

# ASHE

# Carbon Reduction Plan

## Reporting Year 2024

SHEQ-932 Rev A



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**Building  
better for a  
sustainable  
tomorrow**



**Ashe Group are a leading provider of design and construction management for private and public sector clients. Ashe Group comprises of two businesses Ashe Construction and Ashe Roofing. Ashe Construction specialises in high quality new build, extensions, internal and external refurbishments, alterations, and fit outs, with many clients specifying a Net Zero in operation requirement. Ashe Roofing specialises in high quality flat roof refurbishments and new build installations for private and public sector clients.**

The company currently employs over 140 people directly which includes apprentices and other trainees. We also provide structured work placement opportunities for Higher Education interns and T Level students who are interested in a career in construction.

Ashe Group are committed to achieving net zero emissions by 2045 to align with UK Government ambition. To achieve our goal, Ashe are recording and reporting Scope 1 & 2, plus limited

scope 3 greenhouse gas emissions (GHG) required by PPN06/21. We will further expand scope 3 emission data during 2024 covering further categories (e.g. Category 1 Purchased goods and services) progressively in 2024 and beyond.

We have developed a comprehensive route map setting out our net zero transition and will publish annually a summary report describing our net zero transition progress made during that year. A simplified route map is published on the Ashe website.

Ashe Group of companies discloses annually a full breakdown of its Scope 1, 2, & (limited) 3 GHG emissions in alignment with GHG protocol streamlined validation route. We will submit our Near-Term and Net-Zero targets to the Science Based Targets initiative (SBTi) for verification and to show our commitment to achieving our goals during 2024.

A baseline was set in 2021 covering our scope 1 and 2 direct operations, against this baseline we have shown progress towards GHG emissions in 2022 and 2023.







Installation of Air Source Heat Pumps at Bedford College VI Form Centre.

In addition, to measuring our Scope 1 and 2 Carbon Emissions we are currently recording our Scope 3 data sets in line with the PPN06/21 requirements. We are working collaboratively with our supply chain to collect data covering the following categories:

- Category 04 Upstream transportation and distribution – due to the way packages of work are purchased, this category is covered under transport and delivery of materials, items moved by Ashe in own vehicles are covered under scope 1 fuel usage.
- Category 05 Waste Generated in Operations – All waste generated from head office, construction and roofing activities, this data is collected and recorded.
- Category 06 Business Travel – business travel using Trains, Taxi, and aircraft, i.e. provided by others,
- Category 07 Employee Commuting – climate impacts of Ashe Group employees travelling to their usual place of work.

- Category 09 Downstream transportation and distribution – this category is not relevant to Ashe business activity, materials removed from site is covered under the waste management category. We do not manufacture goods which require onward transportation.

### **Commitment to achieving Net Zero**

Ashe Group has set its science based (SBTi) target of Net Zero by 2045 and reduce its 2021 baseline scope 1, 2 & 3 (limited) GHG emissions by 30% by 2030 and 50% by 2034.

We are committed to achieving this reduction; hence several measures have been successfully implemented at Ashe Group offices and construction sites with many further measures planned to follow.



## → 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.

To align with Science Based Target requirements, Ashe Group have established a baseline measurement for GHG emissions based upon data collected from the period 1st January to 31st December 2021. The base year emissions cover 100% of scope 1 & 2 emissions plus category 6 (Business Travel) scope 3 emissions. During 2024, baseline levels were set for Scope 3, category 5, 6, and 7 to align with PPN 06/21 reporting requirements except for scope 3 category 4 Upstream transport and distribution. Ashe routinely purchase packages of work which comprise of a single cost for materials, labour, transport, and waste management. It is, therefore, difficult to quantify the value of transport in isolation. Further research will be undertaken to see if it is possible to quantify the GHG impact of transport and means to lessen this impact.

The primary operations and activities that account for scope 1 and 2 emissions include the use of natural gas for heating and domestic hot water (DHW) at head office, fuel for company vehicles, site mobile plant, site electricity generators, and electricity (grid) consumption. We have used the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard and Streamlined Energy and Carbon Reporting (SECR) as the standard to which all measurements and carbon emissions have been calculated.

We plan to submit our data and commitment targets to SBTi for verification during the second half of 2024.

## → Baseline Emissions Reporting

### Baseline year emissions: 2021

The baseline year has been set as 2021 as this was considered as the first stable year following 2020 pandemic disruptions. Some Scope 3 data was not collected in 2021, this has been addressed in 2024 for the reporting year 2023.

Emissions 2021	Total (tCO <sub>2</sub> e)
Scope 1	641.30
Scope 2	51.12
Scope 3 (Category 4 Upstream transport & Distribution)	Data not collected in 2021
Scope 3 (Category 5 Waste Generated from Operations)	Data not collected in 2021
Scope 3 (Category 6 Business Travel)	1.04
Scope 3 (Category 7 Employee Commuting)	Data not collected in 2021
Scope 3 (Category 9 Downstream Transport & Distribution)	Not applicable to Ashe

Table 01 2021 Baseline GHG data collected.

