



Harbourside District Council Carbon Emissions Inventory 2024 - 2025

Summary

Background and context.

This report collates the equivalent carbon emissions due to Harborough District Council's use of energy for both its own services and those services commissioned by the council. The results are for the financial year 2024/25.

The Council declared a Climate Emergency in xx and has committed to reducing emissions to net zero by 2030, as far as practical. The Council is developing a full programme of work to reduce Scope 1 and 2 emissions which counts for net zero and this ambition is reflected in council corporate priorities. The scale of the challenge is recognised and the need for some offsetting of emissions has been identified.

The Council has procured the Ideagen software package this year to manage the data for the inventory, following a limited pilot last year. This has given new insights into the emissions and improved data gathering.

The data presented here has been re-baselined to 2019/20 to reflect changes in the Council's estate. Both Harborough Innovation Centre (HIC) and Harborough Enterprise Centre (HEC) have now been included in Scopes 1 and 2 as they have moved to full council control. This year emissions data also includes the EV charging points in HDC car parks and car park lighting, which were previously not available. The data for the car parks has not been applied retrospectively to previous years data.

The results are separated into three scopes.

- Scope 1 covers emissions due to the direct use of fossil fuels in the district's own buildings and operations, that is gas boilers or vehicles owned by the council.
- Scope 2 covers indirect emissions from electricity consumption.
- Scope 3 amalgamates emissions from other sources, including contracted services, such as waste and leisure centres and business mileage.

Summary of Carbon Emissions findings

The biggest carbon emitters in Scopes 1 and 2 are;

- the Symington Building,
- the Market Hall,
- Harborough Innovation Centre and
- Harborough Enterprise Centre.

Table 1 shows the emissions for each scope from 2019/20 to the current year. Figure 1 shows the reduction in emissions over time graphically.

High energy prices are still a driving factor and have continued to impact council energy bills, adding impetus to reducing energy usage across the estate. Reductions have been achieved by improvement works, such as LED lighting and solar panels on the HIC and building management improvements across the estate. Council emissions have reduced from the baseline year (2019/20) but show an increase from last year.

Scope 1 and 2 emissions together show an increase of 7.3% against the previous year 2023/24, but this is still a significant decrease of 31.9% on 2019/20. The increase this year is due to a number of factors, explored in more detail in the main body of the report, including:

- A longer heating season increasing gas consumption
- An increase in the carbon intensity of gas leading to a 2.5% increase in greenhouse gas emission per kWh
- Addition of car park lighting to scope 2 emissions

The total of all scopes (1 ,2 & 3) emissions show an increase of 14.5% Compared to 2023/24 and a decrease of 9% on 2019/20.

Changes in scope 3 are attributed to by:

- including EV charging infrastructure.
- Including Car park Lighting
- Refurbishment works on the leisure centres which caused an increase in emissions in the short term. Part of the works are improvements to climate adaptions and should lead to a reduction in emissions in 2025/26.

Figure 1 shows the reduction in emissions since 2019/20.

	2024/25	2023/24	2022/23	2021/22	2020/21	2019/20
Scope 1	183.1	164.66	174.31	230.06	233.1	257.34
Scope 2	187.19	166.05	170.68	173.24	209.62	286.64
Scope 3	1775.77	1483.37	1529.86	1812.66	1438.18	1814.62
Total of Scope 1 and 2	370.29	330.71	344.99	403.3	442.72	543.98
Total All Scopes	2146.06	1814.08	1874.85	2215.96	1880.9	2358.6

