

ADVISORY

DECARBONISATION OF NORFOLK COUNTY COUNCIL'S SCHOOL ESTATE

NORFOLK COUNTY COUNCIL



ADVISORY OVERVIEW

Norse Consulting has successfully designed a 4-staged process that enables a cost-effective, targeted approach to decarbonising the built environment. The framework begins by identifying the poorest energy performing buildings, preceded by feasibility studies, and delivery implementation. Over the course of 2021 and 2022, this process has been implemented for 154 of Norfolk County Council's maintained school estate and realised significant energy and carbon savings opportunities.

Norse Consulting's approach to decarbonisation feasibility and delivery follows the 4-step approach summarised in the table (right).

Stage 0	Initial Workshop
Stage 1	Desktop and Planning Activities
Stage 2	Site Decarbonisation Studies
Stage 3	Decarbonisation Delivery Plan

“ Our innovative and transparent approach on this project to date has already supported Norfolk County Council to make significant strides towards achieving its strategic goal to become net zero across its estates by 2030. We look forwards to supporting the Council in continuing its journey towards carbon neutrality. ”

PAUL COCKADAY
ASSOCIATE DIRECTOR
PROJECT LEAD



PROJECT

Norse Consulting were commissioned by Norfolk County Council to complete Stage 1 decarbonisation prioritisation activities in 2021. Of the 154 schools in the estate, 20 were identified as top decarbonisation priorities for Stage 2 decarbonisation feasibility site reports based on M+E service condition, fuel types, fabric characteristics, and energy and carbon intensity on site.

Stage 2 surveys were commissioned in 2022 for 5 of the prioritised schools with a requirement to produce these to the PAS 2038:2021 specification. All in, the outputs are shown in the table below.

Our Stage 2 feasibility reports identified a total of 463 tonnes of CO2e emission savings, a 74% reduction of existing emissions.

SITE	TOTAL CARBON SAVINGS (TONNES)	CARBON EMISSION REDUCTION
Swanton Morley Primary School	119.52	79.3%
St William's Primary School and Nursery	80.42	69.8%
Recreation Road Infant School	131.70	76.5%
Colman Junior School	87.38	67.0%
Robert Kett Primary School	43.80	50.6%

¹⁾ Includes VAT at 20%

PROJECT

Norse Consulting has subsequently supported Norfolk County Council with an application for Public Sector Decarbonisation Scheme (PSDS) funding; a grant provided by the Government Dept. of Business, Energy, and Industrial Strategy (BEIS) and overseen by Salix to decarbonise buildings in the Public Sector and implement technologies identified at the feasibility stage. Specifically, for Swanton Morley Primary School, a Grade II listed building constructed in 1917 with a DEC rating of G.

If successful, the grant will pay for 62% (£884k) of the total project value, in excess of £1.4m, and restore inefficient fabric, install solar PV, remove old incandescent lighting, and replace current heating systems with ground source, and air source, heat pumps.

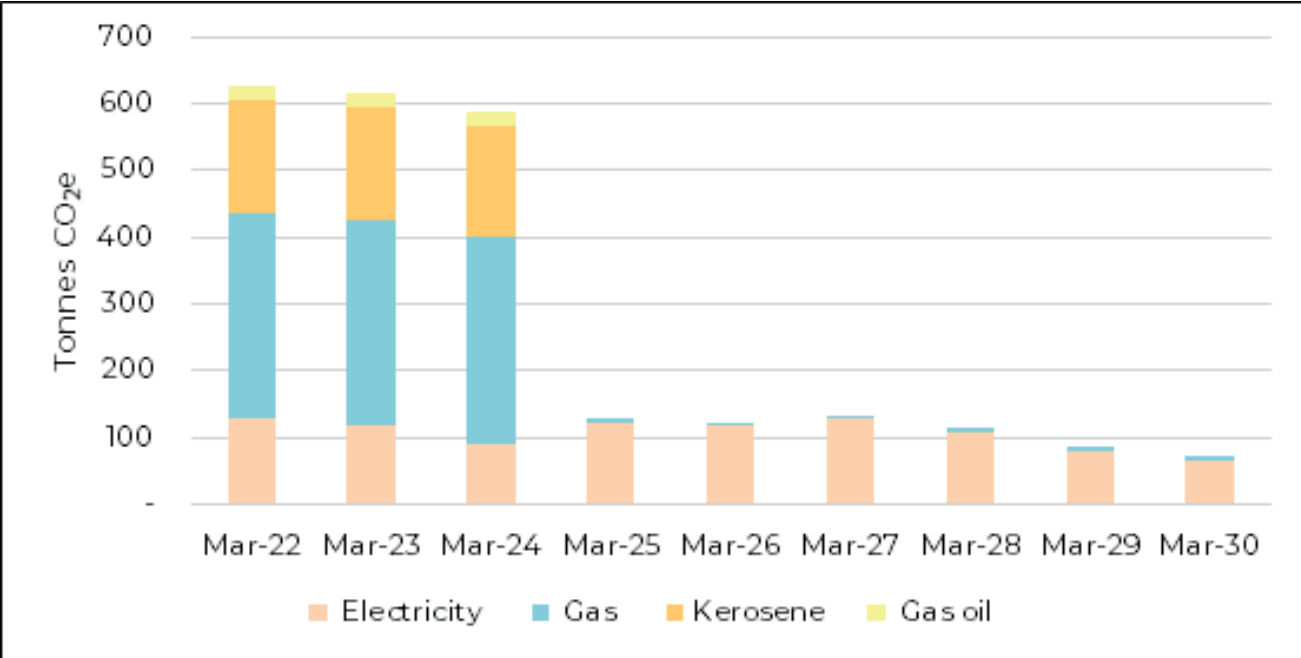


KEY BENEFITS

The project will contribute towards reducing Norfolk County Council's carbon emissions and support its pathway to achieve a net zero carbon status in 2030. The projected carbon emissions up to the Council's 2030 target across all 5 schools is detailed in the figure below, based on Norse Consulting's Stage 3 delivery programme which details an achievable completion date in March 2025.

Our Stage 2 feasibility reports identified a combined carbon emission saving of 463 tonnes. The Stage 3 programme, and support with PSDS funding, could enable retrofit implementation at Swanton Morley Primary School beginning as early as April 2023.

The project set the foundations for future building improvements and if acted on, would also improve the building's operations and functionality for its users as well as increase its longevity. In the longer term, additional savings on operational energy costs are possible through the removal of fossil-fuelled heating as the national grid becomes greener.





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