# → Progress Emissions Reporting

## 2023 - year emissions and progress

The table adjacent represents the data collected for the years 2021 (base year), 2022, and 2023. The variations in GHG emissions are largely attributed to the volumes of bulk fuels used on site and employee vehicles (diesel) on company business, but also due to an increase in turnover and staff headcount. These variances can be caused by the types and location of the active construction sites during the reporting year, staff travelling further, Green field sites will require the use of generators for longer periods of time, hence using more fuel, also project sites away from head office leads to an increase in travel distance for core site management staff and some of the support services.



98 PV panels at Ashe House

Carbon Emissions (Ashe Group)	2021 Tonnes CO <sub>2</sub> e	2022 Tonnes CO <sub>2</sub> e	2023 Tonnes CO <sub>2</sub> e
<b>Natural Gas</b> Ashe House only (Scope 1)	8.02	8.30	6.28
<b>Diesel Vans</b> Fleet Vehicles (Scope 1)	84.30	80.92	96.96
<b>Petrol Vans</b> Fleet Vehicles (scope 1)	4.84	6.57	3.50
<b>Bulk Fuel</b> used on site (Diesel Scope 1) ACL + ARL	323.19	204.52	272.29
<b>Diesel Cars</b> (Scope 1) employee vehicles on company business (fuel)	130.30	152.06	101.16
<b>Petrol Cars</b> (Scope 1) employee vehicles on company business (fuel)	90.65	109.43	114.57
<b>Grid Electricity</b> Ashe House (Scope 2)	11.29	7.99	10.60
<b>Grid Electricity</b> Unit 11 (Scope 2)	0.00	0.25	8.35
<b>Grid Electricity</b> Site (Scope 2)	39.83	28.36	17.72
<b>Scope 3</b> limited categories	1.04	1.73	2.54
<b>Totals</b>	<b>693.46</b>	<b>600.14</b>	<b>633.97</b>
<b>Scope 1 Total emissions</b>	641.30	561.81	594.76
<b>Scope 2 Total emissions</b>	51.12	36.60	36.67
<b>Scope 3 (Category 6) emissions</b>	1.04	1.73	2.54
<b>Scope 1, 2, and 3 Total emissions</b>	<b>693.46</b>	<b>600.14</b>	<b>633.97</b>

Table 02 2021, 2022, & 2023 Actual Carbon emission data for scope 1&2 emissions plus Scope 3 Category 6 only

## 2023 - year emissions

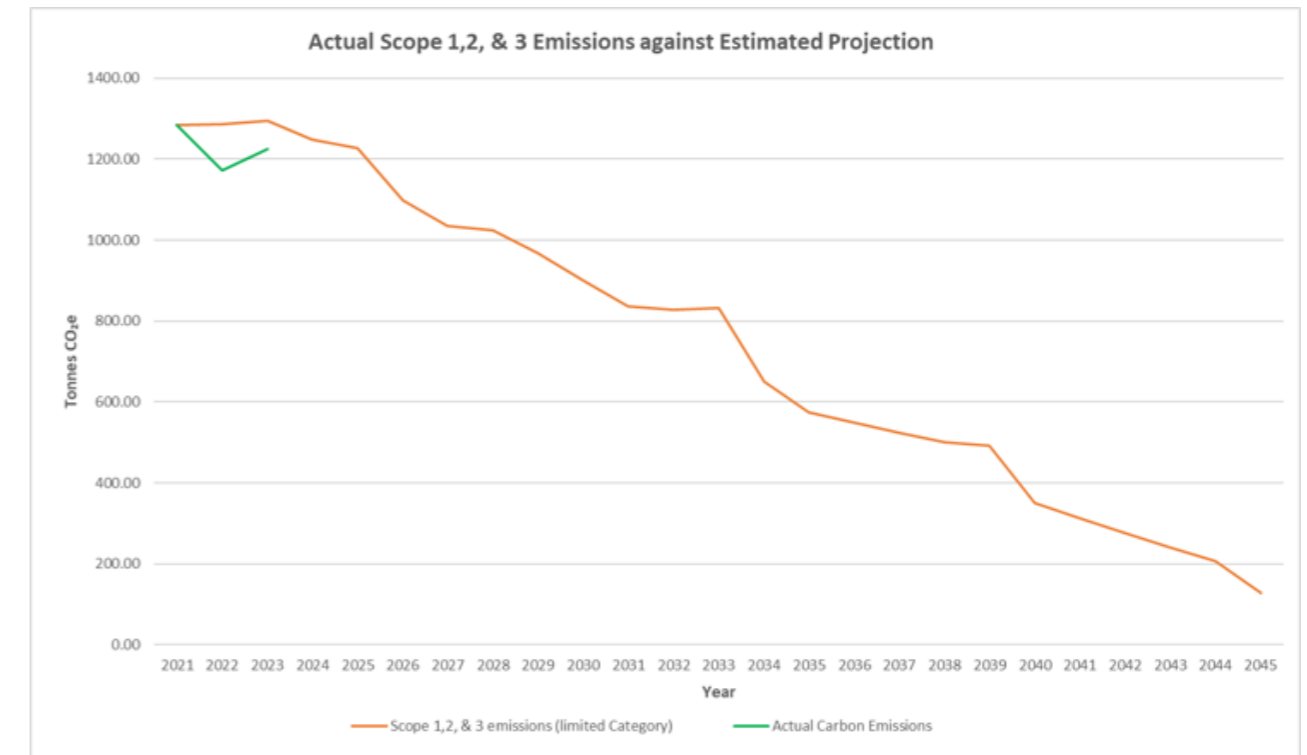
Table 3 below shows Scope 1 covering fuel use by the van fleet, car fleet, Ashe House gas heating, and bulk fuel used on site during 2023. Scope 2 emissions covers head office, Ashe Roofing, and site electricity use during the construction process. We have collected Scope 3 category 5, 6, and 7 GHG emission data for 2023. Category 4 upstream transport and distribution is not reported separately as it is generally included within the packages of work purchased from the Ashe supply chain.

