

# JIGSAW<sup>24</sup>

## PPN 06/21 carbon reduction plan

September 2021



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## Commitment to achieving net zero (carbon neutral)

Jigsaw Systems Ltd is committed to measuring and validating our carbon emissions in scopes 1, 2 and a subset of scope 3 (category 7: employee commuting) through 2022 to 2023 and substantially reducing our carbon emissions in scopes 1, 2 and 3 (measuring the relevant 12 of the total of 15 categories) by 2030.

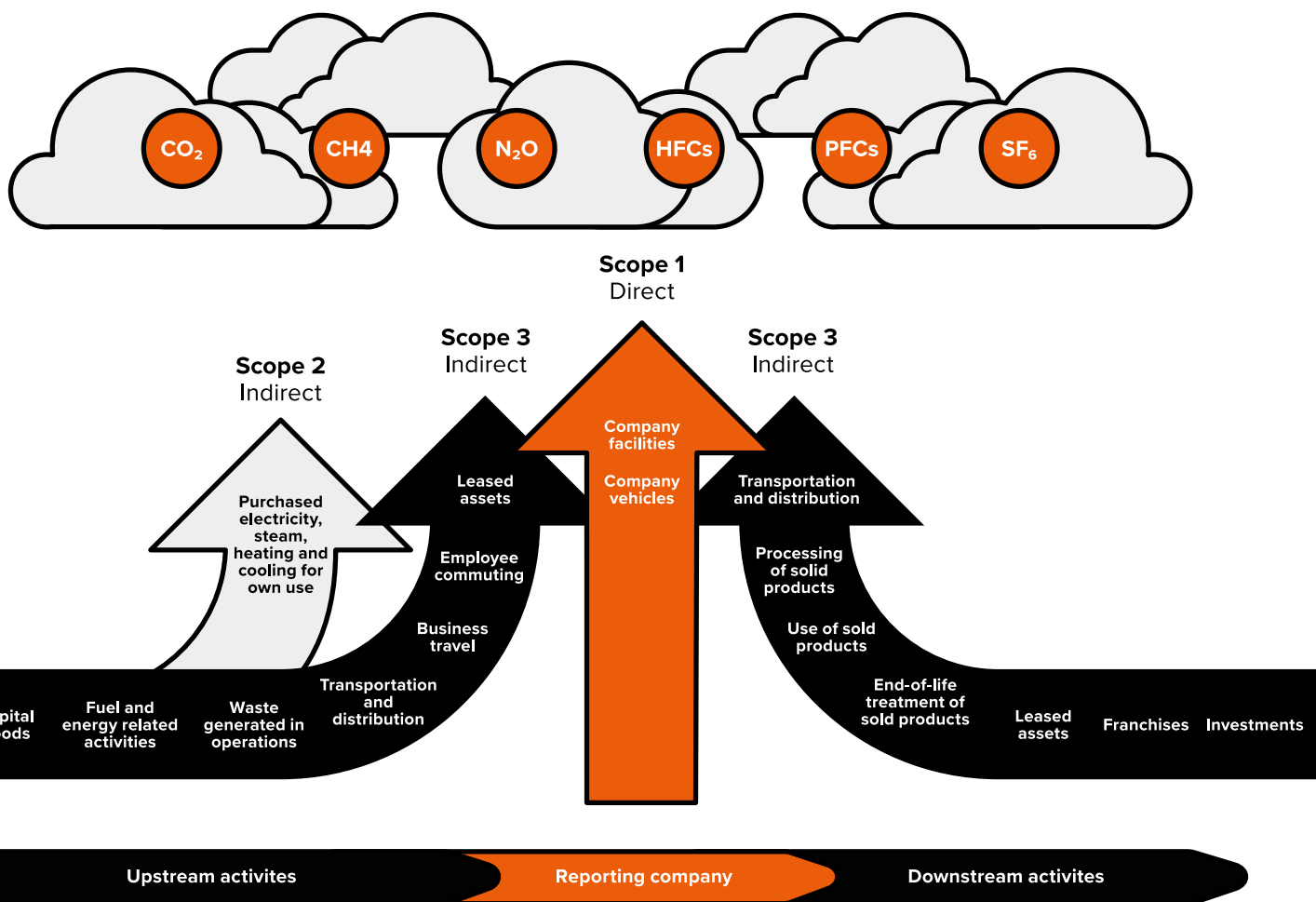
In order to continue our progress to achieving net zero (carbon neutral), we have adopted the following carbon reduction targets. Jigsaw24 intend that any target should be aligned with the Science-Based Targets initiative, intended to limit global warming by less than 1.5%. Jigsaw24 will be looking to formally sign up to the SBTi in 2022.

