



# Heat Network Programme

## July 2024

# Heat Network Programme on Page

## Executive Summary

Phase 1 of the Notting Dale Heat Network in North Kensington will set a new benchmark for sustainable urban living. The Council has partnering with Cenergist and Vital Energi to design and build a heat network supplied entirely from renewable sources. This sustainability project is crucial to delivering carbon reduction and is fully integrated with deep energy efficiency improvements in Council homes. Pipe construction is expected to start in early Sept 2024. The heat network has been co-designed with Notting Dale residents, leading the way in terms of community involvement, to help ensure an outstanding customer experience. The significance of this approach has been recognised nationally, with the UK government's Department for Energy Security and Net Zero featuring this work as an exemplar in their 'Heat Network Investment Project Evaluation.'

## Overall progress

Construction scheduled to start autumn 2024. First Heat On Autumn 2025. Still within budget

## Workstream summary

### Resident Co-Design and Engagement

The programme has successfully engaged over 200 residents on the energy centre locations and designs. Two resident Board Members have been recruited to the Notting Dale Heat Board. Residents fully engaged in the procurement and selection of the two main heat network contracts. The co-designed 'Notting Dale Heat' brand has been adopted by the Board, with the Kensington and Chelsea Council logo featured throughout as the owner and principal funder.

### Procurement

- RLB appointment as Contract Administrator and Principal Designer ongoing
- Osbornes now acting as fire consultant
- Delegated Authority Decisions (DADs) and business case written for award of contestable works (electrical substation and low voltage wiring). Council's Procurement Team is reviewing
- Line, level and CCTV survey undertaken on 24<sup>th</sup> June to provide inputs to Thames Water build-over agreement decision

### Programme Timelines and Interdependencies

- Estimated Vital programme delay of 4 months: due to loss of KAA; the complexity of the Schedule 3 consultation and legal advice; Salix opportunity; interdependencies e.g. KLC roof and Lancaster Green; and discharge of planning pre-commencement conditions.
- KLC, Baseline Studios and Treadgold House – connection to Notting Dale Heat Network, by October 2025.
- Completion of secondary networks in 80% of homes on two existing heat networks by October 2025.
- Tertiary network installs (including HIUs) start with internal refurbished properties, enabling 50% of homes to go live in Summer 2025.

### Budget and Costs

- Vital Energi have completed approximately 90% of their Stage 4a design. KLC roof is the main piece of work that's outstanding.
- Variation orders total to date: £66,000

### Strategic and Operational Risks

- Work is progressing to replace the heat demand from Kensington Aldridge Academy loss.
- Mazars reviewed options appraisal completed.