Emissions 2023	Total (tCO <sub>2</sub> e)
Scope 1	594.76
Scope 2	36.67
Scope 3 (Category 4 Upstream transport & Distribution)	Data not collected in 2023
Scope 3 (Category 5 Waste Generated from Operations)	377
Scope 3 (Category 6 Business Travel)	2.54
Scope 3 (Category 7 Employee Commuting)	214.01
Scope 3 (Category 9 Downstream Transport & Distribution)	Not applicable to Ashe

Table 03 2023 Emissions data collected.

## 2023 - year emissions vs forward trajectory

The graph below shows GHG (in green) emissions since 2021 (including actual scope 1, 2, 3 (Cat 6) and estimated scope 3 (Cat 5 & 7) based upon actual 2023 data. The forward trajectory (in orange) estimates the reduction in GHG emissions based upon the planned interventions along with the associated GHG reduction based upon each intervention once successfully completed.



Graph 01, Projected Carbon Reduction trajectory based upon the 2021 baseline.

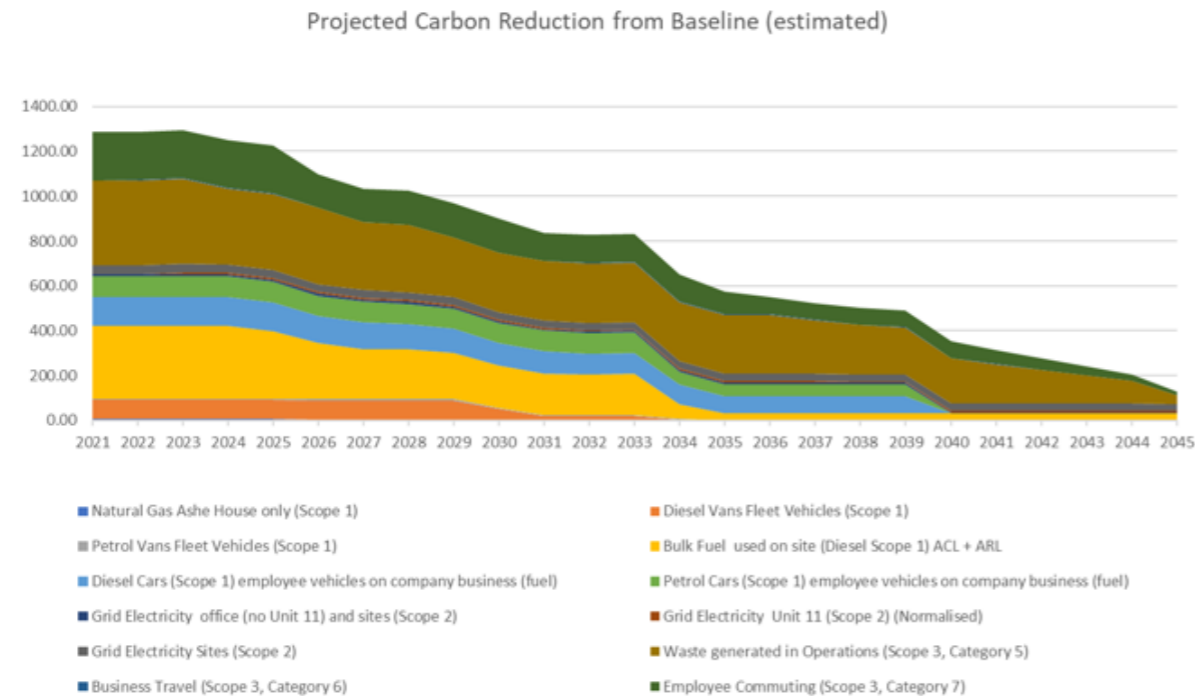


# → Emissions Reduction Targets

The graph below illustrates the estimated trajectory that Scope 1, 2 and limited Scope 3 GHG emissions will decrease in the short to medium term.

