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1. Purpose and scope

Purpose:	Defines Apem's Net Zero commitment aligned with PPN 006.
Scope:	APEM Group and subsidiaries: AQUAFACT International Services Limited (a trading name of Woodrow Sustainable Solutions Limited), Aspect Ecology Limited, Woodrow Sustainable Solutions Limited, GoBe Consultants Limited, Macroworks, Nash Maritime Limited

2. Ownership and implementation

Procedure owner:	Quality and Environment Systems Manager
Procedure user:	APEM Group employees and external stakeholders

3. Definitions

- Location based represents emissions from electricity consumption based on grid average emissions.
- Market based represents emissions from electricity consumption based on specific energy contracts.

- WTT - Well-to-tank emissions. Emissions associated with the extraction refinement and transport of fuels before consumption.
- T&D losses – Transmission and distribution losses. Emissions associated with the energy lost during the transmission of electricity through the network.
- WTW – Well-to-wheel emissions. Includes emissions associated with the extraction, refinement, transport, and consumption of fuels.

4. Methodology

The GHG Protocol states that a company's organisational boundaries can be set in two possible ways. 'Equity Share' where the boundary is defined by the amount of equity a company has in an operation or 'Control Approach' where the boundary is defined by how much control a company exerts over an operation. Control can be defined by either operational or financial control.

As in previous years APEM Group has chosen to use the 'Operational Control' approach meaning that it includes in its emissions inventory for any and all operations which it or one of its subsidiaries has full authority to control operating policies. APEM Group has chosen this as it best reflects the areas where it can influence and affect policies that directly and indirectly relate to GHG emissions.

Operational boundary conditions provide depth to a corporate inventory by identifying which emission sources will be accounted for within the organisational boundaries.

The GHG Protocol outlines three categories of emissions sources (referred to as "Scopes"):

- **Scope 1, 'Direct Emissions'**, represent emissions from combustible fuels and other sources that occur directly on-site and mobile emission sources
- **Scope 2, 'Indirect Emissions'**, represent emissions that occur off-site to produce electricity or steam purchased for use at a company's locations
- **Scope 3, 'Other Indirect Emissions'**, represent emissions from activities upstream or downstream from a company's core business such as purchased goods and services, waste disposal, commuting, and business travel.

Scope 1 (Direct Emission Sources)

Scope 1 sources included in the inventory are onsite (or "stationary") natural gas combustion, mobile fuel combustion from leased and owned vehicles and fugitive emissions of refrigerant gases from heating, cooling and air conditioning (HVAC) units, as. APEM Group will continue to collect this data for future reporting years.

Scope 2 (Indirect Emission Sources)

Purchased electricity was the only identified scope 2 emissions source. As per the GHG Protocol Scope 2 and the UK Government's Environmental Reporting Guidelines, Scope 2 emissions have been calculated in two ways using the location-based and the market-based methodology. A location-based method reflects the average emissions intensity of the grids on which energy consumption occurs. A market-based method reflects emissions from electricity from sources/locations that APEM Group has purposefully chosen (e.g., specific green energy supply contracts, renewable energy guarantees of origin (REGO), green power purchase agreements (green PPA)).

Scope 3 (Indirect Emission Sources)

The GHG Protocol identifies fifteen categories of Scope 3 emissions. APEM Group's fiscal year (FY) 2025 inventory includes seven of these categories, identified in table 1.

Table 1. Scope 3 Categories included in the inventory

Category	Definition	Status
Category 1: Purchased goods and services	Extraction, production, and transportation of products purchased or acquired by APEM Group in the reporting year.	Calculated/ Relevant
Category 2: Capital goods	Extraction, production, and transportation of capital goods purchased or acquired by APEM Group in the reporting year	Calculated/ Relevant
Category 3: Fuel- and energy-related emissions	Extraction, production, and transportation of fuels and energy purchased or acquired by APEM Group in the reporting year, not already accounted for in scope 1 or 2	Calculated/ Relevant
Category 4: Upstream transportation & distribution	The warehousing and transport of goods from Tier 1 suppliers	Calculated/ Relevant
Category 5: Waste generated in operations	Disposal and treatment of waste generated in operations in the reporting year	Calculated/ Relevant
Category 6: Business travel	Transportation of employees for business-related activities during the reporting year	Calculated/ Relevant
Category 7: Employee commuting	Transportation of employees between their homes and their worksites during the reporting year	Calculated/ Relevant

4.1. Exclusions

Certain sources were excluded from the FY 2025 inventory due to either data gaps or relevance. Exclusions and corresponding justification are disclosed in Table 2.