<https://sciencebasedtargets.org>

Based on the Scope 1,2 and 3 factors reported for 2020/21, we project that carbon emissions will decrease over the next five years by 78 tCO<sub>2</sub>e by 2026. This is a reduction of 33% against the baseline and takes into account an anticipated increase in emissions by 100 tonnes in 2022 due to the return to normality post-pandemic, and the impact of our new service centre building.

Jigsaw24 have committed to offsetting 800 tonnes of carbon with the Woodland Trust in 2021/22, which we believe will cover all increases in the emissions factors that we have reported in 2020/21. Jigsaw24 will look to verify this disclosure against the PAS 2060 standard.

In the longer term, Jigsaw24 will work with its key partners to support their efforts to reach net zero, with the aim that our cleaner tier one and two supply chains will allow us to reasonably offset our Scope 3 indirect courier emissions.



## 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: 2020/21 (June 2020 to May 2021)**

### Additional details relating to the baseline emissions calculations

While Jigsaw24 did produce a baseline report for 2019/20, which was carried out internally, for 2020/21 reporting we commissioned **Carbonfootprint.com** to produce an enhanced report. This expanded the scope of our reporting and allowed more detailed and accurate measurements with external verification. We have therefore established the 2020/21 report as our baseline. The additional factors that were considered in our scope 3 'subset' reporting included home working, employee commuting, waste, and water. Note that the reporting period is aligned to Jigsaw24's financial year, which runs from June to May.

Due to insufficient reporting available for Scope 3 upstream and downstream transportation at the time that the carbon footprint report was produced, emissions for downstream (purchased) transportation have been calculated subsequently based on a four-month analysis of actual courier data, extrapolated to give a twelve-month figure. Full details of the methodology used for courier emissions reporting are in Appendix A.

Baseline year: FY 2020/21	
Emissions	TOTAL (tCO2e)
Scope 1	5.69 tCO2e market and location based
Scope 2	56.95 tCO2e location based, 19.57 tCO2e market based
Scope 3 (included sources)	218.17 tCO2e location based, 206.26 tCO2e market based Employee commute (private and public transport) Home workers Well to tank, electricity transmission and distribution Business travel (private and public transport including flights) Water and waste Scope 3 – downstream transportation (purchased logistics) 141.52
Total emissions	422.32 tCO2e location based, 373.02 tCO2e market based

## Current emissions reporting

Reporting year: FY 2021 (June 2020 to May 2021)

As detailed below, as 2020/21 is our baseline. The current last reporting period is also 2020/21, therefore the data below is a replication of the baseline. We are using **Carbonfootprint.com's** Sustrax software for ongoing reporting in the current financial year.

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Total emissions	422.32 tCO2e location based, 373.02 tCO2e market based

A copy of our Streamlined Energy and Carbon report and full carbon reduction plan is available on request.

## Carbon reduction projects

### Completed carbon reduction initiatives

While we have set a new baseline for 2020/21, the following projects have already been completed or implemented over recent years and are under regular review. As these schemes were put in place before the baseline was set, it is not relevant to detail their carbon reduction effect. We do have data on the impact that they made to energy reduction, however, and can demonstrate year on year energy consumption reduction despite company growth. In addition, Jigsaw24 HQ has energy saving windows and all sites have full LED lighting, including our new building, Resource House.

