

Carbon Management Plan

2022 to 2025



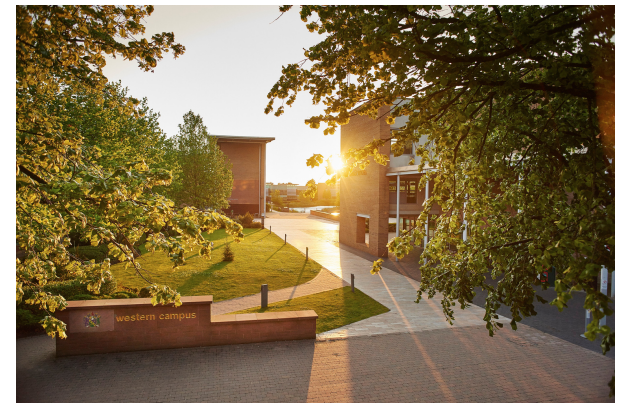
Introduction

The UK has committed to a range of targets to reduce carbon emissions, all of which are aiming to ensure we limit global temperature increased to just 1.5°C above pre-industrialisation levels to minimise the negative impacts on life.

The UK 2008 Climate Change Act initially stated a 2050 target of 80% reductions in carbon emissions against a 1990 baseline. However, in 2019 this was revised to a target of net zero emissions by 2050, i.e., 100% lower than the 1990 baseline.

To work towards this 2050 net zero target the UK Government introduced a 78% reduction by 2035 against the 1990 baseline.

It is important as a university that we not only work towards a net zero target, but also set achievable targets along the way and report on our carbon emissions regularly. Through such actions we hold ourselves accountable and demonstrate ways to reduce carbon emissions.



Scope of Plan

To fully understand the scope of our Carbon Management Plan (CMP) it is important to clearly establish the emissions being included in our reporting.

Edge Hill University aims to monitor and reduce all emissions related to our operations. Carbon CO₂e emissions (which includes CO₂, PFCs, HFCs, CH₄, N₂O and SF₆) are separated into three Scopes:

Scope 1 – Direct Emissions,

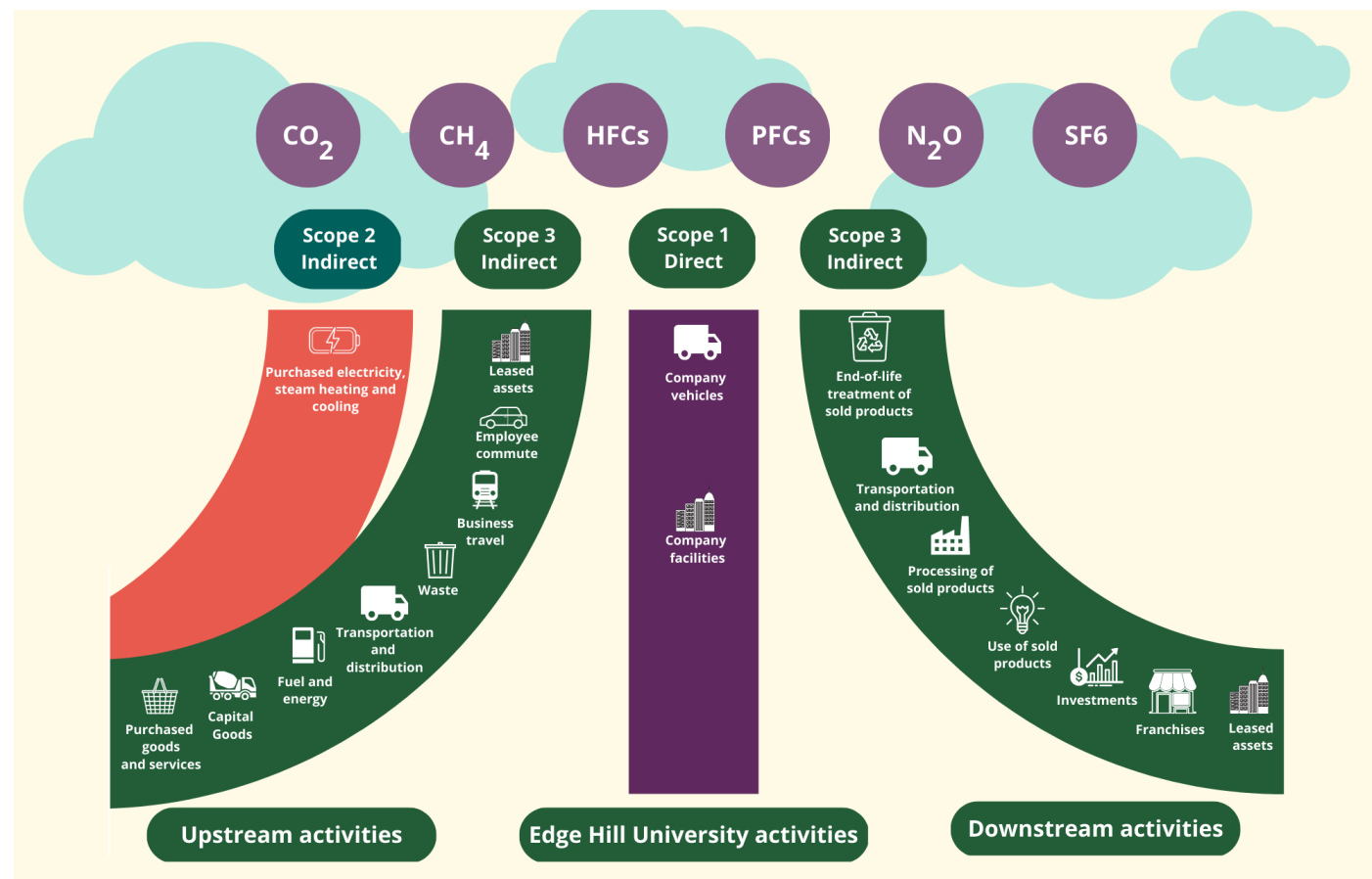
Scope 2 – Indirect Emissions and

Scope 3 – Other Indirect Emissions.

This plan only accounts for emissions that EHU has direct control over (Scope 1 and 2).

This ensures we are only accounting for emissions we regulate, as well as avoiding any double reporting of emissions that may come under the scope of other entities.

Notwithstanding this, Edge Hill University are committed to monitoring and reducing our Scope 3 emissions and engage with technology and policies to allow this.



Upstream activities are those resulting from activities that occur during the production of materials or services used by EHU. Downstream activities covers activities that occur after EHU has finished using materials or services.

Baseline and Targets

In line with HEFCE (2010) EHU previously had a carbon emission baseline from 2005/06 for Scope 1 and 2 emissions. EHU like many universities has undergone a significant amount of development since 2005/06, for that reason our baseline reporting year has been changed to 2018/19, this is in line with our baseline guidance outlined in Appendix 1 which states changes can be made based on significant changes to the building stock (as measured by GIA). This year was chosen as it is the most recent year, not impacted by the covid-19 pandemic, for which we have robust data available. We have established two baseline variables to report against for 2018/19:

- 1) Total scope 1 and 2 CO₂e emissions: 6229 tCO₂e
- 2) Estate carbon intensity: 44.7 kgCO₂e/m

Against these baselines we have set the following targets:

- 1) Reduce our carbon emissions by 10% by 2025
- 2) Become Carbon Neutral by 2030
- 3) Reduce our carbon intensity by 30% by 2025
- 4) Reach Net Zero by 2035

Carbon Neutral vs Net Zero

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While achieving Carbon Neutral and Net Zero status are both ultimately about the reduction of CO₂ emissions, there are differences in the journey to both including their scope and objectives. These are briefly summarised below.