Table 2. Exclusions from the inventory

Exclusion	Scope	Explanation
Category 8: Upstream leased assets	Operation of assets leased by APEM Group in the reporting year and not included in Scope 1 and Scope 2.	Not calculated as not relevant. APEM Group does not lease any assets.
Category 9: Downstream transportation & distribution	The transport and warehousing of sold products, between operations and the end consumer (including retail).	Not calculated as Not relevant.

Category 10: Processing of sold products	Processing of intermediate products sold in the reporting year by downstream companies.	Not calculated as Not relevant.
Category 11: Use of sold products	Emissions from the use of goods sold in the reporting year.	Not calculated as Not relevant.
Category 12: End-of-life treatment of sold products	Waste disposal and treatment of products sold (in the reporting year) at the end of their life.	Not calculated as Not relevant.
Category 13: Downstream leased assets	Operation of assets owned and leased to other entities in the reporting year, not included in Scope 1 and Scope 2.	Not calculated as Not relevant.

The FY 2025 inventory covers all of APEM UK and Ireland Group's operations. They have been calculated using the following formula:

$$\text{Source emissions data} \times \text{conversion factor} = \text{total source emissions}$$

$$\text{Source unit} \times (\text{tCO}_2\text{e/unit}) = \text{tCO}_2\text{e}$$

Conversion factors are primarily derived from the latest:

- UK Government GHG conversion factors for Company Reporting
- DEFRA (Department for Environmental, Food and Rural Affairs)
- Environmentally extended input-output (EEIO) tables
- United States (US) Environmental Protection Agency (EPA)

5. Baseline Emissions Footprint: 2022

Baseline emissions are a record of the GHGs that were produced in a previous financial year prior to the introduction of any strategies to reduce CO₂e emissions. Baseline emissions are the reference point against which emissions reduction can be measured. APEM Group chose January 2022 – December 2022 as the baseline year.

Scope / Category	Description	Total 2022 tCO ₂ e
Scope 1		
Stationary combustion (Gas)	Gas consumed	0.05
Transportation	Owned and leased vehicles	221.9
Refrigerants	HVAC's	0
Scope 2		
Electricity (location based)	Electricity, for own use (grid average)	96.9
Electricity (market based)	Electricity, for own use (specific contract)	55.2
Scope 3		
Category 1: Purchased goods and services	Goods and services	1,571.8
Category 2: Capital goods	CapEx expenditure	750.5
Category 3: Fuel and energy related activities	WTT & T&D losses	215.5
Category 4: Upstream transportation	Transport between tier 1 suppliers or paid transport for goods, WTW	17.3
Category 5: Waste generated in operations	Waste	7.1
Category 6: Business travel	Travel and hotel stays for business	86.3
Category 7: Employee commuting	Employees commuting	88.4
Category 7: Employee homeworking	Employees working from home	147.1
Total Gross Emissions (Location based)		3,202.8
Less emissions avoided by procurement of renewable electricity		(41.8)
Total Gross Emissions (Market based)		3,161.0
Less carbon offsets		(280.00)
Total Net Emissions		2,881.0

6. Current Emissions Reporting: 2025

This is APEM Group (UK and Ireland) fourth year calculating our GHG emissions. By comparing GHG emissions each year to the baseline year, it allows us to see how far we have come on their journey to Net Zero and allow us to identify which areas we are succeeding in, as well as which areas need more focus.