Opportunity	Impact	Progress as of September 2021	Time frame
Implement a maintenance procedure for all significant energy consumption equipment.	Low	Complete, records available for all major SEU maintenance.	2018
Review of increased use of PIR technology to turn off lights automatically.	Medium	This is in place in all relevant areas at all relevant sites (including Resource House).	2018
Printing – look into further options of reducing printing.	Medium	Accounts and most areas are now virtually paper free (a by-product of the pandemic home working). Warehouse looking into how paper dispatch notes could be removed. Most export paperwork is electronic however we are finding that we still have to provide duplicate paper copies.	2020
Improve carbon reporting.	High	Partnered with Carbonfootprint.com for 2020/21 report. Using their Sustrax software for 2021/22 reporting.	May-21
Undertake degree day analysis to determine the impact of temperature on energy high consumption.	Low	This is under review. 23 degrees has been identified as ideal setting, but HQ building is prone to changes in temperature based on external temperature.	Jun-21
Ensure energy management is a key consideration in any proposed office space search.	High	Environmental considerations were at the forefront in the search for an additional building. Factors considered included: heat map of affected staff to identify most suitable location for all staff to commute to; energy efficiency of building; use of LED lighting, modern AC and electrics. All energy will be sourced from renewable sources. Building has infrastructure for EV charge points and is walking distance from Tram Park & Ride.	Jun-21
Offset carbon emissions.	High	800 tonnes of carbon offset with Woodland Trust for 2021/22 FY. Reported emissions for 2020/21 are 280 tonnes net, this covers Scope 1,2 and elements of Scope 3, including employee commute, home workers, waste and water.	Jun-21
Install electric vehicle (EV) charging points at HQ.	High	In place from August 2021 at HQ, with plans to install chargers at Resource House in 2022. Chargepoint are our partner. EV charging is not relevant to London office due to its Soho location.	Aug-21
Encourage all staff to consider electric vehicles for their next car.	Medium	EV salary sacrifice leasing scheme that can assist staff in upgrading to an EV is at pilot stage, with a strong level of interest.	Aug-21



Implement a training programme to ensure all personnel who can control or influence energy efficiency are competent in their role.	High	MD leading environmental training, World Environmental Week events and other incentives are considered by the environmental and energy team monthly.	Ongoing BAU
Obtain data to confirm how many internal meetings are being held over Zoom compared to face to face.	Medium	We estimate that one Zoom meeting hosted in Nottingham per working day, saving one employee visiting London or Nottingham, saves 60,720 miles of train travel per annum.	Ongoing BAU
Increased facilitation of home working post-lockdown.	Medium	Zoom and MS Teams have been the primary meeting method over the pandemic and have become the new norm, facilitating more home working post-pandemic. It is recognised that some teams do perform better in an office environment, but more home-based workers will be the norm.	Ongoing BAU
Increase use of cloud-based systems to reduce onsite server requirement.	High	Implementation of cloud-based 3CX phone system, Salesforce and ServiceNow which are core work processes that need little or no onsite server usage.	Ongoing BAU

### In-progress and future carbon and energy reduction initiatives

The following environmental management measures and projects are in progress or planned for completion soon. Note that while not a tangible carbon reduction aspect, we consider improved reporting and regulatory adherence to be a key driver for our carbon reduction efforts and have therefore noted them in our plan.

Opportunity	Impact	Progress as of September 2021	Time frame
Continue to maintain ISO 50001 certification, originally gained in 2019.	Compliance	Next annual audit November 2021 with NQA, UKAS accredited provider.	Nov-21
Encourage tram2work participation.	Medium	New office, Resource House has been selected due to proximity to the tram park and ride. tram2work scheme is under consideration, however interest from staff has been low so far.	2021
Company car and van fleet fully electric.	High, increased electricity usage from charging should be offset by petrol and diesel consumption.	Company car fleet will be sold by 2022 and will be replaced by car allowances. Users will be encouraged to move to electrified vehicles where possible. Company van will be replaced with EV when ready. Mileage is extremely low.	2022
Review process of recording company mileage to take electric vehicle charging into account for ongoing reviews.	Reporting	As EV uptake rises and Jigsaw24 install charging point, methodology of recording mileage will need to be reviewed to take in to account electricity consumption, both on site and as part of staff fuel expenses when charged externally.	2022
Discuss the possibility of developing safe driving apps with the apps team.	Low	Jigsaw24 always encourage safe and frugal driving techniques; apps have been decided to be a personal choice. Our new health insurance provider Vitality can provide suitable apps to all members.	2021