Table 1: Summary of Emissions (tonnes equivalent) 2019/20 to 2024/25

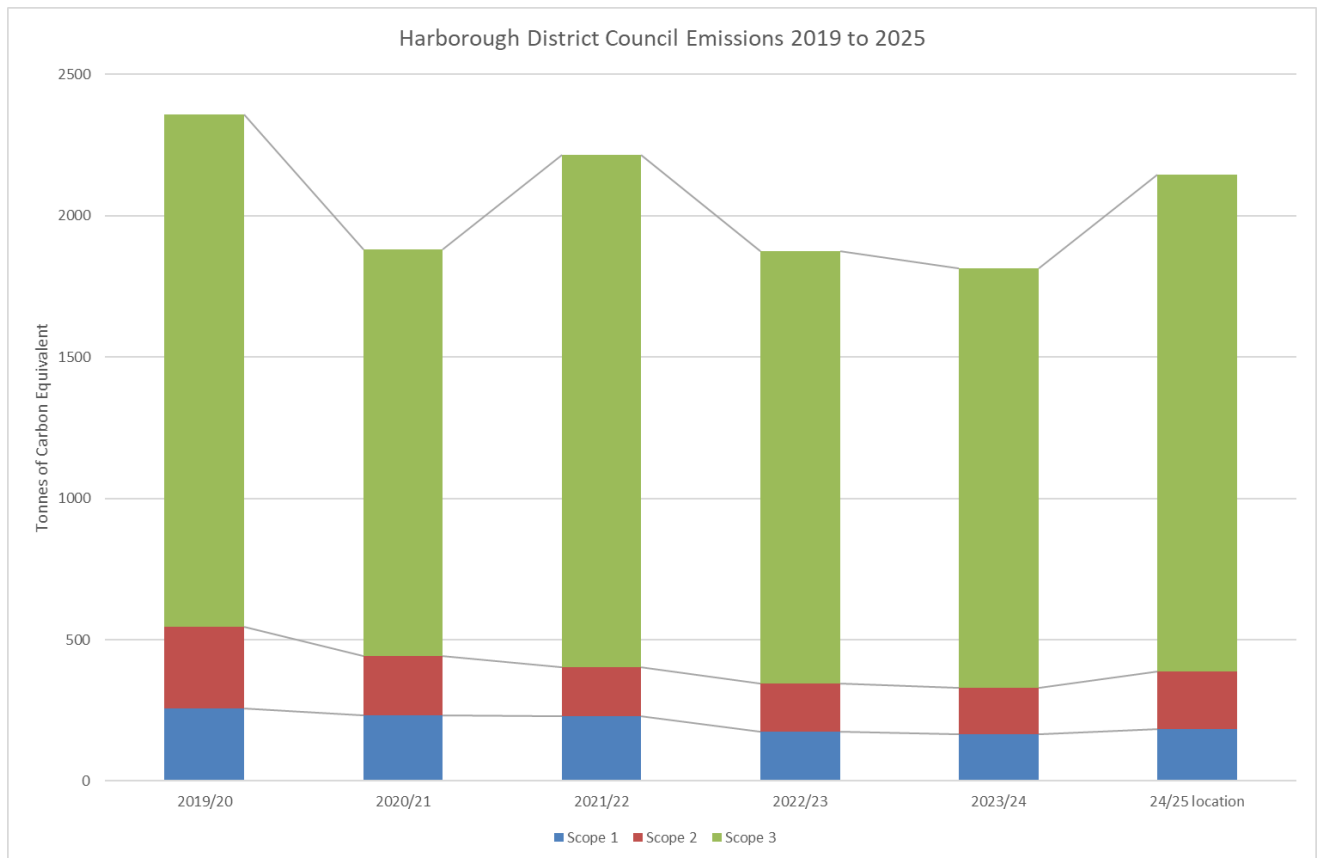


Figure 1 Emissions reduction, all scopes, 2019/20 to 2024/25

Introduction

Harborough District Council's estate consists of:

- Grade 2 listed mill building that is used as the council's main offices, but includes retail units and partner office space
- The Market Hall, in use 6 days a week
- Harborough Innovation Centre – a space for start-up companies
- Harborough Enterprise Centre – a space for companies that have outgrown the start up space
- a variety of sports changing facilities, lighting, EV charging and public toilet blocks.

The sports and leisure services for two leisure centres in Market Harborough and Lutterworth are contracted out under a competitive tender arrangement, as are the Waste and environmental services.

Harborough District Council's action on emissions

Harborough District Council declared a Climate Emergency and has committed, as far as practical, to reaching net zero carbon in its own services by 2030. An important part of monitoring this is an inventory of Harborough District Council controlled emissions: that is information on emissions from property and services run or commissioned by the council.

An inventory has been completed annually since 2014 with a baseline dataset for 2008 available. This inventory marks a new baseline following some changes in the council's estate. The new baseline is based on emissions from 2019/20 when both business centres (HIC and HEC) came under direct control of the council.

A full programme of works is being developed in order to ensure that the council can reach net zero in scopes 1 and 2. This involves additional studies to build business cases for each of the buildings with the highest emissions (the Symington Building, Market hall, Harborough Innovation Centre and Harborough Enterprise Centre). In addition, the council is investigating opportunities to increase renewable generation to net off any electricity (scope 2 emissions), recognising that all emissions cannot be erased..