Ashe Group have set a short-term emission reduction target to reduce our scope 1 & 2 GHG emissions by 30% by 2030 against the 2021 baseline.

Ashe Group have set a medium-term emission reduction target to reduce our scope 1 & 2 GHG emissions by 50% by 2034 against the 2021 baseline.

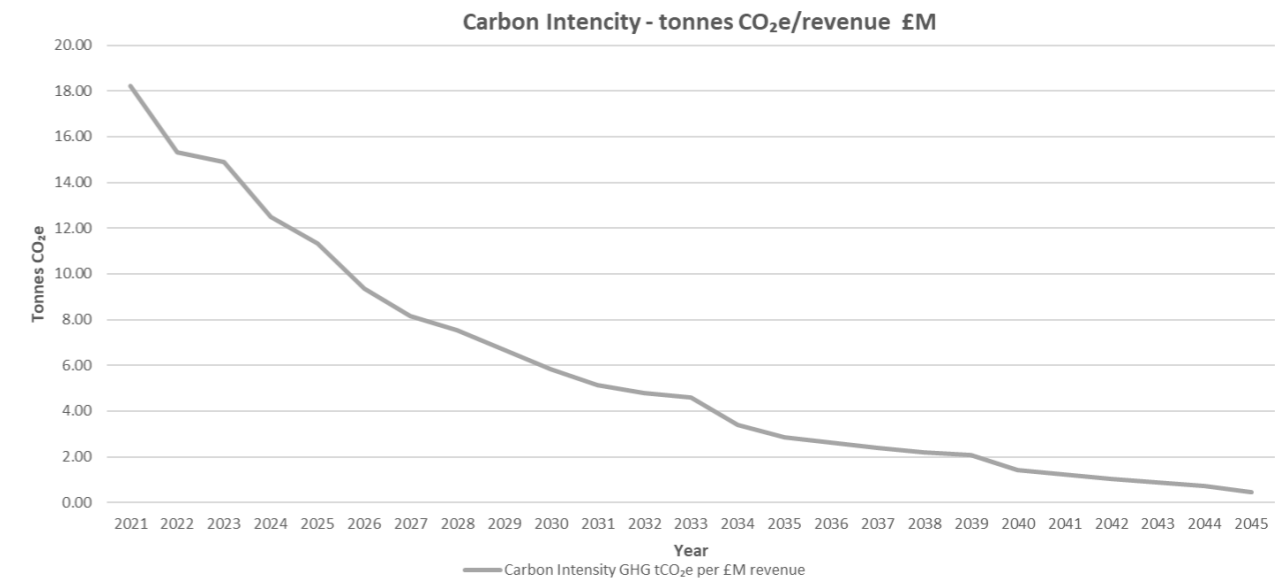


Graph 02 Projected Carbon Reduction trajectory based upon the 2021 baseline.

## Carbon Intensity

Carbon Intensity provides a standard normalised value which considers changes in business activity which will vary the carbon emission outcome. This graph allows the plotting of GHG emissions to be compared year on year irrespective of changes in business activity. The value is determined by dividing the emissions output in tonnes CO<sub>2</sub>e divided by revenue in millions (£). As can be seen from the graph below, that although Ashe Group has seen increased project activity with a corresponding increase in turnover the carbon intensity value has continued a downwards trajectory.

The carbon intensity trajectory has been extended out through to 2045 based upon an assumed growth in revenue year on year and GHG emissions estimates from Graph 02 adjacent.



Graph 03, Carbon Intensity – normalised value to compare year on year progress.



# → Carbon Reduction Projects

Ashe Group have successfully implemented several projects to reduce energy consumption across the office and temporary site estate in addition to the other schemes which have also been implemented resulting in carbon reduction across the business.

The following measures have been implemented across the business:

In 2024 Ashe Group appointed a Head of Sustainability to develop sustainability strategy for the business, report progress, raise awareness, implement, and drive our Carbon and Net Zero ambition across both Ashe Construction and Ashe Roofing business.

An extensive roof mounted solar PV array at Ashe head office which directly supplies the office electricity needs including powering the 8 electric vehicle charging points. Excess electricity is currently exported to the National Grid, consumption data is recorded and monitored.

Adjacent is a screen-shot of the solar PV dashboard, in this example the blue area illustrates the self-consumption of the office powered from the PV array, the green shaded area shows export to the National Grid.