Insulate warehouse roof for improved thermal efficiency.	Medium, should reduce reliance on electric heaters or fans.	Main office ceiling has been insulated; Quotes have been gained to possibly insulate rear warehouse roof that currently has no HVAC.	2022
Use courier partners that are progressively rolling out EV deliveries.	High	Mainly relevant to carbon emissions. DPD, UPS and DHL are key partners, all increasing EV presence. However, reporting their carbon emissions is over-complicated and costly.	2022
Look into breaking down electricity usage further to track individual SEU.	Low	Ongoing, SEU's are known, Jigsaw24 need to carry out work on fuse boards to identify routing and remove obsolete cabling first.	2022
Remove gas supply from Resource House (new service centre).	TBC as consumption not known at this point, estimate 8000Kw PA.	Resource House has a gas boiler to heat water and power a few radiators, look at removing this if landlord agrees. Water will use in line electric heaters and replace gas radiators with electric.	2022
Obtain improved Energy Performance Certificates (EPC) ratings for all buildings .	Compliance	In place. Nottingham HQ review is 2022 and we are seeking to achieve a B rating rather than the current C-72. Resource House is C-68.	2022
Implement a purchasing/ procurement policy specifying that energy efficiency is considered in all purchasing decisions.	Compliance	There are several ongoing projects on procurement policy and sustainability. Jigsaw24 request that all suppliers are environmentally responsible.	2022
Move ISO 140001 certification to UKAS certified provider (NQA).	Compliance	Jigsaw24 hold ISO 14001 through QMS, who are not UKAS accredited.	2022
Pursue ISO 14064 carbon management certification.	Compliance	Identify requirements of the standard. Will be through a UKAS accredited provider.	2023
Improve EcoVadis and CDP score. Make reporting available for customer tenders.	Compliance	Ensure our environmental commitments are shared with our customers and that we are shown to be a leader in our industry.	2022
Move to 100% renewable purchased energy.	High, currently around 30% of energy purchased is non-renewable, 19.57 tonnes.	HQ is 100% renewable, for Resource House 100% renewable electricity and 100% offset gas will be in place; London has four separate supplies, one of which is currently renewable and will be 100% renewable from August 2022 when current British Gas contract expires.	Aug-22
Continued investment in to air conditioning upgrades from R410 to R32 refrigerant.	Energy saving through lower power consumption, less damaging refrigerant is less likely to need to be topped up.	Five older R410 units are left at HQ. Cost is approximately £17k to upgrade current older units plus £8k to install AC in warehouse. All of the existing units are currently working well.	Final upgrades for HQ in 2022. All units are on a 10 year renewal programme. Resource House air con was installed in 2020, London 2018.
Pursue PAS 2060 certification for carbon neutrality.	Verification	To verify any claims to carbon neutrality, possibly in conjunction with ISO 14064 .	2022



## Declaration and sign off

This carbon reduction plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standards 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 Jigsaw Systems Ltd:**

A handwritten signature in black ink, appearing to read 'R. Whittle', with a long horizontal flourish underneath.

**Name: Roger Whittle**

**Position: Founder & CEO**

**Date: 30th September 2021**

## Appendix A: Scope 3 Courier emissions reporting

Jigsaw24 did not include Scope 3 upstream and downstream third party courier emissions in its 2020/21 carbon footprint report as the data was not available to make an accurate estimation. The reporting of transportation emissions is a complex area: different methodologies can provide very variable results, and data is not readily available from couriers.

### Scope 3 Category 4: Upstream transportation

Upstream transportation of goods purchased by Jigsaw24 and delivered to its premises will form part of the Scope 3 Category 1: Purchased Goods. In future reports, we must be careful not to double count by attempting to separate out upstream transportation where we have not purchased the courier services directly. Category 1 is more relevant to Jigsaw24, as we are not a manufacturer and only source and provide finished goods.

Most of Jigsaw24's purchased goods are sourced from UK distribution companies, with three suppliers accounting for 79% of spend, and just 20 suppliers accounting for 98% of spend, with a very long 'tail' of several hundred smaller suppliers. Therefore, it is not currently possible to calculate emissions from all of them. 99% of Jigsaw24's spend is with UK-based suppliers, with a small number of EU-based and a handful of RoW suppliers.