Scope / Category	Description	Total 2022 tCO ₂ e
Scope 1		
Stationary combustion (Gas)	Gas consumed	0.03
Transportation	Owned and leased vehicles	133.53
Refrigerants	HVAC's	0.14
Scope 2		
Electricity (location based)	Electricity, for own use (grid average)	76.13
Electricity (market based)	Electricity, for own use (specific contract)	65.29
Scope 3		
Category 1: Purchased goods and services	Goods and services	1523.27
Category 2: Capital goods	CapEx expenditure	229.84
Category 3: Fuel and energy related activities	WTT & T&D losses	129.44
Category 4: Upstream transportation	Transport between tier 1 suppliers or paid transport for goods, WTW	19.29
Category 5: Waste generated in operations	Waste	0.09
Category 6: Business travel	Travel and hotel stays for business	295.04
Category 7: Employee commuting	Employees commuting	134.98
Category 7: Employee homeworking	Employees working from home	212.26
Total Gross Emissions (Location based)		2754.05
Less emissions avoided by procurement of renewable electricity		-10.84
Total Gross Emissions (Market based)		2743.21
Less carbon offsets		-130.00
Total Net Emissions		2613.21

7. Emissions Reduction Targets

APEM Group (UK and Ireland) are committed to working alongside other organisations to achieve the UK and Ireland's government Net Zero targets for our operations and are taking action to reduce our annual carbon dioxide equivalent (CO₂e) greenhouse gas (GHG) emissions and achieving Net Zero emissions by 31 December 2045, five years earlier than the UK Government's 2050 target. This will constitute predominantly absolute emission reduction through Scope 1, 2 and 3. However, as with all businesses, it is likely that there will be some small remaining residual emissions. These remaining residual emissions will be accounted for through investment in carbon removal programmes.

APEM Group (UK and Ireland) will aim to reduce our emissions year-on-year to achieve:

- 45% reduction in our Scope 1 and 2 emissions by 2030.
- Continue to offset our residual Scope 1 and 2 UK emissions (commenced in 2022).
- Overall reduction in all intensity GHG emissions across Scopes 1, 2 and 3 by 2030, offsetting any residual emissions via high-quality nature based or direct air capture projects and becoming Net Zero.

APEM Group Carbon Emission Glidepath tCO₂e

Our carbon emission glidepath is shown in Figure 1 below:

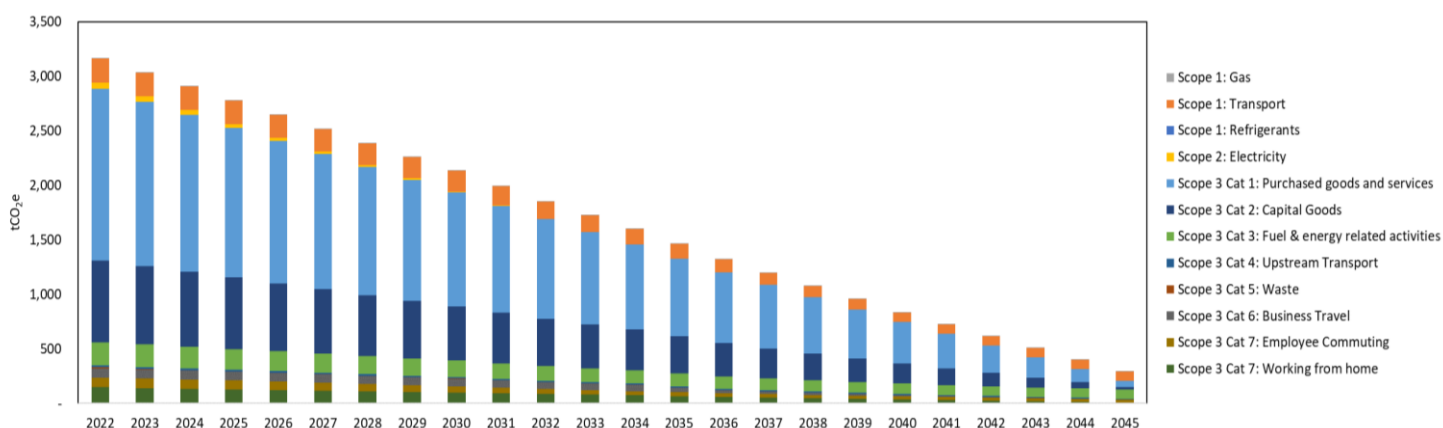


Figure 1: APEM Group Net Zero Carbon Glidepath

8. Carbon Reduction Initiatives

As a responsible business, APEM Group (UK and Ireland) has had a focus on the environment and reducing our CO₂e emissions, our key actions are summarised below.

SCOPE 1: Stationary Combustion (Natural gas)

What we are doing:

- Ensuring biomethane (Green Gas) is procured and consumed on sites where directly controlled by APEM.

- Improving the quality of our data.
- Evaluating the energy performance of our estate and making this a decision factor when seeking new premises.
- Ensure that all of our facilities use minimal space and domestic hot water (DHW) heating by making sure temperature set points are appropriate and relevant pipework and building envelopes are fully insulated.

What we plan to do:

- Initiate opportunities identified in our Energy Saving Opportunity Scheme (ESOS) site surveys.
- Reduce reliance on gas use and replace gas boilers with electrical heating systems such as air source heat pumps (ASHPs), infra-red (IR) panels, electric space heaters etc. where practicable.
- Investigate new technologies (for example, hydrogen powered boilers) as they become available and install these where practical.

SCOPE 1: Transport (owned and leased vehicles)

What we are doing:

- Transitioning from diesel and petrol internal combustion engine (ICE) owned and leased vehicles to electric vehicles (EV) as soon as is practicable and where moving to EVs is not practical, switch to plugin hybrid electric vehicles (PHEV).
- Providing driver training on how to drive more efficiently to reduce CO₂e emissions and enhance safety.

What we plan to do:

- Introduction of Telematics on all leased vehicles to review driving behaviours especially related to efficient use of engines/route planning/fuel consumption.
- Initiate opportunities identified in our ESOS survey.
- Ensure any PHEVs or EVs are charged using clean, low CO₂e emission electricity sources where possible including installing charging points at our sites where feasible supplied via renewable electricity contracts.

SCOPE 1: Refrigerants

Although only minor zero leaks were noted from air conditioning / refrigeration in 2025, we will continue to collect and maintain detailed data on refrigerants used across our sites and the repair and servicing of the relevant equipment. We will endeavour to reduce any potential impact where possible.

What we are doing:

- Limit use of refrigeration / air conditioning systems where practicable.
- Where refrigerants are used in our operations (e.g., air conditioning our offices or server rooms), ensure they are properly maintained and serviced.

What we plan to do:

- Ensure correct end-of-life treatment of refrigerant gases; recover and dispose of refrigerant gases correctly when maintaining, upgrading, or decommissioning a system

- When we have no option but to renewing heating, ventilation and cooling (HVAC) systems that use refrigerants, we will choose the most efficient systems:
 - Investigate systems using least damaging refrigerant gasses with low potential leakage.
 - Installing new systems may offer energy savings as well as next generation refrigerants (HFOs (hydrofluoroolefins) and natural refrigerants).

SCOPE 2: Electricity

What we are doing:

- Issuing energy efficiency guidance to all site staff to facilitate positive behavioural change.
- Appointing energy champions at each site who gather up-to-date monthly energy performance data and provide feedback.
- Appointing green champions who sit on our Environmental Committee and gather ideas from colleagues across our organisation. These ideas are collated and shared, supplemented by what we consider to be best practices.
- Ensuring we use energy efficient systems wherever possible e.g. replacing fluorescent, halogen and tungsten lighting with low energy light emitting diode (LED) fittings and using passive infra-red sensors (PIRs) where possible, to reduce electrical energy consumption.