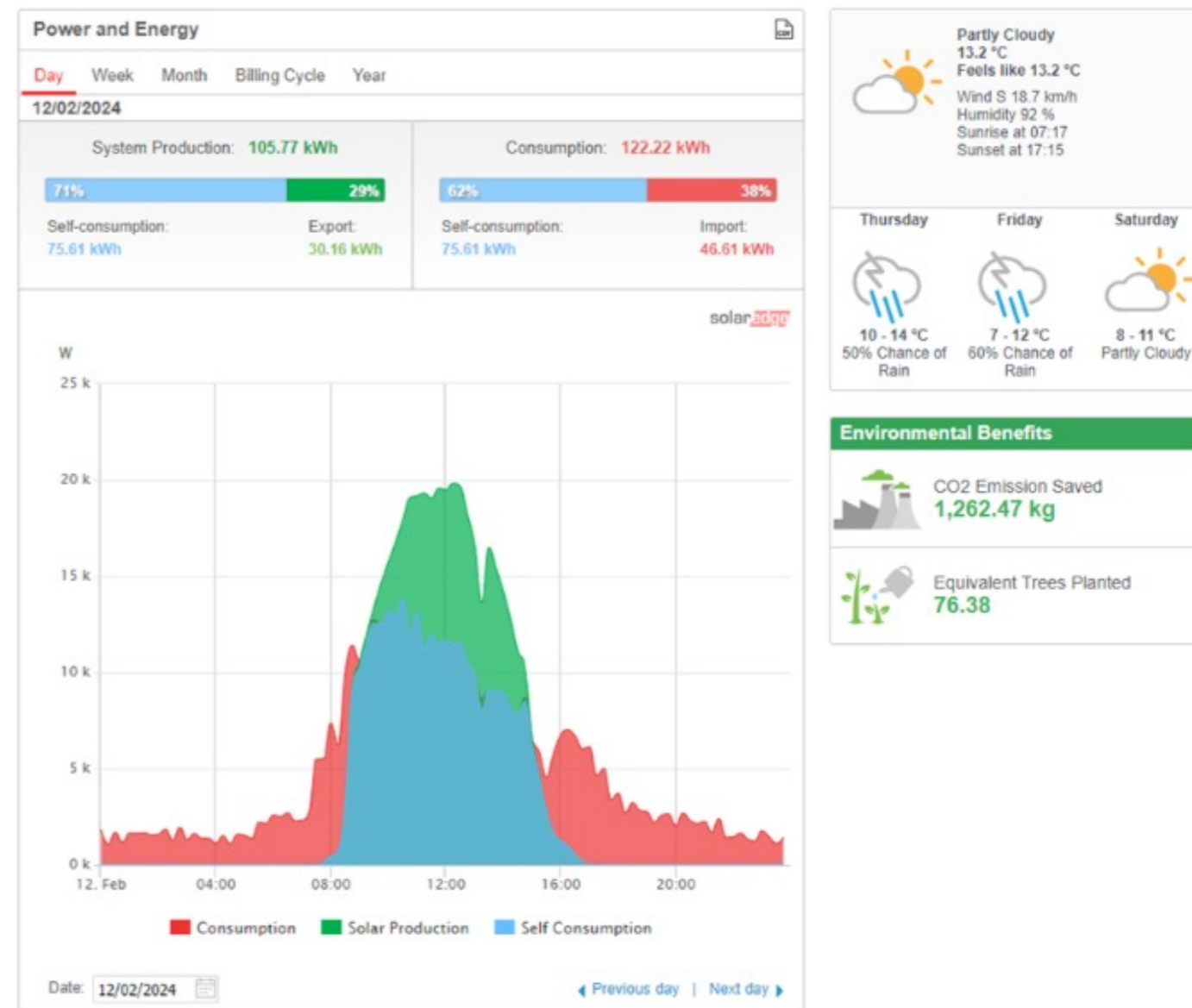


Image 01 Solar PV system dashboard

Ashe Construction install electric vehicle charging points at each construction site (where space and supply capacity allows) for the use of Ashe staff and in readiness for the future charging of mobile plant. These EV charge points are intended to be connected through the GridDuck supply monitoring system.

Ashe Group has completed the transition to purchasing 100% renewable electricity for both Ashe House and Unit 11 (Ashe Roofing).

For smaller projects Ashe use Eco site cabins which use a combination of solar and battery storage to minimise the use of diesel-powered generation when operating off grid or when cabins are used in locations away from a grid electrical supply. The cabins run on solar and battery for the bulk of time only switching to a fossil fuelled powered generator at times of peak demand or poor PV performance.

We have removed all single use plastics at head office providing ceramic mugs, glasses, and metal cutlery in all office spaces. Glass refillable by tap water bottles are used in meeting rooms to ensure disposable plastic bottles are not used. All staff are provided with a reusable cup for take away drinks to eliminate the need for take away packaging.

Ashe have set up Green Team with ten staff volunteering from all parts of the business. The team has been set up to up-skill, promote, share best practice, and deliver quick wins and sustainability initiatives across the Ashe Construction and Roofing business. The team has been responsible for implementing the office recycling scheme and promoting its use among staff.

Materials delivered to site are transitioning to using recycled packaging and is either collected by the delivery driver or diverted into the recycling scheme. The medium-term ambition is a transition to use reusable packaging examples such as Pallet Sock.

