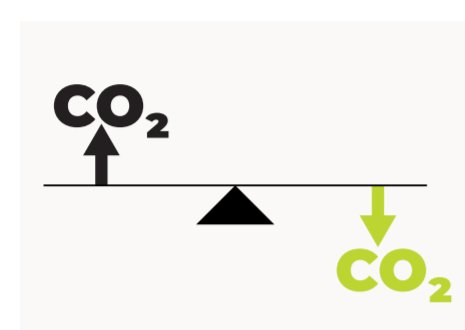


Welcome

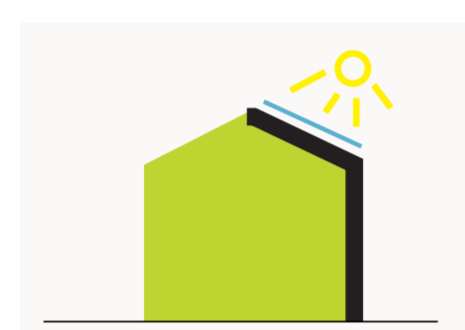
Thank you for coming to find out more about the renewable heat network and renewable energy centre proposals.

Project background



Carbon neutral by 2030

Kensington and Chelsea Council declared a climate emergency in 2020. By 2030, the Council aims for all the buildings it owns and manages to be carbon-neutral.



Refurbishing Lancaster West Estate

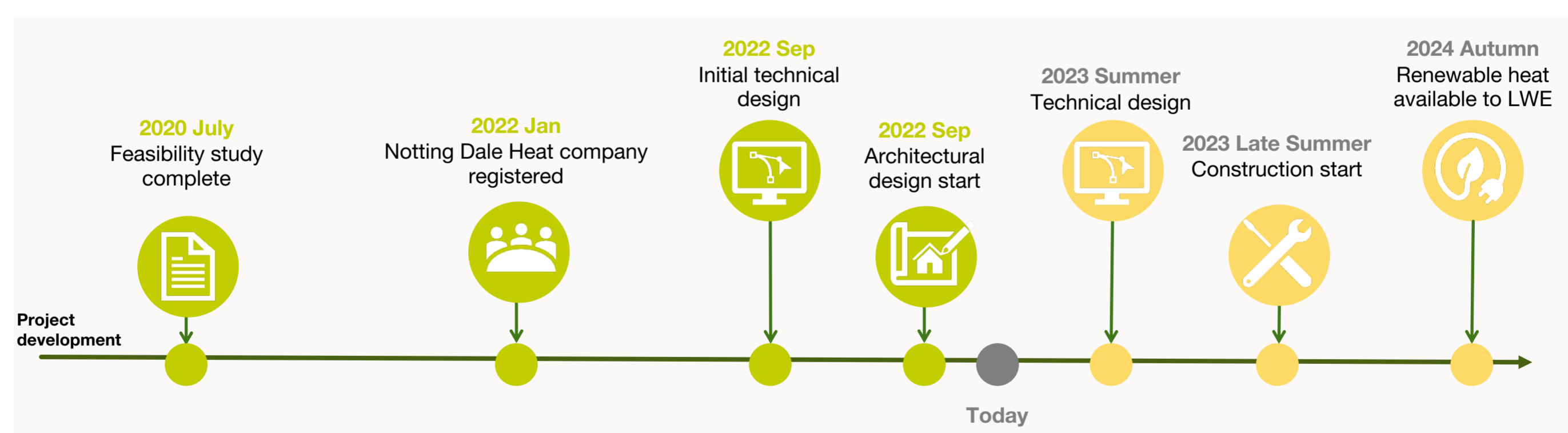
Lancaster West Estate is being refurbished to become a model 21st Century social housing estate. The existing, heating systems require replacement. The Estate will be Phase 1 of the Notting Dale Heat network.



Approvals and funding

The project is being funded by Kensington and Chelsea Council and a £1.1m grant from BEIS Heat Network Investment Project (HNIP). A final investment decision by the Council will take place in March 2023. The heat network will make enough money to cover its future maintenance and replacement costs.

Project milestones



1 Our Team

Creating a renewable heat network for Notting Dale

Lancaster West Neighbourhood Team (LWNT)

Based at Lancaster West Estate, the neighbourhood team provide essential services to residents on the Estate. LWNT are managing the refurbishment and heat network installation. The team have facilitated the development of these projects by co-designing them with residents.



James Caspell
Neighbourhood Director



Jeff Laidler
Heat Network Programme Manager



Janet Hall
Heat Network Resident Engagement Manager

Notting Dale Heat

Notting Dale Heat is a local energy company set up by Kensington and Chelsea Council to design, build, operate and maintain the renewable energy centre and heat network. Once the network is built, Notting Dale Heat will employ heat network professionals to manage the company and customer experience.



Notting Dale Heat Non-Executive Board

In 2022 a board was appointed to oversee management of Notting Dale Heat. The non-executive board includes two Council Officers, two independent professionals, and two future customers of Lancaster West, Phase 1 of the Notting Dale heat network.

Technical Team



Client's engineer: TACE
Mechanical and electrical engineer's TACE designed the new plumbing system for each block and home at Lancaster West Estate.



Engineer: Ramboll
Multi-disciplinary engineering company, Ramboll, have designed the energy centre and underground pipe network to each block.



Architect: Tonkin Liu
London based architects Tonkin Liu, are designing how the new energy centre looks.