## Key statistics

203

+1 from May



Gas meters removed  
203 / 575

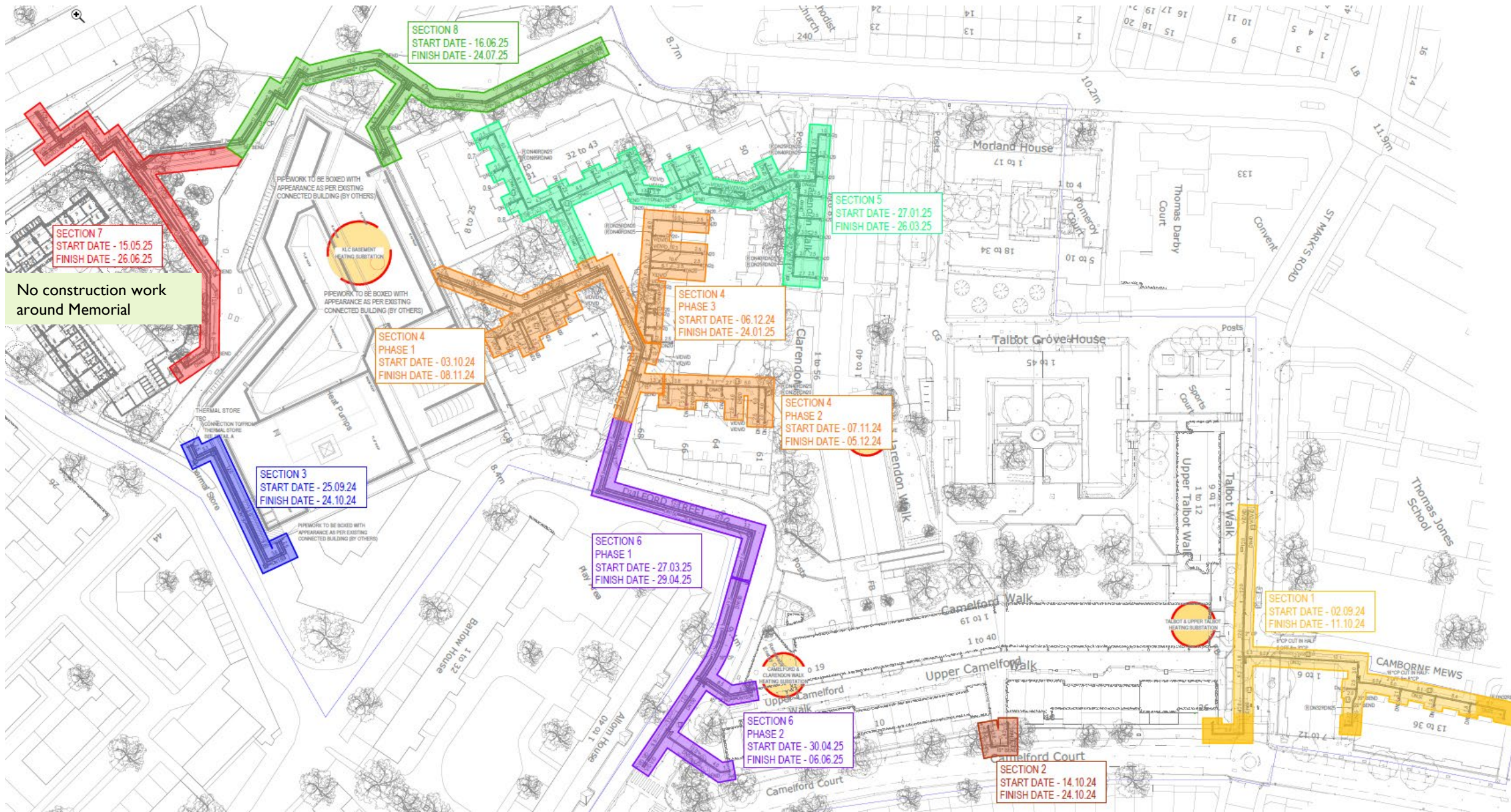
310

+2 from May



New domestic or residential systems installed  
310 / 826





# Progress

## What has been achieved in last 3 months?



**Final technical designs:** Vital and Cenergist both working on RIBA Stage 4b contractor designs for construction



**Planning** – we are processing:

- 1) Discharge of existing planning application. Determination date in September.
- 2) Section 73 amendments to vary pipe route and heat pump system
- 3) Largest challenge is design of KLC roof mounted plant



**Stakeholder Engagement following loss of KAA heat load**

- Shareholder Committee
- Overview and Scrutiny
- Joint Leadership Team

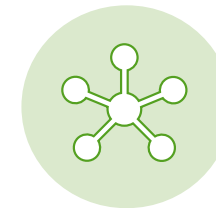


**Financial Model** – Mazars have reviewed and endorsed the financial modelling and options analysis completed in the wake of loss of KAA.



**Utility engagement**

- Thames Water reviewing sewer survey for Build Over Agreement for Renewable Heat Store. No structural issues identified with CCTV survey of trunk sewer
- UKPN regarding electrical upgrades



**Hydraulic substations** – Site walk to identify practical issues in relation to the installation, operation and maintenance of the hydraulic substations.



# Next Steps

## What will be main focus for next 3 months?



**Schedule 3 Leaseholder consultation** – Imminent issue of Schedule 3 for both D&B (Cenergist) and DBOM (Vital) contracts.



**Site co-ordination meetings** between Amber, United Living, Capital, Cenergist, Deconstruct DeRisk, RLB etc.



**Clarification of overall system performance** – confirmation of baseline Seasonal Coefficient of Performance from Vital Energi's Stage 4b design



**Preferred option of leisure centre heating system upgrade** – Council and contractors reviewing best use of £3.8 million Salix grant to upgrade the heat network's efficiency. This requires a technical redesign and re-evaluation of the commercial contract arrangements.