Compiling an Inventory

The UK government has encouraged Local Authorities to continue to voluntarily report on their greenhouse gas emissions, even if the authority is too small to be required to report through the formal reporting framework for larger authorities. The Government provide guidance on the format and methodology that should be used <https://www.gov.uk/sharing-information-on-greenhouse-gas-emissions-from-local->

[authority-own-estate-and-operations-previously-ni-185](#). In addition, they provide information to enable conversion of energy in kWh or fuel in litres to be converted. The information presented here has used these protocols and the conversion data available at [Greenhouse gas reporting: conversion factors 2024 - GOV.UK](#). Conversion factors for 2024 have been used in this report.

The Data is collected in two sections or scopes:

- Scope 1 and Scope 2 combined: Scope 1 relates to emissions due to the direct use of fuel, i.e gas boilers, biomass, vehicle fuel use for council business and Scope 2 relates to electricity usage in buildings
- Scope 3 which relates to all other emissions, including from contracted out services, business travel, electricity transmission.

Harborough District Council has collated emissions information in earlier years, with 2008 as the earliest year. However, the methodology has changed, and the estate has also changed. The emissions inventory has been re-baselined and trends will be measured against the baseline of 2019/20.

Harborough District Council Emissions

Emissions from Council Services - Scope 1 and 2

The majority of the scope 1 and 2 emissions come from four buildings:

- The Symington Building (main council offices, retail units, library and museum)
- The Market Hall – open 6 days a week with food hall and main hall.
- Harborough Innovation Centre – small business incubator
- Harborough Enterprise Centre – a grow on space for more established local businesses

The Symington Building is usually well used throughout the day and into the evening. The building was fully refurbished in 2013. Heating for the whole building is provided by central boiler and all of the emissions from gas use are included within the figures for the Symington Building, although Harborough District Council only uses around half of the building directly. The electricity supply does have some separate metering, including for the retail units. The emissions from the retail units is included as Scope 3. The building has a BMS and the building management has been looking at ways to reduce emissions, through managing temperature, improving local water heaters and managing lighting.

The Market Hall is well used 6 days per week. The heating is provided by gas boilers but the boiler for the Food Hall has been replaced with a heat pump, towards the end of 23/24 and additional insulation has also been installed. A 42kWp photovoltaic array was installed on the Market Hall in August 2015, continues to provide electricity savings. The PV panels (42.5kWp) generate around 40,000kWh per year, saving around £10,000 and 16 tonnes of carbon per year. LED lighting was also installed in 2016.

Harborough Innovation Centre (HIC) is a BREEAM excellent building, that was built in 2010. The gas boiler provides backup to the biomass boiler, which has been refurbished recently to improve the wood pellet feed, which had led to the biomass boiler being out of commission for some time. The contribution from the HIC biomass boiler, which is fuelled by wood pellets, is 0.27 Tonnes. LED lighting was installed in 2022. A solar PV array was installed in May 2024 consisting of 226 panels of 80kWp capacity. Electric Vehicle chargers have been upgraded with 6 double headed chargers provided for users of the building.

Harborough Enterprise Centre (HEC) is a new building, completed in 2019. It also is designed to BREEAM excellent standards. The building is now fully occupied. It has a very small PV array on the roof (11kWp). Emissions have increased for this building as the occupancy has increased. The building also has 6 EV chargers for the building users.

The Scope 1 emissions from gas boilers in these 4 buildings are shown in Table 2 and the Scope 2 emissions for the same buildings in Table 3 below. Gas usage in all buildings except the Market Hall is higher, this is due to colder weather or cooler spring or autumn weather requiring additional heating. In addition, there is an increased carbon intensity in the gas supply, which leads to a 2.5% increase in carbon emissions compared to 2023/24. The air source heat pump (ASHP) installation in the Market Hall has reduced gas usage by 9.5% compared to 23/24.

Scope 2 emissions are broadly similar to the previous year. The HIC shows a 23.8% reduction due to the new solar array. The Symington building has increased back to previous levels, this is following some services being out of commission in 23/24 and back in use now. The HEC emissions have increased as the building has been in greater use. The HIC scope 1 emissions have increased as the back up gas boiler was in more use whilst the biomass boiler was repaired.