	Carbon Neutral	Net Zero
Scope 1 Emissions must be accounted for	✓	✓
Scope 2 Emissions must be accounted for	✓	✓
Scope 3 Emissions must be accounted for	✗	✓
Carbon Offsetting Allowed	✓	✗
Offsetting through Carbon Capture Required	✗	✓

2015 Carbon Management Plan Update

The previous iteration of the University's CMP was generated in 2015 and presented two main targets that will be reported here:

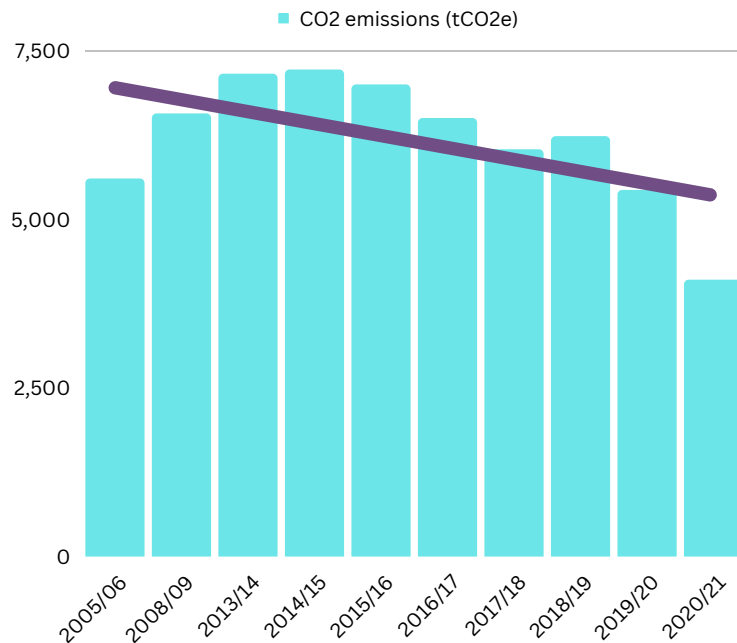
- 1) Edge Hill University will reduce their CO₂e emissions from the 2005/06 baseline of 5601 tCO by 5%, by July 2020 for Scope 1 and 2 activities
- 2) Reduce the University estates carbon intensity (kgCO₂/m²) by 34% by July 2020 from the 2008/09 baseline (94.1)



Achievements and Progress to Date

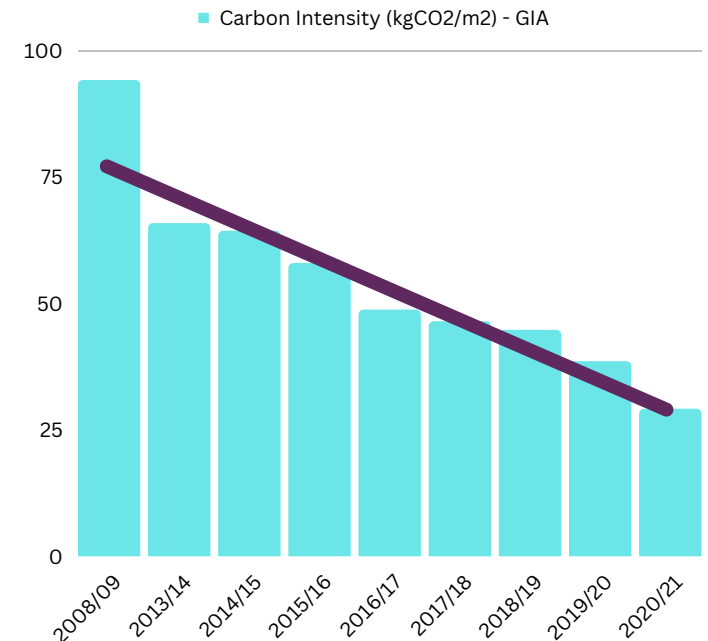
Target One: CO₂e emissions ✓

EHU exceeded the CO₂e emissions target with emissions for the year 2020/21 being 26% lower compared to the 2005/06 baseline. In 2020 EHU campus switched to the edf 100% renewables for business tariff (UK REGO/EU GoOs backed). This switch has saved roughly 1700 tons CO₂e emissions per year.