**Commercialisation contracts:** finalisation of the large number of legal documents required for successful project delivery

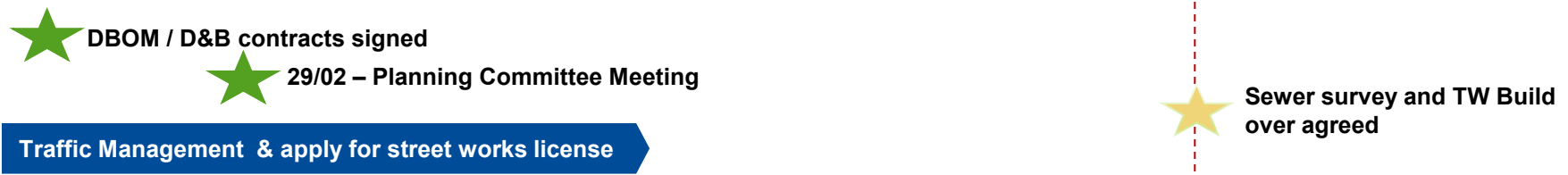


**Construction starts on site:** external pipe trenches and installation starts on the east of the Estate. Inter

# Programme: Primary Plant (Vital Energi)



Applications

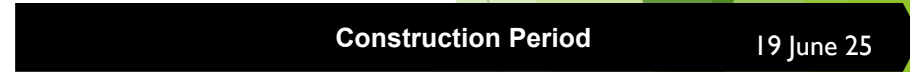


Resident Communications



03/25 - Finalise residential leasehold variations

Project Delivery



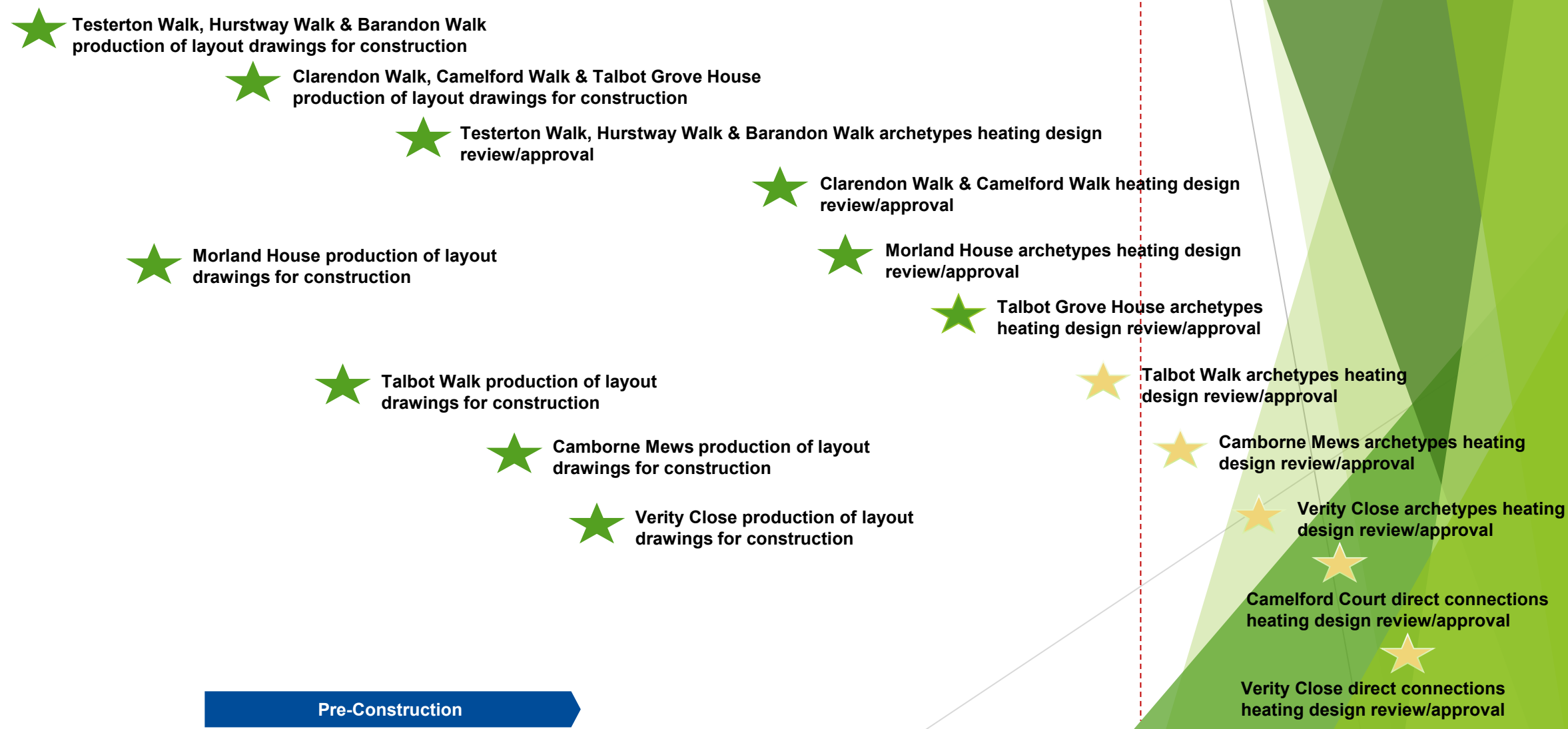
- Primary network: Autumn 2024 to Summer 2025
- Heat Pump System: Winter 2024 to Summer 2025
- Renewable Heat Store: Winter 2025 to Summer 2025
- Renewable Boiler Room: Winter 2024 to early autumn 2025