Harborough District Council Site	2024/25	2023/24	2022/23	2021/22	2020/21	2019/20
Council Offices, Adam & Eve Street	84.76	74.49	81.31	101.30	111.91	115.24
Market Hall	38.37	42.38	45.55	62.94	73.81	80.92
Harborough Innovation Centre	21.16	15.14	15.38	35.66	3.45	10.12
Harborough Enterprise Centre	34.37	31.09	19.56	18.06	31.82	39.33

Table 2: Scope 1 Emissions from gas usage for Main Council Buildings

Harborough District Council Site	2024/25	2023/24	2022/23	2021/22	2020/21	2019/20
Council Offices, Adam & Eve Street	68.41	44.64	62.25	65.02	77.26	91.03
Market Hall	43.19	47.47	47.22	45.22	42.71	66.34
Harborough Innovation Centre	23.73	31.13	31.31	35.66	29.10	53.88
Harborough Enterprise Centre	25.92	22.01	15.56	16.03	50.43	63.80

Table 3: Scope 2 Emissions from electricity usage for Main Council Building.

Scope 1 emissions also come from the parking attendants transport contribution is 4.39 Tonnes equivalent of CO₂. The parking attendants' mileage is now monitored via log sheets, with 15,378 miles completed. Harborough District Council host the parking services but this contribution is only from parking attendants in Harborough District.

Scope 2 emissions also come from electricity usage in a number of smaller buildings and other sources such as car park lighting. Table 4 below shows the emissions from each building or service. The lighting at Orchard Rd is included for the first time. Emissions from the other sources are broadly the same. Total Scope 2 emissions amount to 187.19 Tonnes equivalent. This value is based on the typical mix for UK electricity. The new software allows us to also work out the value based on the exact mix of electricity supplied to HDC buildings from details provided in each bill. In this case Scope 2 emissions are only 95.5 Tonnes equivalent. We have not used this data in the overview of emissions, as we don't have the comparable data for previous years. This data will be reported in future along with the data for the typical mix.

Harborough District Council Site	2024/2025	2023/2024	2022/2023	2021/2022	2020/2021	2019/2020
Public Conveniences Common Car Park	15.34	15.02	7.37	5.56	3.84	4.18
Welland Park Rest Room	0.72	0.66	0.72	0.59	0.79	1.11
Public Conveniences Recreation Ground	0.80	1.09	1.02	1.23	0.82	1.26
Cemetery Chapel	0.59	1.07	1.38	2.26	2.76	2.58
Orchard Rd Lighting	8.50	-	-	-	-	-

Table 4: Scope 2 Emissions from other Council Buildings

Emissions from Contracted Council Services (Scope 3)

Harborough District Council, in common with many Local Authorities, has contracted out various services. These results are collated in Scope 3.

Emissions from Waste Services and Other Vehicles

Contracted services for waste collection are the main contribution to emissions from vehicles. The emissions also include grounds maintenance, street cleaning and environmental crime vehicle. The amount of fuel used has increased by around 20,000 litres this year. This is due to a continuing increase in the number of households served by the waste services and an increase in the carbon intensity of diesel fuel.

In total, waste and grounds services contribute some 907.73 Tonnes_e of CO₂, which is an increase of 32 Tonnes_e of CO₂ on the previous year. The contractor monitors vehicle use and provides regular driver training. Routes are regularly reviewed to increase efficiencies. The vehicles were replaced in 2016 and meet the Euro VI standard.

Contractor Service area	Fuel (Litres)	Emissions (Tonnes equivalent CO ₂)
Waste collection, grounds maintenance and street cleaning.	361,245	907.73

Table 5: Scope 3 Emissions from Environmental Services Vehicle Operations

In addition to the waste services, there are some smaller uses for vehicles, including pest control and dog warden. The mileage for these services is estimated. These services contribute to the overall carbon emissions through the use of diesel fuel, contributing some 4.99 Tonnes_e of CO₂. This is a slight increase, mainly due to the increased carbon intensity of the diesel fuel.

Total emissions from all contractors' transport fuel use are 912.72 Tonnes CO_{2e}. This is a slight increase on last year.

Harborough District Council business mileage is available via the expenses system. This provides simplified data, with limited information on car size or fuel type. All figures here have been derived assuming the vehicles are average petrol cars. The total mileage claimed for business use has increased to 80,884 miles, which is almost 3 times 23/24 mileage. This accounts for 23.07 Tonnes equivalent of CO₂. This is an increase from last year of almost 13 tonnes.

