



CASE STUDY

TONBRIDGE & MALLING BOROUGH COUNCIL PUBLIC SECTOR DECARBONISATION SCHEME

CLIENT: TONBRIDGE & MALLING BOROUGH COUNCIL

LOCATION: UK

Highlights:

- Public Sector Decarbonisation Scheme Programme Delivery



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THE CHALLENGE

Arthian has been engaged by Tonbridge & Malling Borough Council (TMBC) since 2022 to lead the decarbonisation of their highest-emitting leisure facilities, including Larkfield Leisure Centre and Tonbridge Swimming Pool. These two sites alone contribute over 63% of the Council's total carbon emissions, primarily from gas consumption, and were prioritised as part of TMBC's wider Carbon Descent Plan. This work sits within a broader Public Sector Decarbonisation Scheme (PSDS) funded programme with a total capital value exceeding £80,000, delivered under a traditional procurement model where the Council retained full design control. Arthian served as the client-side advisor and technical lead.

Our engagement encompassed full lifecycle services from RIBA Stage 3 (Developed Design) through to Stage 7 (In Use), with a focus on engineering-led design, funding compliance, and technical assurance. Larkfield Leisure Centre, a complex wet-side facility with variable occupancy and continuous heating demands, formed the cornerstone of this programme.

THE SOLUTION

We commenced with a feasibility assessment and authored a RIBA Stage 1 report that informed investment prioritisation. Our team then carried out detailed site surveys and developed a bespoke Heat Decarbonisation Plan (HDP) for Larkfield Leisure Centre, assessing building fabric, plant condition, baseline energy consumption, and emissions profiles. Using our proprietary carbon modelling tools, we proposed a suite of targeted interventions in alignment with PSDS eligibility criteria:

- **Air Source Heat Pumps (ASHPs)** specifically designed for wet-side pool heating.
- **Integrated Air Handling Units (AHUs)** with low-carbon heating to serve wider building ventilation needs.
- **Building Management System (BMS)** upgrades with occupancy-based and time-of-day zonal control strategies.
- **EC fan upgrades and mechanical efficiency improvements** to reduce electrical loads and enhance operational resilience.



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PROJECT OUTCOMES

All technologies were designed and specified to RIBA Stage 4 detail in-house, forming the basis of tender documentation for contractor engagement. Our technical specification included PSDS-aligned carbon saving forecasts and lifecycle performance metrics. Arthian led the tendering process, securing 13 competitive bids through a transparent and technically robust evaluation process.

In parallel, we supported TMBC in compiling and submitting the PSDS funding application, ensuring full compliance with Salix Finance guidance. Our team managed technical clarifications from Salix, prepared carbon and cost-per-tonne justifications, and led negotiations with the District Network Operator (DNO) to coordinate required grid capacity upgrades. These infrastructure elements were fully integrated into the funding model to ensure financial viability and reduce risk exposure for the client.

Delivery is managed under a traditional contract structure, with Arthian providing end-to-end project oversight. We coordinated with the appointed implementation partner (XE), reviewed contractor technical submissions, and validated the Construction Phase Health & Safety Plan (CPHSP). Our project management role includes site progress reviews, commissioning oversight, and quality assurance.

Commissioning stages were witnessed and documented in line with the M&V plan. Particular emphasis would be placed on system integration between ASHPs, AHUs, and BMS to ensure stable indoor environmental conditions in wet-side zones. Arthian will provide post-handover support including user training, metering dashboard setup, and in-use performance monitoring.

A key challenge on this project is maintaining public access to the leisure centre during installation. To mitigate disruption, we implemented a phased delivery strategy, coordinating closely with TMBC's leisure operations teams and plant room managers to schedule works during off-peak periods and system downtime.

As a key driver of this project, Arthian played a pivotal role in leading the assessment, design, funding application, and ongoing project management for the council's leisure facility decarbonisation. Arthian's leadership spanned across technical, financial, and stakeholder engagement aspects, ensuring the project's success.



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