



Heat pump installation: North Lanarkshire Council, Lorne Gardens

1 Project overview

Introduction

In November 2021, North Lanarkshire Council completed the Lorne Gardens Air Source Heat Pumps Project.

This involved installing 21 air source heat pumps in retirement housing that is off the gas grid. Heat pumps were installed in 20 terraced bungalows.

The main driver for the project was feedback received from tenants regarding the cost of running their electric wet systems. The tenants required more affordable heating, as they are generally low-income households.

Project name: Lorne Gardens Air Source Heat Pumps Project
Landlord: North Lanarkshire Council

Installer: Saltire
Tenant engagement: In partnership with Saltire
Project management: North Lanarkshire Council

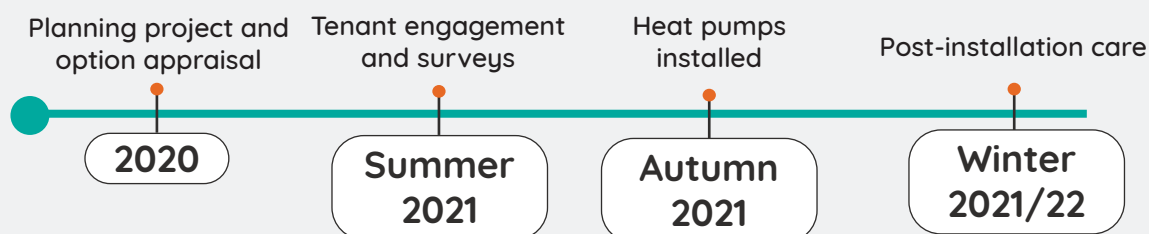
Overall cost: Approximately £200,000
Funding source: Internal, through Housing Revenue Accounts

Heat technology: Air Source Heat Pumps

Building archetype: 20 end- and mid-terrace bungalows
Year: 1977
Tenure: Social housing

Location: Salsburgh, North Lanarkshire

Project timeline:



Measures

A cost-benefit analysis found that air source heat pumps would be more cost effective than the existing electric wet systems. It was estimated that energy use would reduce from 9,907 kWh to 3,341 kWh per year. If realised, this would lower carbon emissions and tenants' bills.

The Council considered a communal ground source heat pump, but determined that this would be too expensive and require significantly more planning and management than heat pumps for each bungalow. In addition, the air source heat pumps could be installed quickly, benefitting tenants in time for winter.

Thermal imaging of the properties identified cold spots due to gaps in the cavity wall insulation. Top-up insulation was installed to ensure the new heating system would work effectively. The properties already had solar PV installed, which has reduced the running costs.

2 Project management

Contractor



North Lanarkshire Council had a three-year measured term contract (MTC) arrangement with Saltire for all renewable energy projects. Saltire was originally selected for the MTC as part of a competitive tender.

This meant that the Council were familiar with working with Saltire. They therefore did not need to conduct a pilot, which they would have done with a new contractor, as they had resolved any issues as part of past projects.

Project management was delivered internally by North Lanarkshire Council.

benefits would be. Needs and concerns were discussed, such as the placement of the infrastructure. All potential properties were surveyed, following which the tenants could decide whether to opt in. This proved effective with only two refusals.

Post install, tenant liaison officers and contractors visited to ensure tenants were happy with the heating system and were confident in how to use it.

Tenant engagement



Initially, the tenants were introduced to the project via a letter that explained the programme and what to expect. The communal living space had an air source heat pump installed six months earlier. Tenants were invited to see the system in action, raise concerns and ask installation questions.

Individual home visits were offered where the installer explained how the work would be carried out and what the results and

3 Costs

**Overall project cost
(including installation and tenant engagement)**

Approximately £200,000



Installation cost per property:
approximately £10,000

Post-installation care was delivered through day-to-day council staff costs. Evaluation was not delivered and therefore was not budgeted for.

The council were not aware of any funding for publicly owned council stock heating. Instead, they funded the project internally through Housing Revenue Accounts.

4 Project impact



Evaluation approach

Energy Performance Certificates (EPCs) have been conducted for the majority of the properties following the project. This provided insight to assess the impact on the energy efficiency of the buildings after the installation. Three pre-installation EPCs and 17 post-installation EPCs were available.

The council did not complete any other evaluation work on this project and therefore do not have official evaluation data.



Results

All three pre-installation EPCs were in band D. Post-installation, all properties were in EPC band B or C, with the exception of one, which remained in band D. It is unclear why this was the case.

All feedback reported verbally from tenants has been positive. The council outlined that this included the following:

- All tenants were satisfied with the installation process and the quality of the work.
- Some tenants reported a reduction in energy via smart meter displays and bills.
- Tenants gave positive feedback about advice on how to use the systems, in particular the support from on-site staff.



5 Challenges and recommendations

Space



Challenge:

The properties were small and it was challenging to fit the new infrastructure in.

Solution:

Externally, walkways and drying areas were adjusted to fit the air source heat pumps. Internally, the placement of radiators needed to be carefully considered. Many of the residents use walkers and handrails. It was important to ensure that the installation of radiators did not restrict the mobility or safety of tenants.

Recommendation:

Engaging tenants helps understand the best placement of the new system throughout the property and ensure that this fits their needs.

Post-installation care



Challenge:

Some of the tenants did not understand how to use the technology.

Solution:

A warden was on the housing complex four days a week and was able to provide immediate help to many tenants as they adjusted to their new heating system. The tenants trusted the warden due to their established relationship.

Recommendation:

Providing access to a member of staff that tenants have established relationships with ensures that post-installation care is easy to access.

6 Project contact

North Lanarkshire Council welcomes enquiries about visits from other social landlords. Please email Douglas McCabe on mccabed@northlan.gov.uk

This is part of a suite of case studies that can be found on the [ClimateXChange social housing decarbonisation project webpage](#), alongside a summary report, which gives an overview of the key learnings and recommendations.