised against turnover. It shows Jackson Civil Engineering emissions reducing year-on-year. This indicates that our greenhouse gas emissions have reduced when evaluated against million pounds of turnover.

Although our absolute has increased, this is measured against increased operational output from a lean period during 2019, increasing to normal operations in 2022.

Figure 2. Carbon emissions normalised against turnover.



Carbon reduction projects:

Completed Carbon reduction projects:

During 2023 we intend to create, sign-off and implement our *Net - Zero Strategy*. We have published our commitment to be Net - Zero by 2035.

The following environmental management measures and projects have been completed or implemented since our 2019 baseline. Carbon reduction initiatives implemented include:

- Company vans are now fitted with monitoring trackers that record and report driving behaviours
- Around 60% of all our sites in 2020 were powered by low-carbon solutions, ranging from renewable grid connections to installed solar arrays and battery systems
- We have piloted Hydrotreated Vegetable Oil (HVO) at our sites and intend to increase its use as an interim solution before hydrogen-fuelled larger plant becomes available, with 90% lower Net CO₂ emissions than fossil fuels
- Jackson is also trialling Hydrogen Fuel Cells (HFCs)
- Our car policy promotes the benefits of battery electric vehicles, as well as plug-in hybrid electric vehicles
- Over 50% of our fleet now comprises low-carbon vehicles
- EV Charging points were installed at Head Office Q3/4 2022 with the view of extending this to applicable sites
- Average CO₂ of our company car list is sub 50g/km
- There is a CO₂ cap on each car allowance of 140 g/km, with no vehicles sourced above this cap from 2023
- We are currently planning for certification to *PAS:2080 Carbon Management in Infrastructure*

Future Project Commitments:

Governance: Jackson will establish a company-wide *Sustainability Committee*, which will address the immediate operational and strategic sustainability issues affecting our business.

Energy - Forming elements of our Net Zero strategy:

- Procure from sustainable low-carbon energy providers and tariffs wherever we use electricity from the grid
- Increase our use of low-carbon fittings across office spaces where we have direct ownership
- Plan to offset 100% of our Scope 1-3 (direct) emissions, scaling back offsetting in line with our absolute Carbon reductions, until our 2035 Net – Zero commitment date.
- Continue to implement low-carbon solutions within our fleet/lease and personal user vehicles
- Establish an energy hierarchy to ensure targeted, prioritised uptake of low-carbon solutions.

Value Chain:

- We will work with our value chain to reduce our Scope 3 emissions, asking suppliers to commit to being Net - Zero, providing their plans, and improving our understanding of our Scope 3 emissions.

Waste:

- We will better understand and categorise the types of waste stream that we generate, and learn how we should implement the waste hierarchy to maximise reductions of upstream and downstream interactions with our waste and the associated GHGe.

Declaration



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, using the appropriate government emission conversion

factors for greenhouse gas company reporting.

Our Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions has 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 Jackson Civil Engineering’s board of directors.



Brian Crofton, Managing Director