# Programme: Secondary Plant (Cenergist)

## External Design Work is progressing well, with the team embedded and on track



Design



Pre-Construction

# Social Value delivery

## Cenergist and Vital Energi

Cenergist and Vital Energi have committed to providing **additional economic and social benefits** for residents through their contracts, across Employment and Training, Community Investment, and volunteering hours. Their combined commitments equate to over £700k in additional value for local communities.

### Update:

**Cenergist** have **employed four local residents** through LancWest Works in substantive roles:

- Labourer role, filled by a LancWestWorks candidate
- Cleaner role, offered to a Lancaster West Estate resident
- RLO Apprenticeship with a Level 2 qualification, offered to a Lancaster West Estate resident
- IT Network Engineer Apprenticeship with a Level 4 qualification, offered to a Lancaster West Estate resident

**Vital Energi** have funded the **Respite Summer Schedule** for LWE and Notting Dale residents, including trips, family activities and more.

### Pipeline:

**Vital Energi** will be recruiting in North Kensington for more full-time roles and apprentice opportunities. These include a Site Administrator and a Net-Zero apprentice.

**Vital Energi** will be delivering improvements to a community garden on Lancaster West Estate and looking at possibilities to provide a water source to this garden.

**Sean** started with Cenergist in June as a Labourer, coming through LancWest Works!





# Programme Outputs

310

+2 from May



New domestic or residential systems installed  
310/ 826

38%

1



Heat Interface Units (HIU) installed  
1/ 826

0.10%

320

+2 from May



Smart Thermostat installation  
320 / 624

51%

203

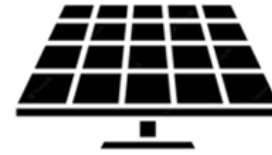
+1 from May



Gas meters removed  
203 / 575

35%

112



Total No. of Solar Panels  
(Verity and Camelford court)