Emissions from leisure services

There are two leisure centres, both with pools, in the district. One is in Market Harborough and the other in Lutterworth. The leisure centres are a major source of emissions. However, the significant increase in energy costs has prompted a closer look at operations and a programme of improvements and energy efficiency measures are taking place over 2024/25. There have been repairs to poorly functioning equipment, improvements in lighting and insulation. Both leisure centres were closed for a few weeks. The total emissions from both gas and electricity consumption have increased compared to 23/24 from 570.79 Tonnes equivalent of CO₂ to 778.7 Tonnes equivalent.

The increase is mainly due to increased gas use at Market Harborough Leisure Centre as Air Handling Units (AHU) that were not functioning have been replaced. In addition, the pools closed in summer 24 and then required refilling and reheated, increasing gas usage markedly. In addition, Since the refurbishment the footfall, has increased in the leisure centres and some areas that were poorly used are now needing increased heating and ventilation. New HVAC units have been installed. The benefits of the refurbishment are likely to be seen next year, particularly as solar arrays were installed on both leisure centres in summer 2025.

	Electricity Consumption (kWh)	Emissions (Tonnes equivalent CO ₂)	Gas Consumption (kWh)	Emissions (Tonnes equivalent CO ₂)
Harborough Leisure Centre	652,579	135.13	1,684,523	310.79
Lutterworth Leisure Centre	498,689	103.27	1,243,710	229.46

Table 6: Scope 3 Emissions from Leisure Centres

Emissions from Other Buildings

The Welland Park Café is contracted out, so is reported under scope 3. There were 6.07 Tonnes_e of CO₂ from electricity use and 3.88 Tonnes_e of CO₂ from gas usage. This is 9.95 Tonnes_e of CO₂ in total. This is a slight increase on 23/24.

The retail units that are part of the Symington Building have been included as scope 3 emissions for the first time this year. Previously they were omitted. The emissions from the retail units are 18.58 Tonnes equivalent.

The Symington Recreation Ground Pavillion is now in use by a community group and thus moves to Scope 3. Emissions have increased from 203/24 2when it fell in Scope 2 emissions. The emissions from electricity usage are now 4.95 Tonnes.

In total 33.5 Tonnes equivalent of CO₂ come from all other scope 3 buildings.

Other Buildings	Electricity Consumption (kWh)	Emissions (Tonnes equivalent CO ₂)	Gas Consumption (kWh)	Emissions (Tonnes equivalent CO ₂)	Total Emissions (Tonnes equivalent CO ₂)
Welland Park Café	29,334.70	6.07	21,004.00	3.88	9.95
Symington Building Retail Units	89,727.80	18.58			18.58
Symington Recreation Ground Pavillion	23,904.8	4.95			4.95

Table 7: Scope 3 Emissions from other buildings

Emissions from EV charging infrastructure

This year we have information on the amount of electricity used in providing EV charging infrastructure. The EV chargers in Orchard Rd, Broughton Astley accounts for 4.06 Tonnes and Station Rd, Lutterworth accounts for 7.03 Tonnes. The Chargers in Commons car park, Market Harborough are not able to be resolved from the emissions from Commons Car Park toilet block, as they share a meter. These emissions are counted under goods or services sold by the council.

Emissions due to electricity transmission

Finally, the transmission of electricity has an impact on emissions, so this included using the factors suggested in government guidance. Given a total electricity consumption of 947,486.9 kWh from all scope 2 electricity consumption there is a contribution of approximately 16.75 Tonnes of CO₂ equivalent.

Total Scope 3 Emissions

The total of emissions covered by Scope 3 is thus 1,775.77 Tonnes equivalent of CO₂. This is an increase on 2023/24 from 1488.15 Tonnes equivalent, an increase of 287.62 Tonnes.

Scope 3 accounts for the highest emissions for the Harborough inventory. Leisure centres are very high users of energy and waste services have to cover a very large rural collection area, which leads to high emissions. The work on the Leisure centres has caused some increase in emissions as equipment has been brought back into use and also for refilling and reheating the pools. The PV on both leisure centres and the energy efficiency works will show savings next year. Waste emissions have only increased marginally.

Conclusions and Future Action

Harborough District Council continues to work hard to reduce emissions. This year has seen a small increase in emissions from Scope 1 and 2. Scope 3 emissions have increased a little more but the trajectory from 2019/20 is still downwards.