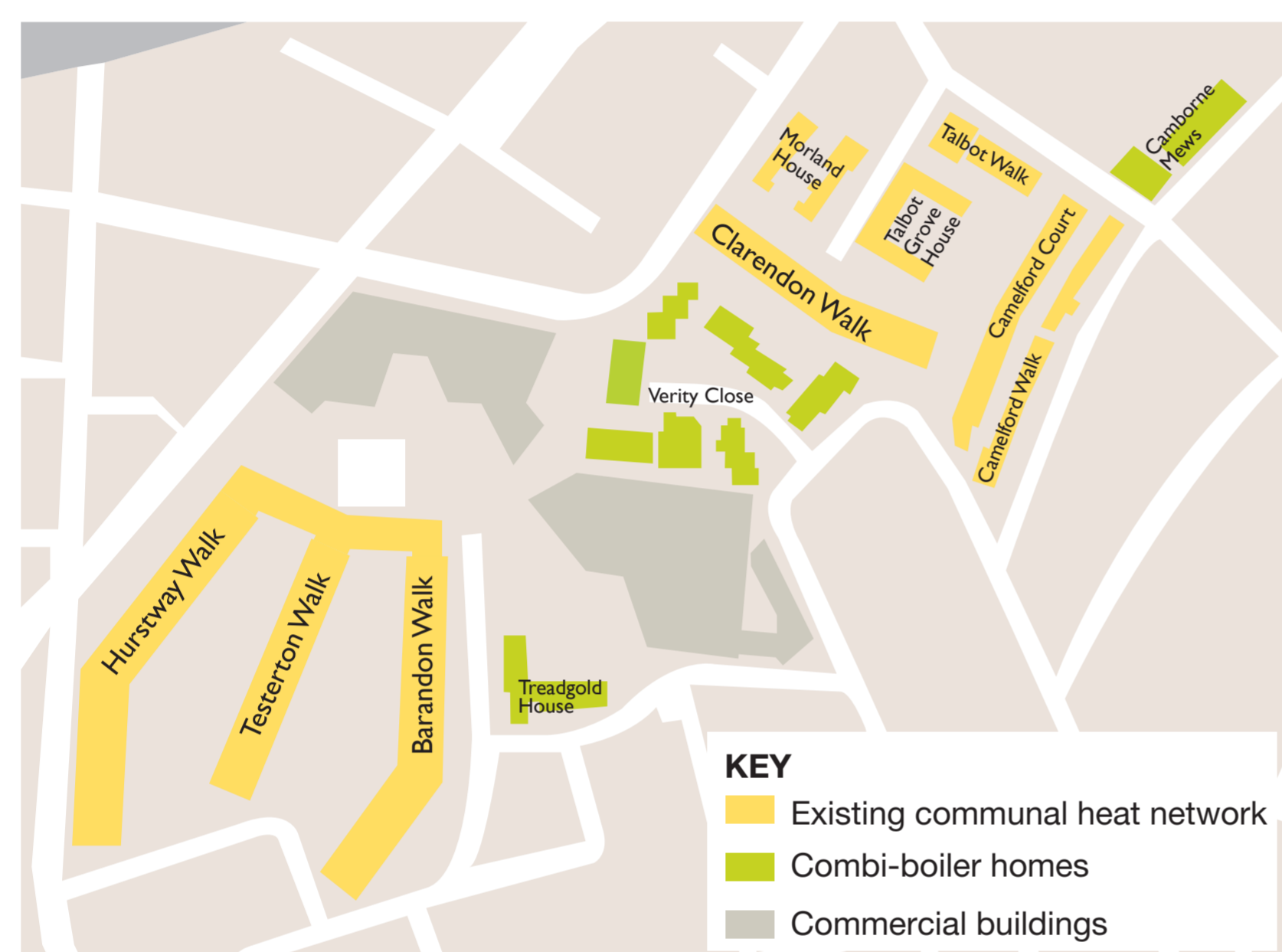
Planning consultant: ARUP
Multi-disciplinary consultancy ARUP is leading the planning application for the heat network.

2 Notting Dale Heat Network

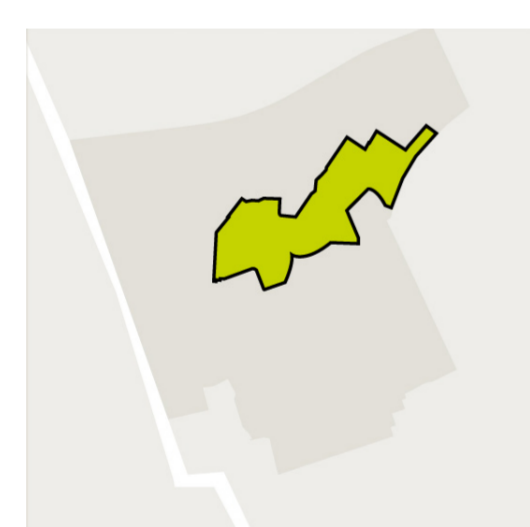
Vision

Notting Dale Heat will operate and maintain the renewable heat network on behalf of Kensington and Chelsea Council. Notting Dale Heat's vision is to:

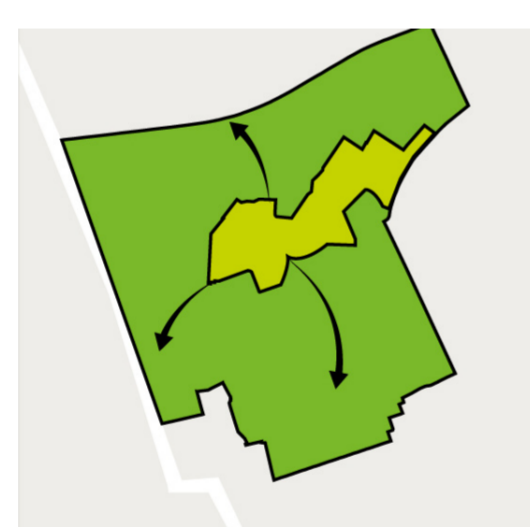
- 1 Put customers first
- 2 Rely solely on 100% renewable heat sources
- 3 Help tackle fuel poverty



Phase 1



Phase 1



Phase 2



Phase 1

Notting Dale Heat will be able to supply renewable heat and hot water to all 826 homes at Lancaster West, Kensington Leisure Centre and Kensington Aldridge Academy. An initial technical design and business case has been completed for this phase.

Phase 2

Would expand the heat network to serve social housing in Notting Dale Ward. Work on a feasibility study to outline the next stage of heat network development is due in Spring 2023. Connections to private homes are also being considered.

Project Benefits



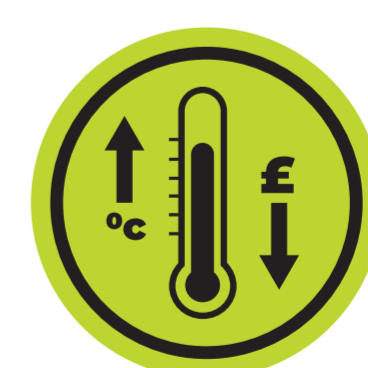
Cleaner air,
no more gas



Green skills
and jobs



Estate
improvements



Help tackle
fuel poverty

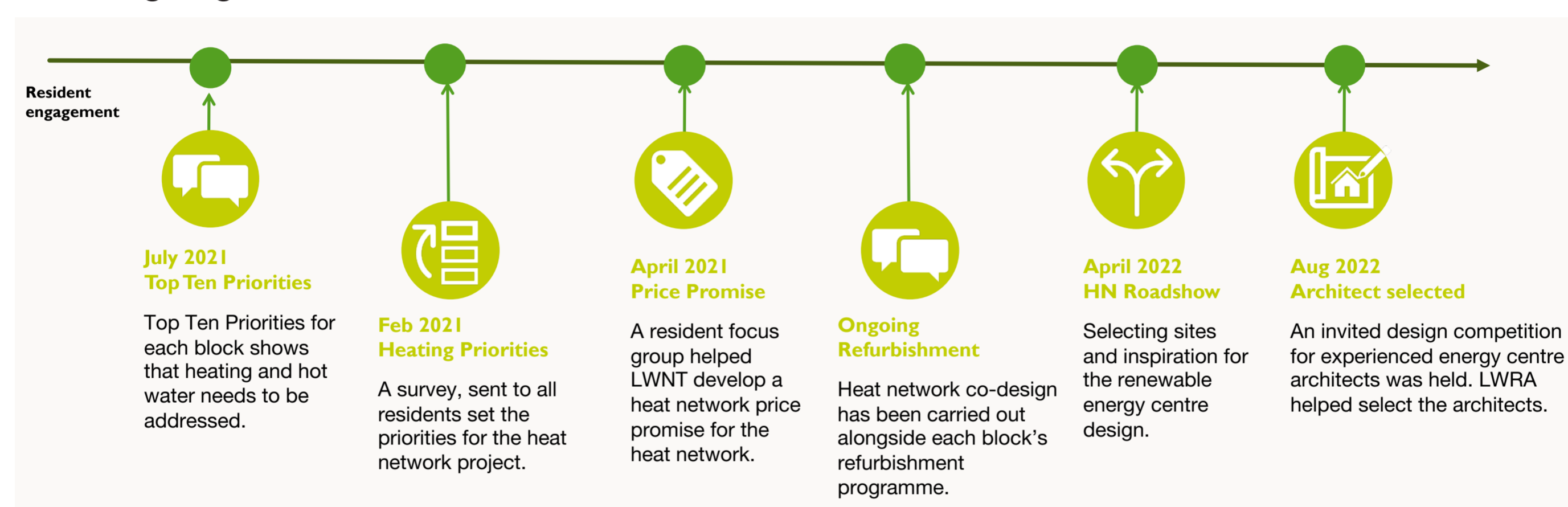
3 Resident Co-Design

What is resident co-design?

Co-design involves customers in the design of a product or service. At Lancaster West residents work with LWNT, architects and engineers to co-design the Estate refurbishment and heat network.

Co-design timeline

The timeline below shows recent co-design engagement with residents of Lancaster West Estate. Through surveys, focus groups, webinars and roadshows over 200 people have participated in co-designing the heat network.



What residents say...

Residents have influenced many aspects of the heat network project. One of the most important aspects is the inclusion of customers on the non-executive management board (see board 1).

60% heat their home as they would like
40% do not...

80% of homes are on a communal heat network, with limited heat controls available to residents.

47% Heating Control
38% Affordable Heating
13% Sustainability

Heat Control and affordability are priorities for residents. This survey was completed in Feb 2021, ahead of the global energy crisis.