0



Meters of heat network pipe installed  
0/1000 meter

35 weeks



Weeks until thermal store arrives

31 weeks



Weeks until ASHP arrives

# Programme Outcomes

## Benefits realisation



Camelford Court Solar Panels

*Saving*



**5,000kg**  
of carbon emissions  
since installation

Monitoring system paused while relocation works undertaken

Reducing gas usage



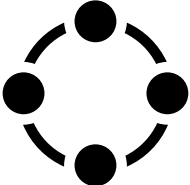
since 2019

*Saving*



**34 tonnes**  
of carbon emissions in  
FY2022/3

**258** gas hobs have been replaced



with induction hobs

*Saving*



**10,678kg**  
of carbon emissions  
every year  
**+ 203kg since last month**

# Key Strategic Risks

Phase of work	Issue/Risks	Current Status	Actions to mitigate risk	Owner	Update
<b>Heat Demand</b>	<b>Kensington Aldridge Academy Board has confirmed that this anchor heat load currently won't connect to the heat network,</b> despite signing Heads of Terms in March 2021 and the Council leveraging £800k of Salix grant funding.	Likelihood: <b>High</b>  Impact: <b>High</b>	Options appraisal Rerun financial model Investigate adoption of Blechyndon and Whitchurch Explore additional expansion opportunities	Jeff Laidler (HN Programme Manager)	Financial model has been re-run with the scenario of the Academy not joining. This prompts a few options: <ol style="list-style-type: none"> <li>1) Don't replace KAA heat demand</li> <li>2) Use recently leveraged £4.3m Salix grant for KLC to enable heat network connection for Kensington Leisure Centre by rediverting existing General Fund CapEx. By removing the gas CHP in 2024, rather than 2030, the heat network supplies 100% of the leisure centre heat for an additional 5.5 years, as opposed to just top-up heat. This largely fills the KAA gap until 2030 and enables KLC to benefit from 100% renewable heating and hot water in 2025. reducing the Council's carbon footprint. Seeking Council approval for bulk heat supply to KLC in July 2024.</li> <li>3) Continue to investigate the HRA financial savings and carbon benefits of connecting the 51 Council-owned sheltered homes at Blechyndon and Whitchurch as part of Phase 1, as well as 3 nearby primary schools (Avondale, Thomas Jones and St Francis of Assisi), all of which have been future-proofed for connection.</li> <li>4) Proceed with Phase 2 Business Plan for heat network expansion into Notting Dale ward by 2030, noting that 150-200 homes are needed to totally fill the KAA gap in heat demand.</li> </ol>
<b>Contract Prolongation with Vital Energi</b>	Programme, reputational and cost risks	Likelihood: <b>High</b>  Impact: <b>High</b>	Ongoing work with RLB as Contract Administrator	Terry McDermott (M&E Senior Project Manager)	<ol style="list-style-type: none"> <li>1) Commercial push back with Vital Energi regarding their performance</li> <li>2) Budget saving from loss of KAA heat connection is helping balance the Vital budget</li> </ol>
<b>Options Analysis Report for Leadership Team</b>	Notting Dale Heat Business Case is changed, with financial, reputational and programme risks	Likelihood: <b>Medium</b>  Impact: <b>High</b>	Options Analysis prepared, with informal feedback planned for the next few weeks	Shaun Haden (Head of Strategic Programmes and Innovate)	Reran financial model to inform Options Analysis



# Key Strategic Risks

Phase of work	Issue/Risks	Current Status	Actions to mitigate risk	Owner	Update
Reduction of Lot 2 refurb scope	<p><b>Residential impact</b> Heating provides insufficient thermal comfort and higher energy bills in energy inefficient homes.</p> <p><b>Impact on company finances</b> Notting Dale Heat sells more heat as less buildings are retrofitted. However, as NDH only covers its costs plus 10% Overhead and Profit, there's no real gain. The local energy company also has to pay more for the electricity to generate the extra heat.</p>	<p>Likelihood: <b>High</b></p> <p>Impact: <b>Low</b></p>	<p><b>Is the heat network able to produce desired space heating temperatures for un-refurbished homes?</b> Yes, by increasing the radiator sizes, which is being worked on through a redesign of Lot 2.</p>	Jeff Laidler (HN Programme Manager)	The heat network's financial model has been rerun. If homes aren't refurbished by 2030, the Council will need to decide whether to extend the Resident Prince Promise until the refurbishment happens.