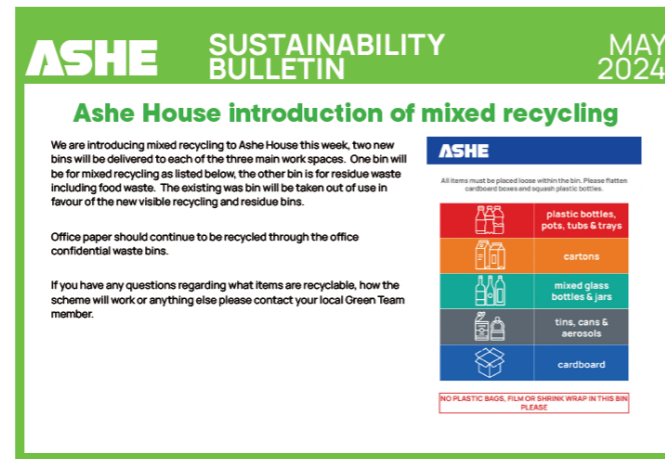


Image 03 Sustainability Bulletin introducing Office Recycling

Ashe Roofing and Construction head offices have transitioned to a harmonised recycling collection to align with the government ambition to simplify recycling across the UK, Collections have been simplified two waste streams comprising of dry recyclables and residue waste, commercial food waste collections are not yet available.

Ashe Construction has implemented a new electricity sub-metering scheme (GridDuck) for site temporary supplies, site consumption can be reviewed remotely via a link to a cloud site, data can be downloaded to allow improved energy management and wider reporting or to include with BREEAM submissions. Energy consumption will be monitored, and anomalies re-reported to enable periods of high or unusual consumption be measured, plans for staff training is being rolled out.

An example of the GridDuck dashboard is presented below.

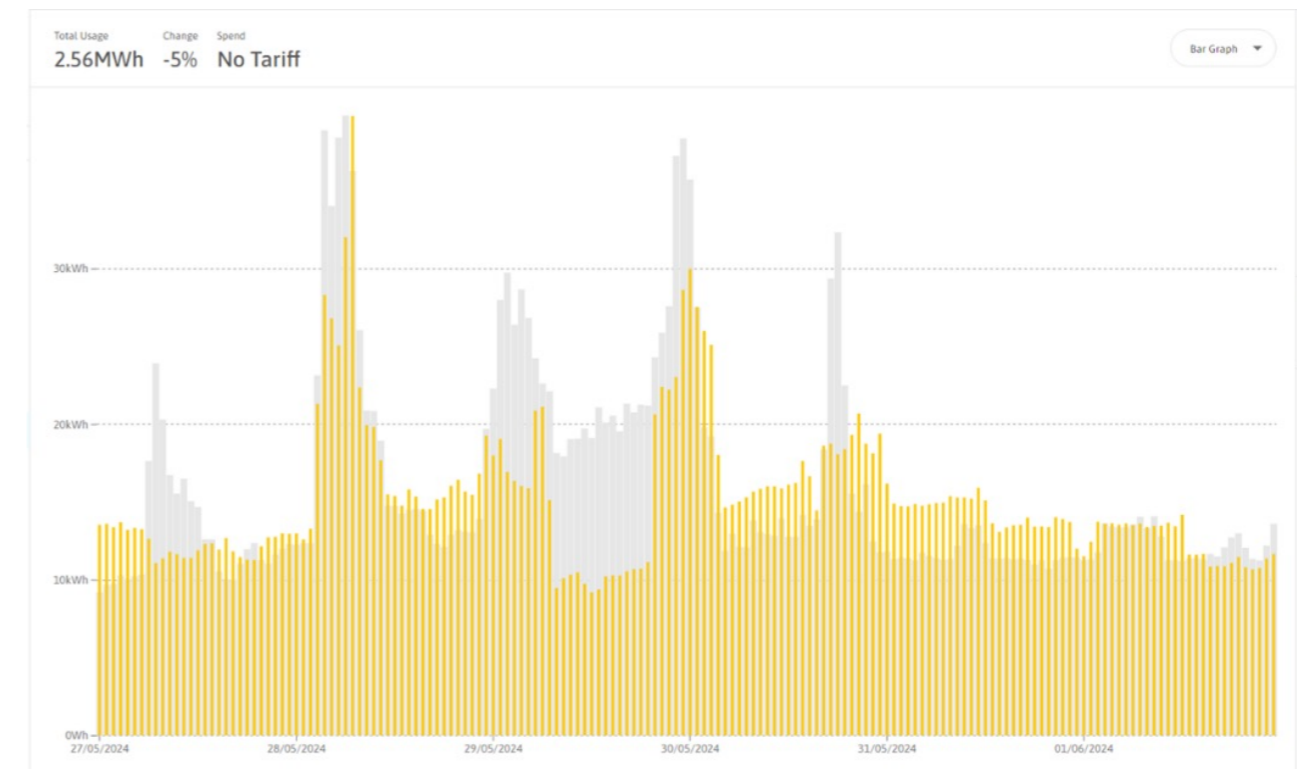


Image 04 GridDuck example dashboard showing weekly consumption compared with previous week.