83% Support

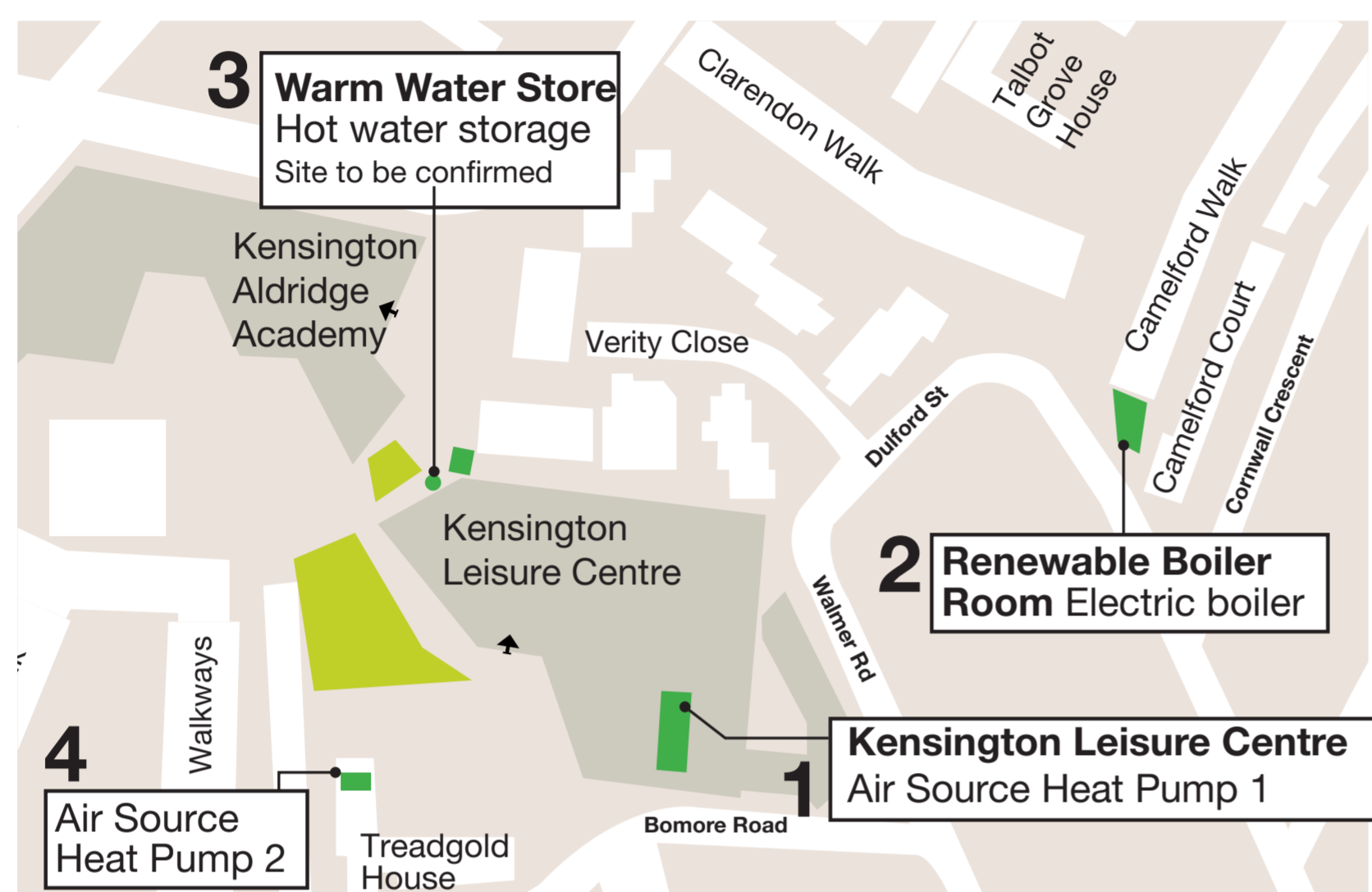
Residents can vote to support the heat network project. So far 83% have said they support it.

Residents picked their favourite case studies from other energy centre projects. The two above came out on top.

4 What is a heat network?

Introduction

Heat networks are big plumbing systems. Heating and hot water is supplied from a central energy centre to several buildings. This enables cities to change from gas to renewable heating.



Lancaster West

An underground heat network and renewable energy centre will be installed. The map opposite shows the heat network and four energy centre locations. (Site 3 has not been confirmed).



1 Air Source Heat Pumps (ASHP)

Converts heat in the air into heating for your home using electricity and a refrigerant.



2 Electric boiler

A renewable electric boiler will provide top-up heat to the estate at peak heating times.



3 Warm water store

A hot water store tops up the heating supply when required. The stores are heated at night, making use of cheaper night-time electricity.

Renewable technology

The renewable energy centre will use green electricity and an air source heat pump to supply heating and hot water.