Target Two: Carbon intensity ✓

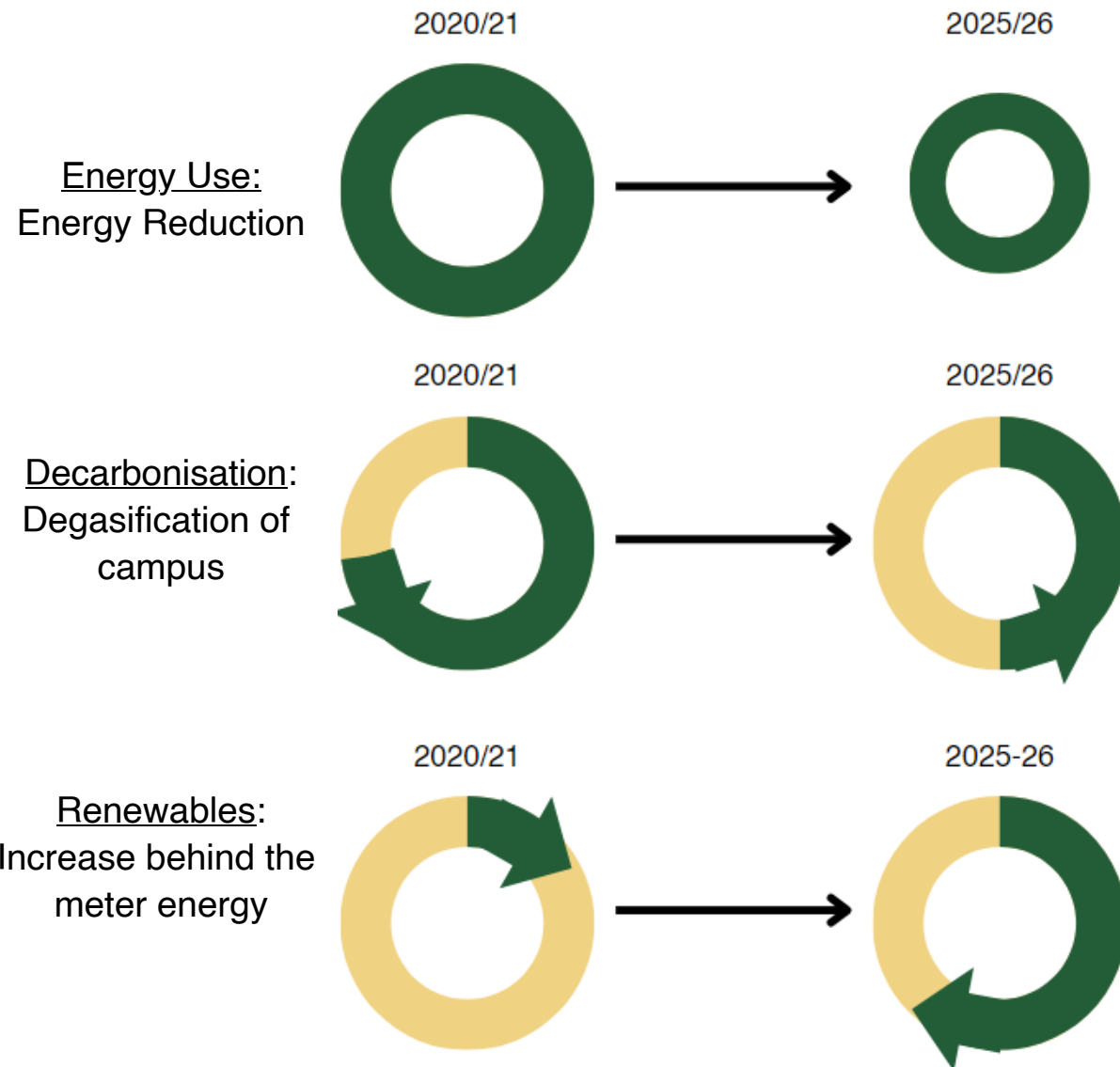
EHU has successfully managed to meet the carbon intensity target set out in the 2015 Carbon Management Plan with a 69% reduction in carbon intensity between 2008/09 and 2020/21. This clearly demonstrates the strong sustainable performance of buildings constructed during this timeframe.