Ashe Roofing's project at Parkside Primary School

A staff travel survey has been implemented and the results used for reporting the current GHG emissions associated with travelling to site, the office, and working from home. The survey asked several other questions around the practicalities of using public transport, walking to work, and car sharing, the barriers faced etc. Several promotional initiatives will be implemented to promote the use of public transport, cycling to work and car sharing.

In addition to the measures taken above, Ashe Group head office has been refurbished to improve comfort and the energy performance of the office accommodation. The building fabric has been improved increasing the levels of insulation and transitioning some heating to a low carbon alternative. The office will be fully electric from 2030 when the final rooms and water heating are switched away from gas.

All lighting has been upgraded to LED with occupancy sensors and zoning to ensure lighting is used efficiently and is only on when spaces are in use.

Utility use is recorded monthly for all offices including site, to ensure energy consumption is measured, any anomalies identified are investigated and addressed.

Ashe Roofing have switched to using hybrid power welfare cabins which use a combination of solar PV and batteries to power the cabin, a low emission generator set provides power/charging power at times of high demand or low solar PV output.

Image 05 Ashe House 1st Floor office reopening following refurbishment.





# → Circular Economy and Waste Avoidance

Ashe Construction are expanding the use of providing pre-cut materials to site, this reduces installation time, avoids cutting on site (reducing dust hazards), avoids the generation of waste on site avoiding transporting and disposing of off cut waste. This practice is publicised using regular Sustainability Bulletins.

**ASHE** **SUSTAINABILITY BULLETIN** **JANUARY 2024**

## Pre-Cut Materials

Some materials are being delivered to site pre-cut, apart from some trimming to length, these materials are ready to install. One such example is Promat fire protection being installed around steel framework.

There are so many sustainable benefits in using materials which are cut to size before arriving on site including:

- Waste avoidance on site due to whole sheet off cuts.
- Avoidance of Gypsum waste (which needs to be separated).
- H&S benefit by avoiding the generation of dust during full sheet cutting.
- Manual handling benefits through not moving large heavy sheets.
- Speedier installation as materials arrives ready to install.
- Less transport to site – only materials to be used are transported.

The use of Pre-cut materials may only seem to bring small benefits but rolled out across many sites with numerous materials adds up. Please contact [james.bisco@ashegroup.co.uk](mailto:james.bisco@ashegroup.co.uk) if you have any similar ideas which will save material, time, or H&S benefits, this could also include sub-assembly off site etc.



Image 06 Sustainable Bulletin – Pre-cut materials.

We have been working with our suppliers to find ways to reduce packaging waste on site, Ashe Roofing materials are delivered in 100% recycled packaging.

Both Ashe Roofing and Ashe Construction are single use plastic free, the offices have ceramic cups and glasses for staff use which are collected and washed.



Image 07 Mugs and glasses as used across Ashe offices and sites.

Wood Recycling Project, we have set up a separate collection of timber by the local wood recycling project depot. Timber is collected by a dedicated vehicle and sorted at the depot into timber suitable for reuse in their shop or processed for recovery.



## → Transport

As part of the wider office refurbishment, all meeting rooms have been provided with teleconferencing facilities to reduce the need for business travel to meetings. To further support the reduction of business travel, all site offices will provide with a simple, portable teleconference tool to reduce travel between sites and head office.



Image 09 Electric Vehicle Charging Points installed at Ashe House



Image 08 OWL Video Conference Unit

The company (and staff) operate a sizable fleet of vehicles, these are progressively transitioning to a zero-emission electric fleet. Staff currently lease 14 electric vehicles through the salary sacrifice leasing scheme.

Ashe House has 8 Electric Vehicle charging points installed for charging staff and visiting vehicles.

The Ashe Group van fleet has been completely updated with lower emission vehicles to replace the older fleet.

## → Future Energy and Carbon Reduction Projects

The following projects are planned as next steps to support our net zero journey.

### Utilities and Energy Management

In addition to the installed 36.12 KWp of solar PV to the roof of Ashe House in August 2023, batteries have been purchased and are due to be installed and connected to the system later in 2024. The batteries will store excess electricity generated by the solar PV and be used by the office when the PV output decreases smoothing and reducing the cyclic grid demand. Excess electricity generated by the solar PV (when not used to charge the batteries) is exported directly to the National Grid.

During 2025 an additional cost benefit analysis will be undertaken to build a case for increasing the number of batteries installed at Ashe House charging them utilising night electricity (when there is excess wind energy) and discharging during the day.

Utility use is monitored, excess or unusual consumption patterns are investigated to establish reasons why and correct the anomaly.

### Fossil Fuel Use

To achieve the 30%, 50% and Net Zero targeted planned reduction in GHG emissions the use of fossil fuels will need to be significantly reduced over the baseline level.