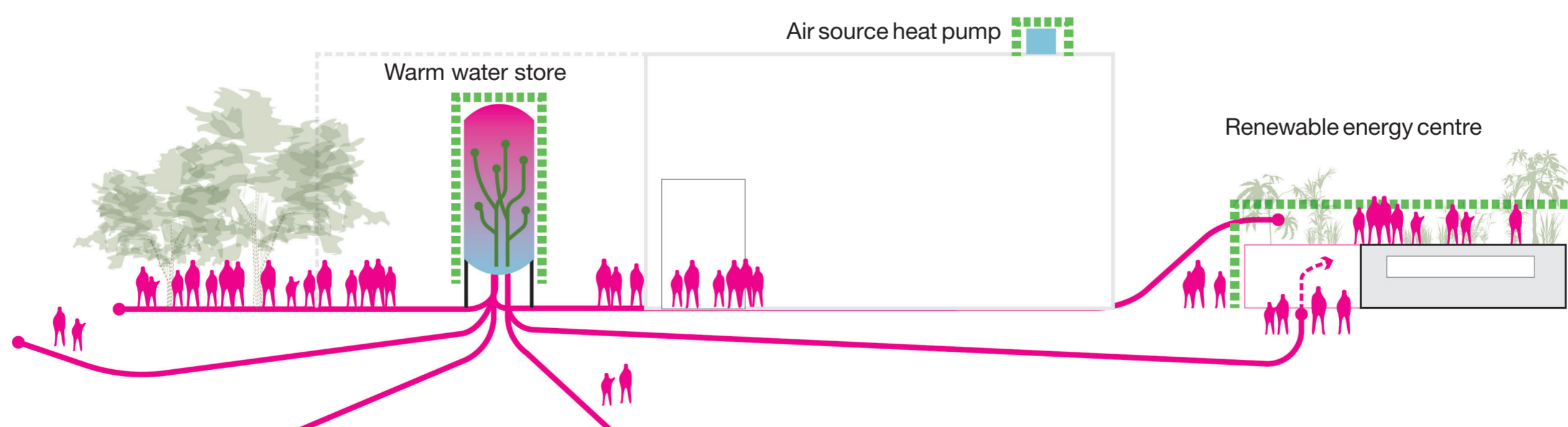


Illustration of renewable energy centre

5 Renewable boiler room

Initial ideas and options

An existing boiler room will be refurbished to become the new Renewable Boiler Room. The gas boilers will be shut down and the chimney stack removed. The building will be wrapped in light-weight screen. There is an opportunity to improve the street and local landscaping.



A. Chimney stack will be removed

B. An opportunity to extend the communal resident garden

C. Improve local landscaping



D. Option for lighting effects

E. Option for screen pattern and finish

F. Option for viewing windows

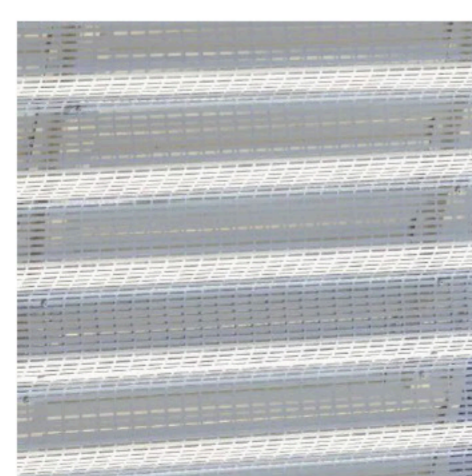
G. Option for information displays

Materials

The renewable boiler room is to be wrapped in a light-weight metal. There are different patterns, colours, and materials available. Here are some examples of patterns that are being considered. Steel is a highly durable, low maintenance, and non-combustible option.



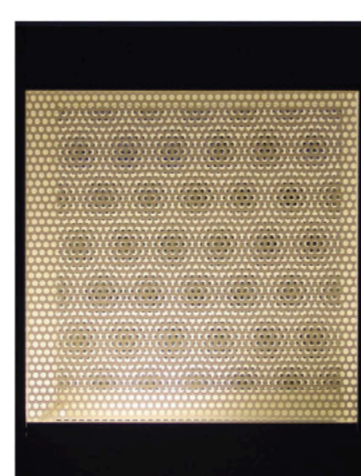
Laser-cut steel



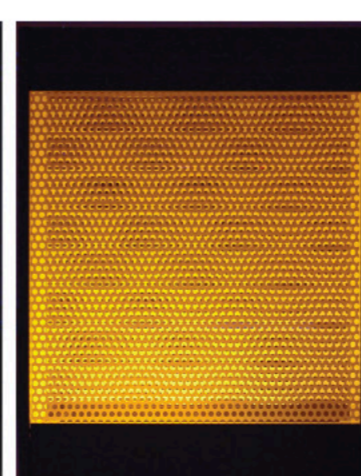
Punched corrugated steel



Laser-cut corrugated



Layered moire effect



Layered lit steel

Resident Input
At the energy centre roadshow held in April 2022. Residents told us that an easy to maintain, low-embodied carbon solution was important.

6 Warm water store concept

Initial idea

The warm water store acts as a battery for the renewable heat network. It could be located as a feature in a public landscaped area, or hidden away within Lancaster West. Which of the three examples do you prefer?



Example 1: Inside
A water store is contained inside the energy centre.



Example 2: Part of building
A water store becomes part of the building.

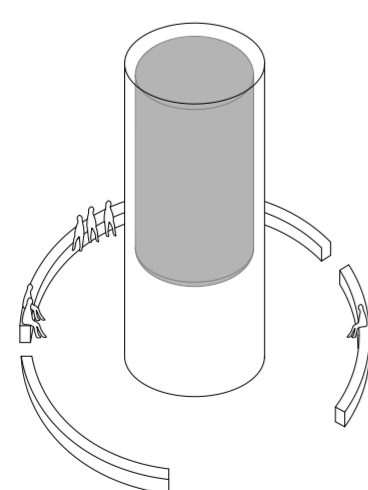
Resident Input
Would you like to see the warm water store inside a building, or to become a feature of an existing building or public area?