What we plan to do:

- Work with our landlords and identify the potential and feasibility of installing low and zero carbon (LZC) energy production onsite where practicable (e.g., solar photovoltaic panels and wind turbines), as identified during our ESOS site surveys.
- Upon site lease renewal we will ensure that energy consumption and energy efficiency are primary considerations, as well as public transport availability, when selecting new facilities, to ensure alignment and support our Net Zero targets.

SCOPE 3 Category 1: Purchased goods and services and Category 2: Capital Goods

APEM Group realises that much of the GHG reductions in this category will happen because of our suppliers reducing their CO₂e emissions and becoming more CO₂e aware as the UK progresses towards a Net Zero 2050. However, that does not mean that we will take a passive approach to the category, especially as it accounts for 96% of our total market based CO₂e emissions. We will continue to try and enact positive change on our suppliers.

What we are doing:

- Engaging with tier 1 suppliers to better understand their CO₂e (scopes 1 and 2) emissions by sending out surveys.
- Reviewing the sustainability and environmental credentials of IT equipment prior to purchase to choose products that lower carbon emissions, are repairable, are refurbished where suitable, and have a longer life-use.

What we plan to do:

- Considering the feasibility of completing surveys with new and developing technologies, such as high-resolution satellite imagery or electric unmanned aerial vehicles (UAVs).

- Ensure the sustainability of products becomes part of our procurement and being selective about working with sophisticated CO₂e aware suppliers (where possible), and additionally, support suppliers to reduce their CO₂e emissions.

SCOPE 3 Category 4: Upstream Transportation and Distribution

What we plan to do:

- Where feasible, consider lower CO₂e emission suppliers as part of upstream transport, e.g. those suppliers that have EVs as part of their fleet.

SCOPE 3 Category 5: Waste

APEM Group continues to follow the waste hierarchy where a preference is given to:

- Reducing the waste generated through purchasing products that are more easily recycled.
- Repairing items where possible.
- Re-using / recycling as much as possible.
- Incinerating residual general waste (with energy recovery) to limit the volume of waste that goes to landfill.

What we are doing:

- APEM Group have collected detailed waste data from several sites, including volume of waste and end-of-life fate. This has allowed us to obtain a better understanding of our waste streams, waste intensity and a reduction in this category.
- Conducted staff training programmes on environmental awareness and best practise to provide clear, consistent training and information to minimise waste and maximise recycling opportunities.

What we plan to do:

- Conduct waste awareness campaigns to provide clear information to minimise waste and maximise recycling opportunities and for each office and at home to learn from each other, share best practice and align our initiatives in this area.

SCOPE 3 Category 6: Business Travel

What we are doing:

- Continued use of online meetings.
- Where travel is required, we prioritise low CO₂e emission travel modes, encouraging active and mixed mode travel, choosing rail over air and / or cars etc.
- Improving our data collection.
- Encouraging car sharing in business travel by paying favourable mileage reclaim rates, as allowed by HMRC.

What we plan to do:

- Encourage the uptake of EV vehicles by investigating options of paying favourable mileage reclaim rates and investigating salary sacrifice options.

Investigating options for facilitating alternative methods of transport – to reduce carbon emissions, by increasing transparency for users.

SCOPE 3 Category 7: Employee Commuting and Working from Home

What we are doing:

- Conducting travel surveys with our employees to understand how they currently get to and from work.
- Supporting active, low CO₂e emission travel with our cycle-to-work scheme, ensuring there are safe and secure cycle storage facilities and appropriate shower and changing facilities at our offices.
- Actively encouraging carpool arrangements.
- Providing information on public transport alternatives.

What we plan to do:

- Repeat our commuting and working from home staff survey.
- Implement an awareness campaign for our staff to support them in reducing their working from home CO₂e emissions through:
 - Energy management best practice.
 - Switching to renewable energy tariffs where possible.
 - Install submetering, if not already installed.
 - Reducing the energy consumption through the selection of energy efficient appliances.
 - Limiting waste sent to landfill by following the waste hierarchy.

9. Declaration and Approval

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard.

Name:

Kirsty Strannigan

Signature:



Position

Group HSEQ and Sustainability Director

Date

22/06/26