New emissions sources, including EV charging and car park lighting, have been included in this inventory. Scope 1 and 2 emissions together show a reduction of 31% on 2019/20. Scopes 1, 2 and 3 emissions show a reduction 9% on 2019/20. The new software from Ideagen for monitoring emissions has improved the data gathering and assessment and will be used in future years.

It is clear, that there is still a significant challenge if the Council is to meet its commitment of net carbon neutral for scopes 1 and 2 by 2030. Scope 1 emissions can only be reduced by replacing gas boilers in the 4 main buildings. Initial assessments have been completed for The Symington Building and the Market Hall for replacement of gas heating with ASHPs. Sadly, a bid to the PSDF was unsuccessful, so other options are being considered.

Scope 2 emissions have more options, but if heating emissions move from gas usage to electricity, then even when energy efficiency improvements and solar PV arrays on the buildings are completed, there will still be a need to offset emissions. This can be done by buying green electricity; offsetting carbon via off site renewable generation and certified carbon emissions from tree planting. Harborough has had various tree planting schemes and some community tree give aways, but these schemes are not certified. Certified schemes will be investigated. Options for offsite renewables is under consideration.

During 2024/25 there have been a number of interventions. The Market Hall has had one boiler in the food court replaced by an ASHP and there has been a reduction in emissions due to that. Harborough Innovation Centre has had a solar array of 80kWp installed and emissions have reduced by around 8 Tonnes but this will increase further once a full year has been completed. The Symington Building has funding set aside for improvements next year (25/26), including new LED lights and window refurbishments to reduce draughts. Funding will be sought for replacing the boilers in the Symington Building with ASHPs during 2026/27. Initial feasibility for a solar farm to net off Scope 2 emissions will be conducted. Further solar on smaller buildings will also be investigated during 2025/26.

Scope 3 emissions also present a challenge. The procurement of the leisure services contract in 2024 included energy efficiency savings. Although the savings are not apparent this year, as work was being completed, the benefits should be apparent next year. Some of the works have actually increased emissions temporarily. Solar arrays have been installed in May 2025 on both the Market Harborough Leisure centre (516.56kWp, 1174 panels) and the Lutterworth Leisure

Centre (261.52kWp, 458 panels). These installations, expected to save over 100 Tonnes of CO₂, should show a significant reduction in emissions from leisure services when next year's inventory is completed. Decarbonising options for the waste fleet are being investigated in time to be included in the new tender procedure due in 2027. The new food collection will increase the miles travelled and so add to the urgency.

Capital funding has been allocated for some projects in 2025/26 plans, including:

- LED Lighting and window improvements in the Symington Building
- Solar PV arrays on the two leisure centres installed Summer 2025
- Roofing works at the Market Hall, which may lead to reduced solar savings whilst the work takes place.

Other areas being considered in the longer term include:

- Electric vehicle replacement when contracts are up for renewal subject to suitable technology being available.
- Solar on smaller buildings
- Procurement of efficient vehicles will form part of the waste contract which will be renegotiated by 2027.
- Solar array on the HEC.
- Ground mounted solar array.
- Including emissions data based on the mix of electricity from HDC bills
- Certified planting scheme, possibly as part of the rewilding project on the newly acquired land north of Market Harborough.

In summary the inventory for the year 2024/25 has shown increases in emissions in comparison to the previous year 2023/24. However, the recent works completed during 2024/25 and 2025/26 are expected to lead to a reduction, which will be seen in the inventory compiled next year. However, emissions reductions in scopes 1 and 2 will require significant capital to be invested to realise large reductions.

Appendix 1

Date	Building	Description	Savings
2013	Symington building	Refurbishment including low energy lights and new boilers	NA
July 2015	Market Hall	42.5kWp solar array installed	
October 2015	Market Hall	LED lights installed	
? 2024	Market Hall	ASHP installed in Food Hall. Additional insulation installed	
	HIC	LED lighting installed.	
May 2024	HIC	80kWp Solar array installed	
?	HIC	Biomass boiler improvements	
2024	Market Harborough Leisure Centre	Energy efficiency measures	
May 2025	Market Hall Leisure Centre	516.56kWp solar array installed	
2024	Lutterworth Leisure Centre	Energy Efficiency measures installed	
May 2025	Lutterworth Leisure Centre	261.52kWp solar array installed	
Autumn 2025	Symington Building	LED lights and draft proofing of windows.	