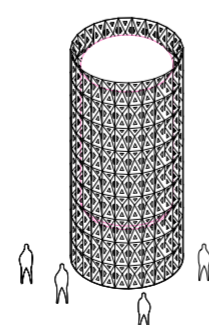
Example 3: Public landscape
A water store becomes a public feature in the landscape.

What more can a water store do?

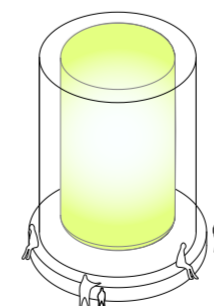
If we locate the water store outside, the water store could have other functions. What ideas do you like?



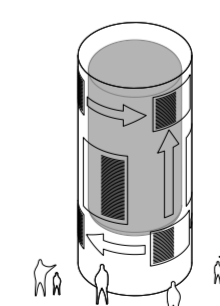
a gathering place



sculpture

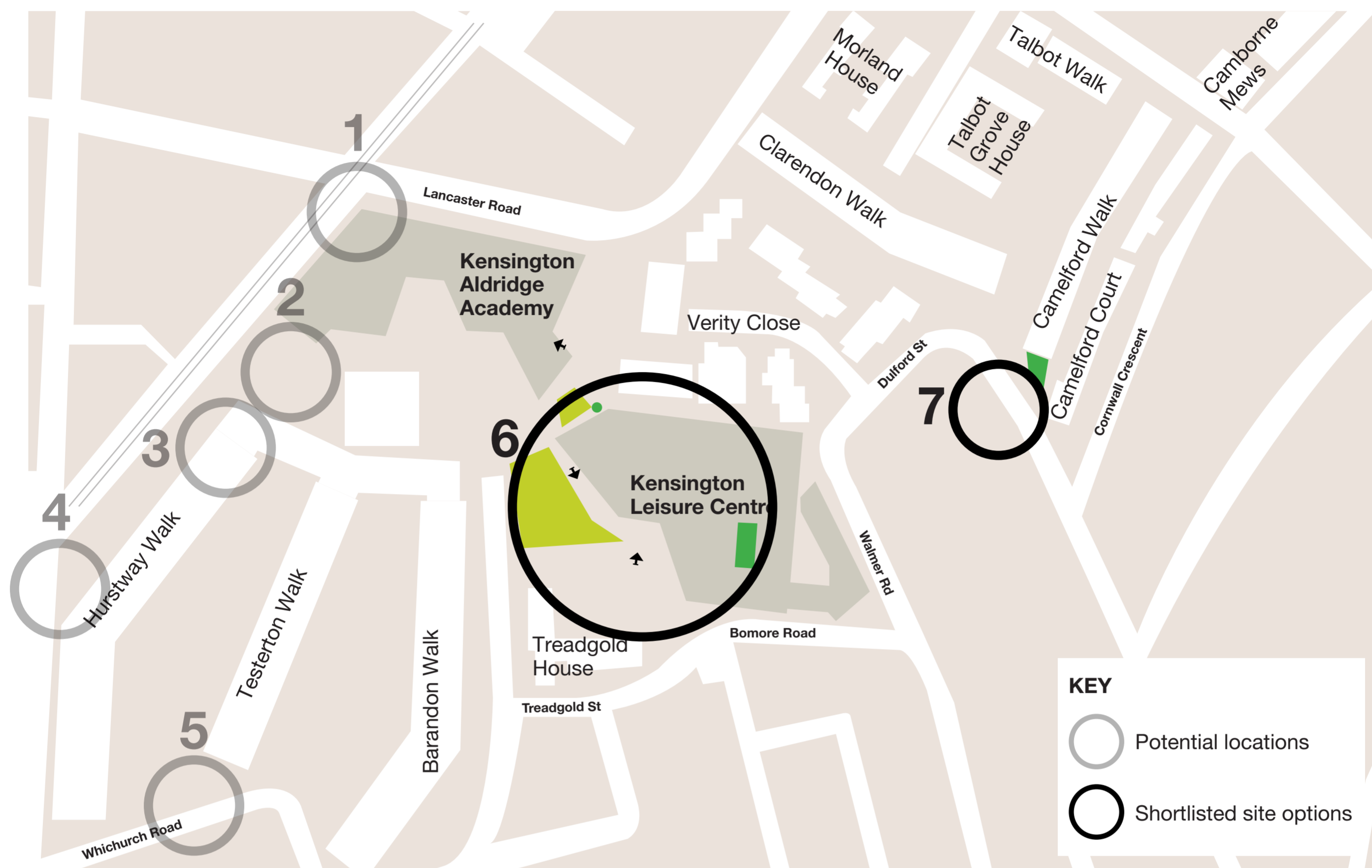


lighting



education

7 Warm water store location



Selecting a location

A long-list of locations were reviewed using five important categories; technical feasibility, land ownership, proximity to homes, accessibility, and the potential for local environmental improvements. Sites near Kensington Leisure Centre and Camelford Walk Boiler room were identified as the shortlisted site options.

<p>1 </p> <p>Silchester Arches</p>	<p>2 </p> <p>Kensington Aldridge Academy</p>	<p>3 </p> <p>Hurstway Walk Garages</p>	<p>4 </p> <p>Transport for London Arches</p>	<p>KEY</p> <ul style="list-style-type: none"> Technical Land ownership No proximity to homes Accessibility Environmental improvements
<p>5 </p> <p>Testerton Walk</p>	<p>6 </p> <p>Kensington Leisure Centre</p>	<p>7 </p> <p>Camelford Walk boiler room</p>	<p>Resident Input In April 2022 we got resident feedback on Kensington Leisure Centre and Camelford Walk boiler room.</p>	

8 Warm water store options



Option 1 Between the Leisure Centre and KAA



Sited between two trees, the Leisure Centre and the school, it is visible from the road and draws people through the site.