Strategy

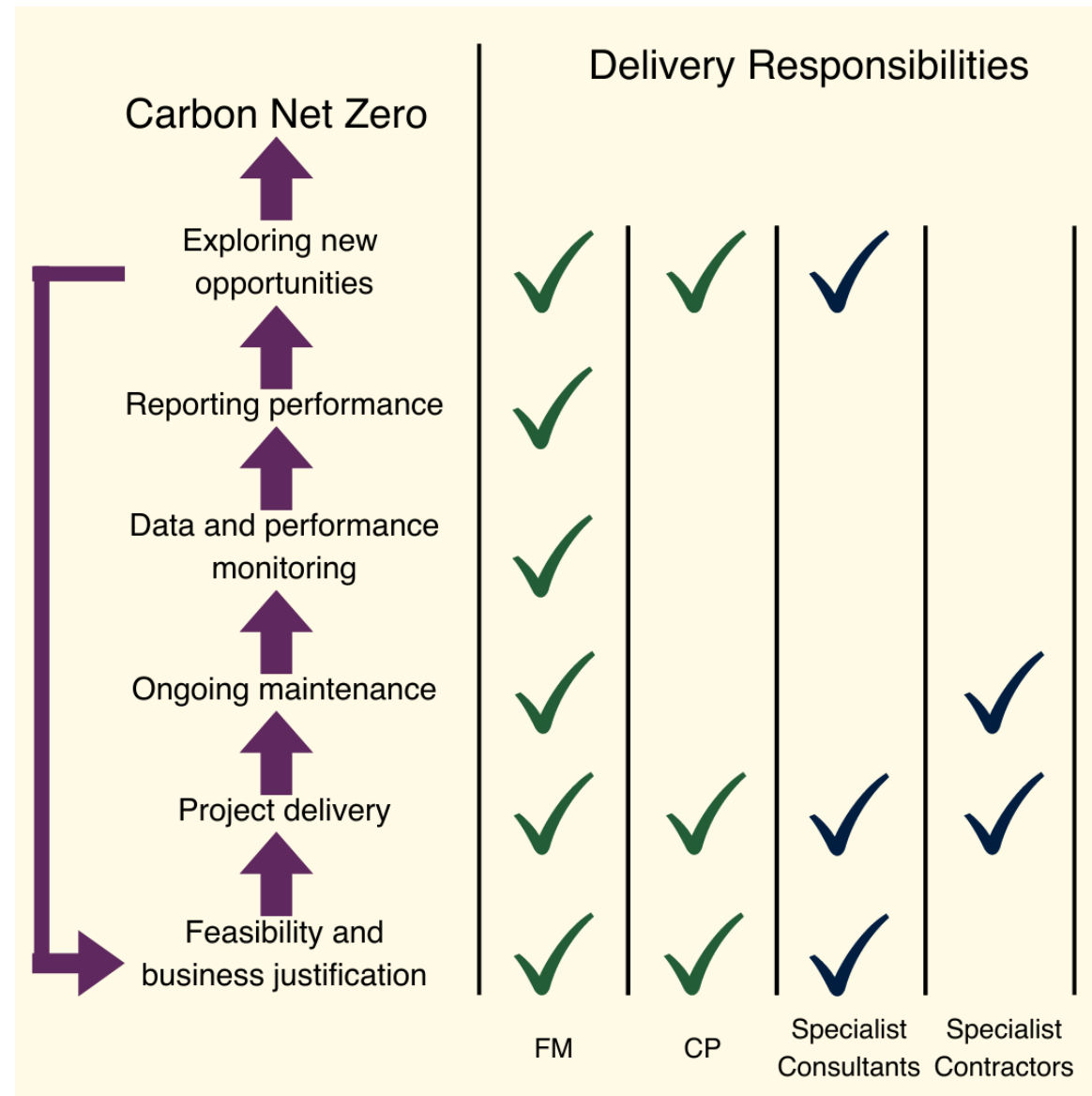
Three key strategic areas are being adopted at EHU to steer our journey towards decarbonisation of our activities, these are Energy Use, Renewables and Decarbonisation. All objectives will sit under at least one of these areas, each objective will also be aligned with one of the four themes outlined in the Environmental Sustainability Strategy (Leadership and Governance; Estates and Operations; Learning, Teaching and Research; and Partnership and Engagement).