# Key Strategic Risks

Phase of work	Issue/Risks	Current Status	Actions to mitigate risk	Owner	Update
<b>Design and operation</b>	<p><b>Vital Energi's performance beyond the technical design.</b></p> <p>Poor client customer service; project management and direction. Unclear roles and responsibilities; poor transition from design to construction team; high churn; actions that are slipping; no-one chasing and co-ordinating; no proactive comms with the client; no RLO in post; no health and safety professional attending meetings; and no performance report for February.</p>	<p>Likelihood: <b>Medium</b></p> <p>Impact: <b>High</b></p>	<ul style="list-style-type: none"> <li>Reviewed with Project Sponsor, escalating with the Vital team.</li> <li>Met with RLB and client team to review Early Warning Notices and associated KPI Failure Points.</li> </ul>	Terry McDermott (M&E Senior Project Manager)	Improvement following a stern assessment of current performance in D&C meeting. Vital provision of update report in advance of Design & Construction meeting; clearer allocation of roles and responsibilities; and provision of KPI report template. Further work underway to push Vital to improve its Health & Safety reporting and to completely rethink its pipe design for Cornwall Crescent. Vital RLO now recruited and in post.
<b>Commercialisation and operation</b>	<p><b>Loss of resident buy-in due to a large construction project over 2 years, on a congested site, where residents live in-situ, some having been directly affected by the Grenfell tragedy.</b> This risk is highest for homes located directly next to construction routes</p>	<p>Likelihood: <b>Medium</b></p> <p>Impact: <b>High</b></p>	<ul style="list-style-type: none"> <li>Prioritise the connection of 50% of homes that have already had an internal refurbishment. These properties only require HIU installs.</li> <li>These homes are also spread across the Estate, providing a quick win and the best chance of happy customers helping influence other residents.</li> </ul>	Janet Hall (HN Engagement Manager)	Resident Transition - developing a proactive Communications Campaign regarding disruption and energy bills.
<b>Design</b>	<p><b>Heat Store: Thames Water to accept the structural design for the thermal store, which currently sits above a large trunk sewer.</b></p> <p>Alternative location to be explored. Associated liability risk from heat network construction adversely affecting the sewer.</p>	<p>Likelihood: <b>Medium</b></p> <p>Impact: <b>Medium</b></p>	<ul style="list-style-type: none"> <li>James Caspell wrote to Thames Water CEO.</li> <li>Meeting held with strategic lead at Thames Water.</li> <li>Initial review completed of pros and cons for Plan B location for the thermal store next to Treadgold House.</li> </ul>	Jeff Laidler (HN Programme Manager)	Strategic meeting with Thames Water on 6 February 2024, with the aim of clarifying costs, liabilities and timelines. Subsequently applied for Build Over Agreement with Thames Water - Vital's foundation design has in principle has been accepted. The Council is awaiting formal approval, following CCTV survey of the sewer to prove that there will be no disturbance due to the heat store construction.

# Key Operational Risks

Phase of work	Issue/Risks	Current Status	Actions to mitigate risk	Owner	Update
<b>Construction</b>	Delays with Renewable Boiler Room due to lift, causing delays to both Cenergist's and Vital's programmes and first Heat On.	Likelihood: <b>Low</b> Impact: <b>Medium</b>	<ul style="list-style-type: none"> <li>Alternative location found which reduces delay</li> </ul>	Chris Kemp (HN Project Manager)	Resolved. Lift moved to alternative location
<b>Construction Primary Plant</b>	Pipe for this internal sections of network must contain non-combustible and non-flammable insulant	Likelihood: <b>Low</b> Impact: <b>High</b>	<ul style="list-style-type: none"> <li>Review line pipe technical submissions</li> </ul>	Chris Kemp (HN Project Manager)	Requested Class A1 rated insulation for all internal pipe work. Waiting for this to be updated in RIBA stage 4b documents. External comms to follow for residents regarding external pipe work, storage and installation. Off-site overnight pipe storage instructed and arranged.



# Health and Safety Review by deriskuk.com

## Secondary and Tertiary Works Progress

Cenergist's Construction Phase Plan last reviewed 18/03/2024

F10 notification – start 19/03/2024 for 116 weeks; exp: 09/06/2026

	This month	To date
Subcontractor RAMS Reviewed	2	8
<b>Statistics for project</b>		
Site inspections by Derisk	1	2
Cenergist site inspections	4	9
Cenergist internal audits	1	3
Major accidents	0	0
Minor injuries	0	0
Near-miss reports	0	0
Non-compliances	0	0
Toolbox talks	2	6

## Current key health and safety risks identified

1	Working in public areas
2	Deliveries roadside
2	Unexpected finds of Asbestos Containing Materials
3	Working at height (mobile towers)
4	Core drilling in walkways noise & spoil
5	Noise when drilling for bracket fixings