Option 3 Leisure Centre Corner on Bomore Road



It becomes a landmark on the corner visible from Bomore Road and gives new purpose to this space outside the Leisure Centre.

Finalising the location

A number of sites for the warm water store are available. The store could become a feature (options 1-3) or be merged into the energy centre design (option 4).

The final site will be determined by the design team, through review of resident comments and working with other design teams for the refurbishment and Grenfell Memorial.

Option 2 Next to the Leisure Centre



Sited on the paved open area next to the Lancaster Green, it provides a central gathering space for the community.

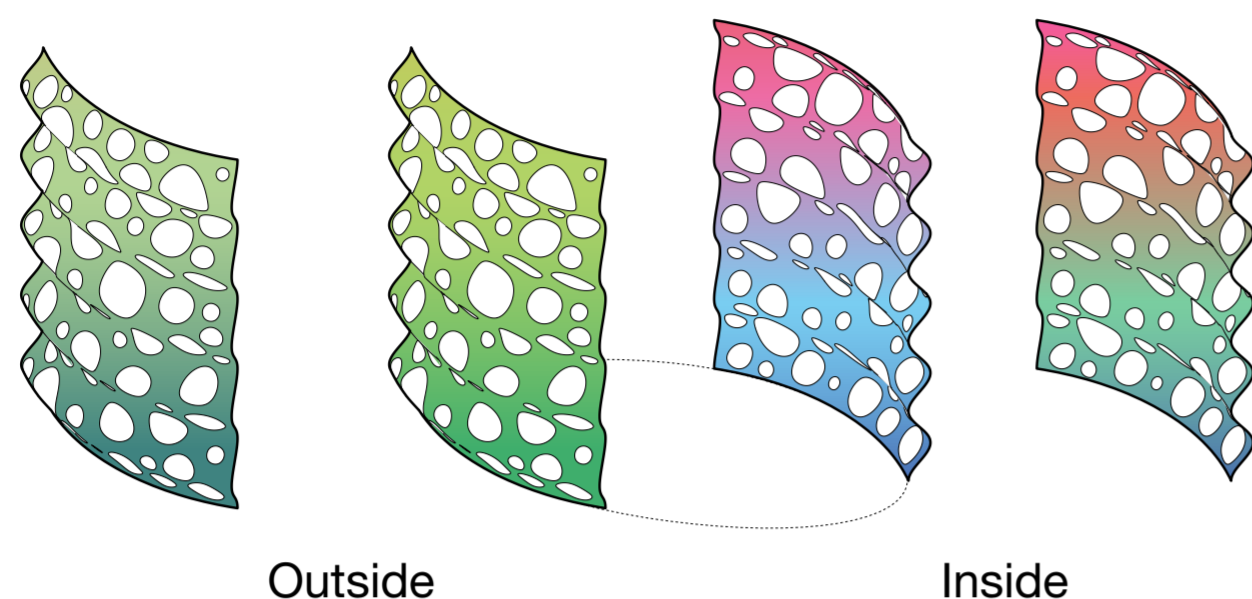
Option 4 Attached to the Renewable Boiler Room



It could be integrated with the Energy Centre, a discrete option, sunk below street level and hidden from view.

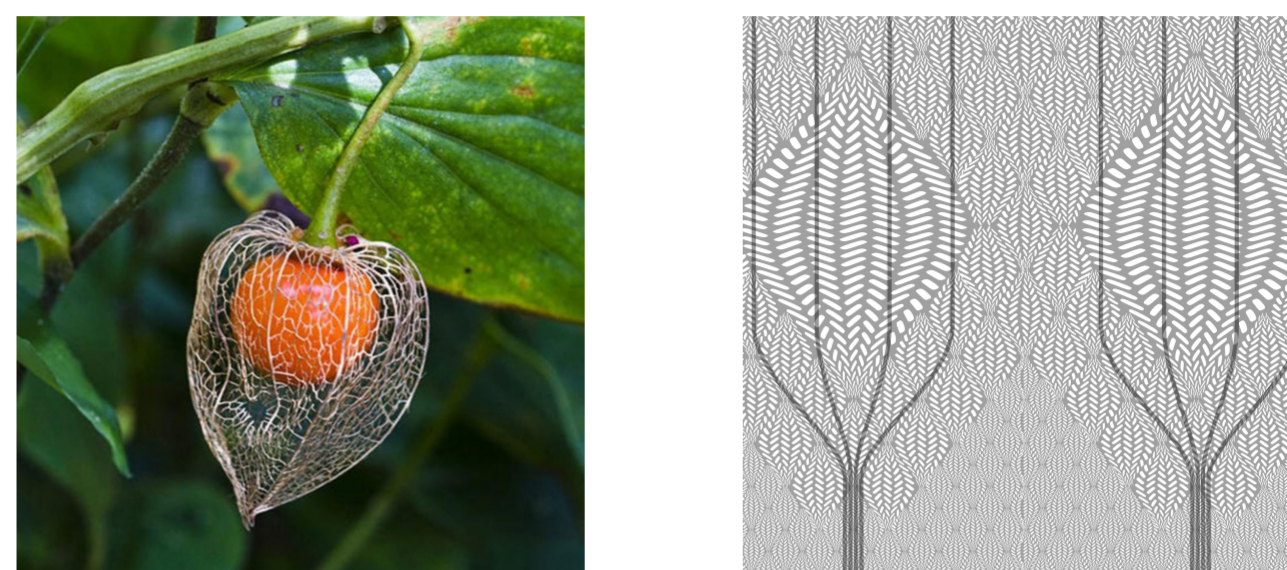
9 Design Options

Colour



The warm water store screen uses a natural colour palette. Inside it has a blue to pink gradient that mimics the temperature difference from the bottom to the top of the water contained in the cylinder. Outside, a green colour complements the surrounding trees and grass.