Underpinning our strategy is our roadmap to decarbonisation which will allow us to reach our target of Carbon Neutral by 2030 and Net Zero by 2035.



Objective Delivery Model

The teams central to the success of this plan are Facilities Management and Capital Developments. Delivery of these objectives will require significant external resource through consultancy and specialist contractors to plan and complete works. In addition, there will be a requirement for internal expertise both in terms of managing technically complex energy infrastructure project delivery and in analysis of energy data to ensure that opportunities for energy efficient across the estate are maximised.



Roadmap to Decarbonisation

Faculty of Health

- Ground source heat pumps and solar thermal panels installed.
- Building later won 'Sustainable Building of the Year' in 2009.

Improvements to building insulation start

- A wide range of buildings across campus have already benefitted from improvements to insulation including: Founders Court (2009), Graduates Court (2010), Chancellors Court and Founders Court (2013), Chancellors South (2015).

Creative Edge Built

- Creative Edge includes a range of sustainability measures which mean this building has a reduced carbon footprint. It features water efficiency measures, heat recovery and export of this heat to Sport and accommodation.

Central Campus Development

- 2022 saw the demolition of the oldest accommodation on campus 'Back Halls'.
- The site will be developed over the coming years and will include a new Life Sciences building and accommodation. All of which will be built with sustainability in mind.

Strategy and Carbon Management Plan Implementation

- Between 2023 and 2025 the new strategic objectives of EHU, supported by the 2022-25 Carbon Management Plan will be implemented and planning for 2025-2030 will begin.

2007



2009



2013



2019



2022



2025



Solar panel (solar thermal and PV) works

- 2007 saw the introduction of solar panels increase across campus.
- To date the following projects have been undertaken: Solar thermal in Faculty of Health (2007), Business School (2008), Founders Court (2009), Chancellors and Founders Court (2013), Chancellors South (2015). Solar PV in Durning Centre (2010), Tech Hub (2016).

Triple glazing works start

- 2009 saw triple glazing starting to be introduced across campus.
- To date the following works have been undertaken: Founders Court (2009) before moving on to Graduates Court (2010), Chancellors and Founders Court (2013), Chancellors South (2015).

Catalyst Built

- Our newest building Catalyst was built to incorporate a range of high specification sustainable features. On the top floor a major feature is the roof garden.

Strategy Review and Site Updates

- During 2022 site reviews began for both EV charge point installation and future solar PV infrastructure.
- 2022 also saw the start of a review of the sustainability strategy with the aim to put decarbonisation of campus at the fore.

