



CASE STUDY

EALING COUNCIL DECARBONISATION PROGRAMME

CLIENT: EALING COUNCIL

LOCATION: ENGLAND

Highlights:

- Carbon governance
- Net zero roadmap
- Programme delivery

THE CHALLENGE

Arthian was appointed by Ealing Council to carry out decarbonisation works, including the development and calculation of a GHG Emissions Baseline, and the development of a Trajectory Tool in addition to conducting Building Energy Efficiency Audits, Feasibility Studies and developing a Heat Decarbonisation Plan. The team provided a Technical Lead to progress the procurement and implementation of energy savings measures across the council's estate. Arthian was appointed Project Manager and Technical Lead for projects funded through the Public Sector Decarbonisation Scheme, a combined funding of circa £11 million.



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THE CHALLENGE

Our energy engineers completed building energy efficiency audits at 41 corporate sites to identify energy efficiency and carbon reduction measures such as low and zero carbon technologies, with quantification of energy, carbon and cost savings. The project recommendations included: Air Source Heat Pumps, Ground Source Heat Pumps, Electric Heating, Solar PV, Solar Thermal, Building Insulation and Glazing, HVAC and BMS optimisation, Lighting upgrades and behavioural change. The sites reviewed included: Adult Education Centres, Children's Centres, Community Centres, Community Shops, Day Centres, Depot and Civic Amenities, Libraries, Nurseries, Offices, Schools, Sports & Leisure Facilities, Visitor Centre and a Zoo.

In addition to the above activity, the team completed Feasibility Studies and provided technical PSDS Grant Application guidance which supported the Council to identify projects and apply for grant funding from the Public Sector Decarbonisation Scheme (PSDS) and Salix Energy Efficiency Loan Scheme (SEELS). Arthian also developed a detailed Project Recommendations Register with requisite data and information required for PSDS and SEELS Applications, including: description of work, project type and category, annual energy consumption (kWh) pre/post project, project value, carbon savings potential and business case cost breakdown. The Council were successfully funded by the Public Sector Low Carbon Skills Fund (LCSF) on two separate occasions by joint applications with the Council.



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THE CHALLENGE

To complete the work, Arthian produced a Heat Decarbonisation Plan (HDP) for the Council, focusing on 11 out of 23 sites that Arthian had audited for the Council's PSDS grant application. The HDP was structured to meet the Salix requirements and to support the wider Net Zero Carbon programme, covering the following:

- Purpose and Introduction: defined scope of the HDP;
- Buildings: provide information on the buildings in the HDP to include energy and carbon details;
- Resources: support the Council to define the responsibilities and competencies for managing the delivery of the HDP;
- Previous Energy Projects and Existing Low Carbon Technology: provide an overview of current technologies and overview of pipeline projects entailing low carbon heating solutions;
- Heat Networks and Opportunities Onsite: overview of existing or planned heat network developments;
- Support Information: wider energy data used to support the HDP and measures applied for under PSDS;
- Plans for the Sites: planning restrictions, planning guidance and planned changes in site use;
- Key Challenges: overview of decarbonisation of heat challenges for buildings and solutions.



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THE SOLUTION

Works provided by Arthian include the following:

- GHG Emissions Baseline – the production of greenhouse gases that have occurred prior to the implementation of emissions reduction strategies, and the first port of call in a decarbonisation strategy
- Net Zero Carbon Strategy and Action Plan – an organisation's strategy to produce zero carbon emissions, and the actionable plan for achieving that goal
- Building Energy Efficiency Projects – surveys undertaken to assess current building stock and emissions produced, and provide suggestions for decarbonisation projects that could be undertaken to reduce and offset carbon emissions and their effects
- Heat Decarbonisation Plan – provides an organisation with a route map of enabling work and projects that facilitate the implementation of low carbon heating solutions



PROJECT OUTCOMES

Arthian provided the following deliverables for the Council:

- GHG Emission Baseline Tool and GHG Emissions Trajectory Tool
- 44 x Building Energy Efficiency and Low/Zero Carbon Audit Reports (and associated Energy Analysis)
- Carbon Emissions Reduction Projects Register (in support of PSDS and SEELS)
- 2 x Public Sector Low Carbon Skills Fund (LCSF) Grant Applications
- 2 x Public Sector Decarbonisation Scheme (PSDS) Grant Applications
- Production of a detailed Heat Decarbonisation Plan for use by the Council within their Net Zero Carbon strategy



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