Pattern

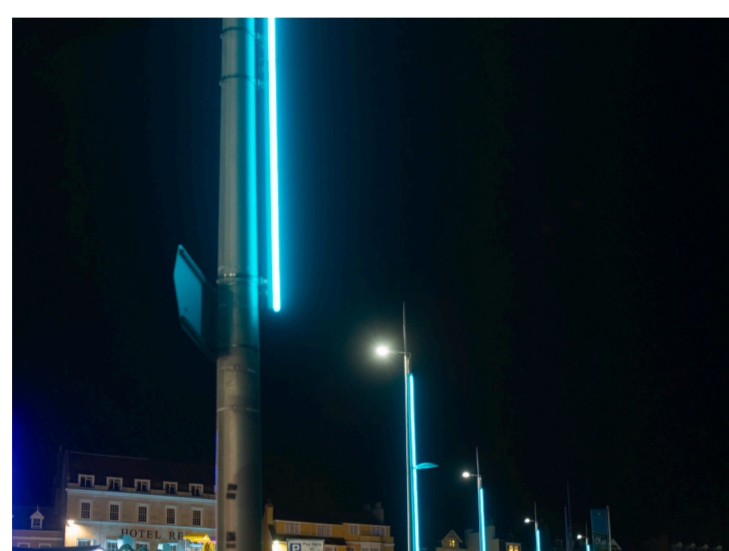


The renewable energy centre will be wrapped in a patterned, light-weight screen. Architects Tonkin Liu are designing a pattern, especially for Notting Dale Heat. They will take inspiration from Notting Dale, nature, and resident's nature photographs and paintings.

Light

The building screens are to be very light, delicate, and see-through. There is an opportunity to softly light the warm water store to make the building gently 'glow' at night. Different lighting effects are being considered. Here are examples from other projects:

Image 1



Unique lighting rhythms were designed to reflect the natural and human rhythms of Weymouth: crescent sunrise, lapping waves, golden sands, falling raindrops, glowing sunset; stacking sandcastles, joyful joggers, 28 flavours of ice cream, and bouncing balls.



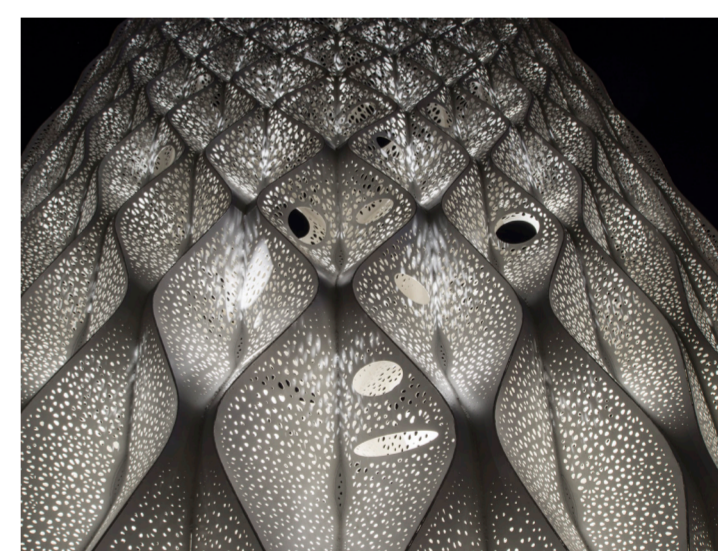
Image 2



Old Street Promenade of Light's sun-tracking seasonal timed switch achieved multiple ways of lighting: back-lighting the leaves, casting shadows of people and trees, projecting circles of dappled light on the pale-coloured paving, and spot-lighting the flowers and the tree trunks.



Image 3



In Hull, the Solar gate is an illuminated timepiece with a controlled in-ground lighting system installed inside and outside the sculpture. Around the sculpture a ring of perimeter lighting turns on and off in a clockwise direction, to herald forthcoming events and festivals.



10 Next Steps

Surveys

Technical surveys will be prepared for the renewable energy centre and heat network proposals. These are required for the planning application. The following important themes will be covered.



Visual

Removal of the chimney stack at Camelford Walk Boiler room, and installation of new building screen and lighting effects.



Sound

Sound-proof hoarding will be installed around the air source heat pumps to minimise any noise.



Trees

There are many mature trees around Lancaster West. The pipe network and energy centre must avoid tree roots.



Drainage

Lancaster West is in a flood risk area. Plans for drainage need to be considered in detail.



Construction & Traffic

A plan to manage traffic during construction will minimise disruption to local residents.

Design and engagement timeline

All comments collected at today's event will be shared with the design team, to inform the renewable energy centre design. Further details on local engagement is planned:



Thank you!

Thank you for reviewing this information. Please leave any comments on a card and join our mailing list to receive regular updates on the project.

New Renewable Boiler Room



Illustration, Tonkin Liu