New Strategy and Carbon Management Plan

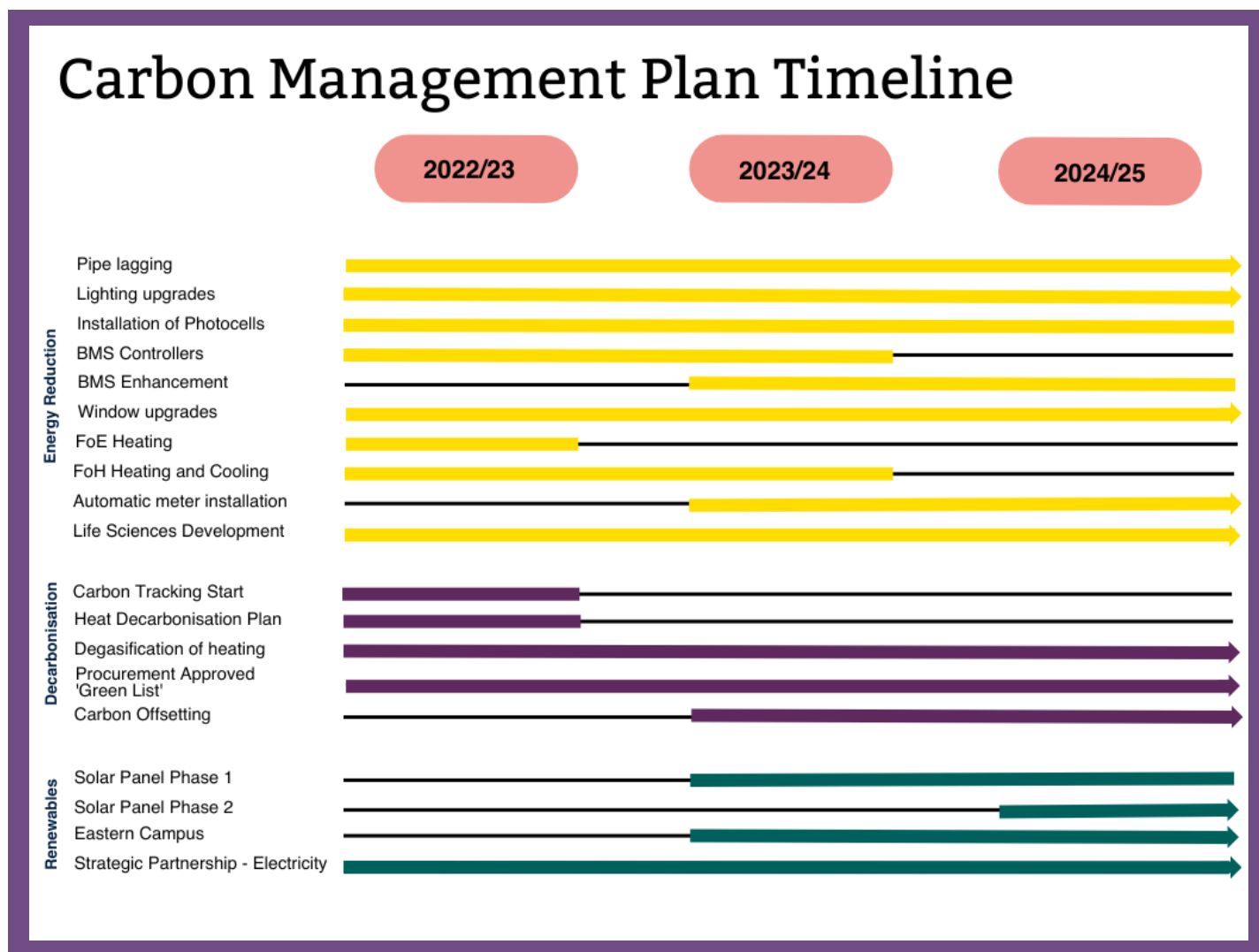
- 2025 will see the launch of our next Environmental Sustainability Strategy and Carbon Management Plan with the aim that we will have reached Carbon Neutrality by the end of their lifecycle and be on our way towards Net Zero.

Objectives

Over the lifespan of this CMP a number of objectives have been set. These are summarised here along with the year of planned implementation. More detail about each can be found in the Environmental Sustainability Delivery Plan. In addition to these objectives a feasibility study will also be undertaken to explore solar array and wind renewable options.