Fossil fuels are used for site electricity generation when sites initially set up, Ashe owned site plant, Ashe owned van fleet, and staff vehicles & company cars on company business all use fossil fuels and are the significant source of carbon emissions.

Ashe plan to remove gas use from all locations by 2030, Ashe House currently uses gas for heating and domestic hot water.

We are investigating the practicalities and planning a trial of using reduced carbon fuel for the site electricity generators and Ashe owned mobile plant. GHG emissions from biofuels are 90% lower than conventional fossil fuels. We will also be amending our policies to require contractors who use mobile plant on site to only use reduced carbon fuels for plant brought to site, this will be voluntary initially before being switched to mandatory. We expect to begin switching Ashe owned plant and on-site electricity generation to low carbon fuels from 2026.

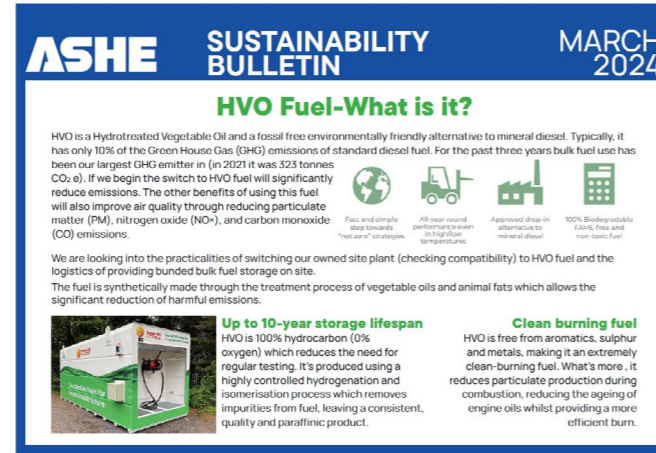


Image 10 Ashe Group Sustainability Bulletin

We are planning to trial switching off the gas boiler and using electricity to provide domestic hot water and make efficient use of excess capacity during the spring and summer months available from the Solar PV array. This will deliver a reduction in carbon emissions and utilise our own renewable generation from the solar PV array.

Ashe Group pledge to be completely gas free by 2030 by replacing the gas boiler with a low carbon alternative.

Further promotion of the electric vehicle employee ownership to enable employees to lease EV using the salary sacrifice option, expansion of the scheme could include using a scheme broker who can include pre-owned vehicles.

Investigating practicalities of switching to hybrid MEWP's and run a trial to see if this type of plant has sufficient availability, understand what kind of charge infrastructure will be required. A future trial is planned utilising electric only MEWP's, information is required covering, availability, types, and sizes of charging infrastructure.

Enhance site utility recording by expanding sub-metering to meter cabins, site and other areas separately, provide data via cloud access site, enable CSV format HH data which can be downloaded to allow further analysis.

Formation of and commencement of an employee lead Green Team to introduce sustainability to the wider business, pick up and support new initiatives.

## Circular Economy and Waste Avoidance

The construction industry generated 59.1million tonnes of non-hazardous waste in 2020, which is approximately 26% of total waste arisings in the UK (source gov.uk.statistics.uk-waste-data 2024). Approximately 54.8 million (92%) of construction and demolition waste is recovered. Ashe are targeting a landfill diversion rate better than 98% for all non-hazardous construction and demolition wastes.

By 2030 Ashe Group is committed to eliminating all avoidable waste from the demolition, excavation, and construction phases of projects. This will be achieved through refurbishment of existing buildings and reducing full demolition, reuse of excavated materials on site or in the locality to reduce the impact associated with transport. Reducing construction waste by limiting material call-off's to routinely adding 2.5% spare or waste material to bills of quantities and expanding the options for shipping surplus and new materials to reuse schemes.

The use of pre-cut materials will be expanded to include other material streams, recently Ashe Roofing has changed its practice to receive pre-cut insulation which helps to speed insulation reducing site time, reducing waste on site, plus reducing transport to and waste away from site. The supplier returns off cuts of insulation in bulk, back to the manufacturer.

Material handling practices are being investigated to allow the use of larger sheets of plasterboard be handled. Larger sheets avoid the need to use two smaller sheets and cuts down on handling, waste, and materials use.







Time capsule burial with nursery children at Kingsway School.

## → 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 Streamlined Energy and Carbon Reporting (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 a representative of the board of directors.

Robin Blake  
Group CEO  
Signed on Behalf of Ashe Group

<sup>1</sup> <https://ghgprotocol.org/corporate-standard>

<sup>2</sup> <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

<sup>3</sup> <https://ghgprotocol.org/standards/scope-3-standard>



# ASHE

## **Ashe Group Ltd**

Ashe House, Cooks Way, Hitchin, Herts SG4 OJE

**T:** 01462 630630

**E:** [hitchin@ashegroup.co.uk](mailto:hitchin@ashegroup.co.uk)

[ashegroup.co.uk](https://www.ashegroup.co.uk)