Jigsaw24 placed over 18,000 purchase orders for physical (non-software) goods in FY 2020/21. 76% of physical goods are delivered to Jigsaw24's warehouse for stocking or pre-configuration purposes. However, to streamline stock holding, 24% of purchases were direct 'drop' shipping, where the goods are delivered direct to customers from our suppliers.

Data is not available on inbound or drop shipment weights or distances travelled. It is also not possible to ascertain how many actual deliveries were shipped as suppliers consolidate their deliveries so that multiple orders are on one delivery, or one order could be split over several deliveries. Deliveries to our main warehouse are usually free of charge from our larger suppliers, so also difficult to separate from product cost.

Jigsaw24 will work with our suppliers to report on this aspect in future reports.

### Scope 3, Category 9: Downstream transportation and distribution

After considerable research and analysis, as well as improving our internal reporting capability from May 2021, Jigsaw24 have calculated an estimated courier emissions footprint based on the following methodology, which is aligned with the GHG protocol guidance and uses UK DEFRA 2021 emission factors.

<https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021>

Jigsaw24 analysed all outbound third party courier activity for four calendar months (23,182 shipments).

From the courier reporting available:

1. Air and road freight shipments were identified.
2. Each journey was postcode mapped to ascertain total miles and km that all vehicles travelled (straight-line distance was used). While actual road distances could be estimated based on multiplying the straight-line distance by a factor to estimate actual road distance, there is no official guidance as to what this figure would be, and research shows factors of 1.23 to 1.38.
3. Weight of the individual Jigsaw24 shipments was multiplied by the vehicle distance for each delivery where available.
4. This weight\*distance was then multiplied by the most appropriate emission factor for road and air freight, which broadly broke down into four emission factor categories.
  - a) Average diesel van, tonnes/km. General domestic courier services where Jigsaw24's parcels will be one of many in a vehicle. Note that whilst the mix of van and lorry movements is not known, as is the loading of any lorries used, Jigsaw24 have used the higher van-only emission factors rather than a blend of van and lorry (which would be lower).
  - b) Average diesel van, km only. Where same day deliveries use a dedicated vehicle and therefore parcel weight is less relevant.

- c) Short haul freight flights, where flight distance is under 3700km. Note that the actual airport used is not known, so distance has been based on distance from East Midlands Airport to the nearest destination airport, including the indirect effects of non-CO2 emissions. This may not be realistic for flights where EMA has not been the departure airport. We hope that this method will improve as we receive better reporting or emission factors for these calculations.
  - d) Long haul freight flights, where the flight distance is over 3700km. Calculated from EMA as above.
5. The four months' data was then extrapolated three times to give an estimate of twelve months activity. An additional 10% was added to the total to account for further uncertainty.

<b>Row labels</b>	<b>4m tCO2e tonnes</b>	<b>X3 multiplier + 10%</b>
Air	22.48	74.18
Road	20.40	67.33
<b>Grand total</b>	<b>42.88</b>	<b>141.52</b>

Declared figure of downstream courier emissions is estimated at 141.52 tonnes tCO2e over twelve months.

## Appendix B: Carbon Footprint Standard licence agreement



Date: 16th August 2021

Carbon Footprint Ltd ('The Licensor') hereby licenses Jigsaw Systems Ltd ('The Licensee') to use the 'Carbon Footprint Standard' brand logo shown below on a non-exclusive basis for a period of one year from today's date.



### Scope of use

The scope of use of the Licence shall apply to The Licensee organisation only.

The Licence enables the 'Carbon Footprint Standard' branding to be used to promote The Licensee's organisation as being environmentally responsible on any associated marketing/sales/other communications materials in any media format, as listed in Schedule A.

### Obligations

The Licence is for sole use by the Licensee – it is not to be sold/sub-licensed or otherwise transferred to any Third Party, without the prior and written consent of the Licensor.

The Licence is not to be used by the Licensee for any particular product or service other than those that may be listed in Schedule A.

The Licensee shall use the 'Carbon Footprint Standard' branding in an appropriate way, so as to avoid damage to the Licensor's brand and reputation.

### Renewals and amendments

The Licence may be renewed at the end of the licence period, subject to negotiation with written agreement from the licensor.

Amendments may be made to Schedule A subject to negotiation and written agreement from the Licensor.

Appendix C: Woodland Trust Certificate