Building audits will be undertaken initially in order to identify a priorities for some of the longer running campus wide objectives, such as lighting upgrades.

Objectives anticipated to go beyond the lifetime of this plan are indicated with an arrow at the end of the chart.



Reporting

This Edge Hill University Carbon Management Plan has been developed by taking a collaborative approach across the University through consultation of key stakeholders. This includes Facilities Management, Capital Projects, Directorate, the University Sustainability Group, SustainNET and the Sustainability Champions.

Performance will be monitored and reported to Directorate by the Operational Risk and Environment team on a quarterly basis via the Institutional Health, Safety and Environment meeting. An annual update will be provided to the Board of Governors and made available online as part of the Sustainability Annual Report. Internal reporting will also be undertaken via our Annual FM Report.

At a minimum EHUs reporting will include the following information:

- Annual GHG emissions from activities for which EHU is responsible for– Scope 1 and 2 emissions
- UK energy use, including gas, electricity, and transport
- Previous year's figures for energy use and GHG emissions
- Energy efficiency actions taken
- At least one intensity ratio
- Updates on the progress of objectives and details of any further objectives identified

Conclusion

For Edge Hill University to reach its Carbon Neutral and Net Zero targets the Carbon Management Plan and its targets must evolve and be built upon. Such an approach must be adopted in order to allow the University to react to changes in technology, attitudes and approaches in the decarbonisation sector that are sure to happen over the coming years.

Edge Hill University is already performing well in the sector in terms of annual CO₂e emissions and has made considerable strides towards decarbonisation since its first Carbon Management Plan was released. However, to reach our 2030 target of Carbon Neutrality there is a clear need to take things further. As well as reducing our annual carbon emissions, there is also a need to ensure that future projects embed low/zero carbon approaches.



Appendix 1: Baseline Policy

The baseline year should only be changed under certain circumstances to ensure a consistent approach is taken to measuring our progress in carbon management. The baseline year should only be recalculated under the following circumstances and a clear statement about the change made as part of the Carbon Management Plan:

- Changes in methodologies, improvements in the accuracy, or discovery of previous errors
- Significant changes to the building stock (as measured by GIA)
- Acquisition of a facility which existed in the base year, then the baseline year should be recalculated if the emissions were not included in the baseline year figures and will be included in the current year's figures
- Outsourcing and insourcing of relevant activities

Environmental Reporting Guidelines: Including streamlines energy and carbon reporting guidance (Pages 17-19)

Appendix 2: Carbon emissions raw data

Year	CO ₂ e emissions (tCO ₂ e)	Actual change from 2005/06 baseline (tCO ₂ e)	Percentage change from 2005/06 baseline
2005/06	5601	n/a	n/a
2008/09	6566	+965	+17.2%
2013/14	7155	+1554	+27.6%
2014/15	7217	+1616	+28.8%
2015/16	6996	+1395	+24.9%
2016/17	6498	+897	+16.0%
2017/18	6034	+433	+7.7%
2018/19	6229	+628	+11.2%
2019/20*	5431	-170	-3.0%
2020/21	4100	-1501	-26%

*2019/20 data includes periods of change to standard operation due to Covid-19

Appendix 3 Carbon intensity raw data

Year	Floor Area (m ²)	Carbon Intensity (kgCO ₂ /m ²)	Percentage change from 2009 baseline
2008/09	65,067	94.1	n/a
2013/14	108,801	65.8	-30%
2014/15	112,238	64.3	-32%
2015/16	120,876	57.9	-38%
2016/17	133,313	48.7	-48%
2017/18	130,079	46.4	-50%
2018/19	139,449	44.7	-52%
2019/20*	141,038	38.5	-59%
2020/21	141,038	29.1	-69%

*2019/20 data includes periods of change to standard operation due to Covid-19

Find out more

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