



# Notting Dale Heat Network Update

## Jeff Laidler

# 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 partnered 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. Construction is expected to start summer 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

On track and 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 and Contractor Performance

Ongoing procurement to provide professional services for: Contract Administrator, Principal Designer, Fire Engineer and Cost Consultancy is underway. Electrical infrastructure Contestable Works (electrical substation and low voltage wiring) is also being procured.

### Programme Timelines and Interdependencies

1. KLC, Baseline Studios and Treadgold House – connection to Notting Dale Heat Network, April 2025.
2. Completion of secondary networks in 80% of homes on two existing heat networks, June 2025.
3. Tertiary network installs (including HIUs) start with internal refurbished properties, enabling 50% of homes to go live in Summer 2025.

### Budget and Costs

To date £100k contingency spent. A further contingency spend of circa. £250k required to comply with RBKC's land contamination remediation strategy (soil sampling) and planning noise SPD. Vital has completed approx. 1/2 of design work, which translates to a spend of approx. £120k.

### Strategic and Operational Risks

Kensington Aldridge Academy's Board of Trustees have confirmed that this anchor heat load won't connect. Alternative heat loads have been identified and are being actively investigated. An Options Analysis paper on the scheme has been produced for members. Other risks being managed are contractor performance, practical delivery risks, the interdependencies of a complex and sensitive site where residents are living in-situ; maintaining resident buy-in during construction; and resident transition to a new system.

### Procurement

Several subcontractors and consultants have been engaged to perform the following activities: cold air dispersion modelling, Thames Water surveys, and Independent Distribution Network Operators

## Key statistics

306

+18 from March



New domestic or residential systems installed  
306 / 826

312

+18 from March



Smart Thermostat installation  
312 / 624

# Previous Actions

	Action	Update
1	Model the risk impact of Heat Network going live before fabric work is completed. Consider both tenants and leaseholders.	Completed. New financial model prepared for the heat network cost comparison for leaseholders and tenants. This includes a retrofit and non-retrofit scenario.
2	Hold a meeting on impact of standing charges and costs of Heat Network and invite Councillors	Meeting arranged with LWRA and Cllr Thalassites for 30 April 2024
3	Explore whether temporary boiler will have adverse cost impact to Tenants and Leaseholders	The gas boiler provided by Vital Energi for the temporary works is inclusive of the fuel charge.
4	NDHN – Impact of digging up roads	Potential loss of carparking spaces on Bomore Road, Verity Close, Dulford Street & Clarendon Road. Full Road closure on St Marks road for a short period of time (hours). There will also be full road closures on Bomore Road when craning ASHP into place. Full road closure on Clarendon Road to allow deconstruction of stack as well. This is in addition usual noise disruption.

# Notting Dale Heat Network Heat Network Route



(C) OpenStreetMap

Dates to be released soon, see our website for details

- Section 1 June / July 2024
- Section 2
- Section 3

- Section 4
- Section 5 & 7,8
- Section 6
- Section 9
- Section 10
- Section 11

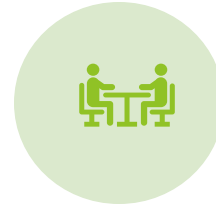
- Section 12

# Programme Highlights

## What was achieved last quarter?



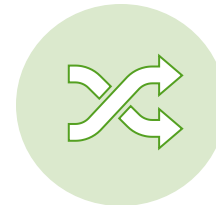
**Design works ongoing for Cenergist and Vital Energi** – in accordance with their programmes, design progress of approximately 80% has been achieved.



**Section 3 Leaseholder consultation** - document has been prepared and is now with the Council's Home Ownership Team for review and issue.



**Engagement with utility providers** - working with UKPN (DNO), ESP (IDNO) and Thames Water to ensure Vital and Cenergist programmes are maintained.



**Interfaces/ clashes** - regular meetings with other PM's are ongoing. For example, lift clash in the energy centre, separation distance clashes and Treadgold House and scaffolding clashes with Lot 1 have been identified and are being designed out. Several issues have been resolved and potential solutions identified.



**Financial Model** - undertook review of financial assumptions and key variables. Base case for the scheme remains positive, with forecast reductions in customer tariffs. The scheme still provides a return on investment in its current state.



**Planning application approved** – the heat network team is working closely with Vital Energi to enable discharge of 5 pre-commencement conditions.

# Programme Forecast

## What is the focus for next quarter?



**Schedule 3 Leaseholder consultation** – we expect consultation letters to be with leaseholders during May.



**Cold air dispersion study** – draft results and report expected week commencing 15/04/2024.



**Heat Loads** – KAA will not join NDHN. Alternative loads will be investigated and pursued including 100% heat supply to Kensington Leisure Centre, (rather than top up heat supply); Blechynden and Whitchurch House; and 3 nearby primary schools.



**Upgrade of leisure centre heating system** – Council and contractor to consider use of £4.8 million SALIX grant to upgrade heating system at the leisure centre and improve the heat network's efficiency. This requires a technical redesign and re-evaluation of the commercial contract arrangements.



**Award Contestable Works** – award c.£2 million of work for electrical substations, low voltage and private wire equipment. Final review taking place by end of April.



**Thames Water** – Build Over Agreement now agreed in principle, avoiding the need to seek an alternative location for the thermal store. This would have delayed the programme, have been difficult to achieve on a space constrained site and would have required variation of the planning permission, with a minimum of an 8-week delay. Written confirmation is required from Thames Water. Pre and post condition surveys instructed.

# Programme: Primary Plant (Vital)

## Planning Permission has been Granted



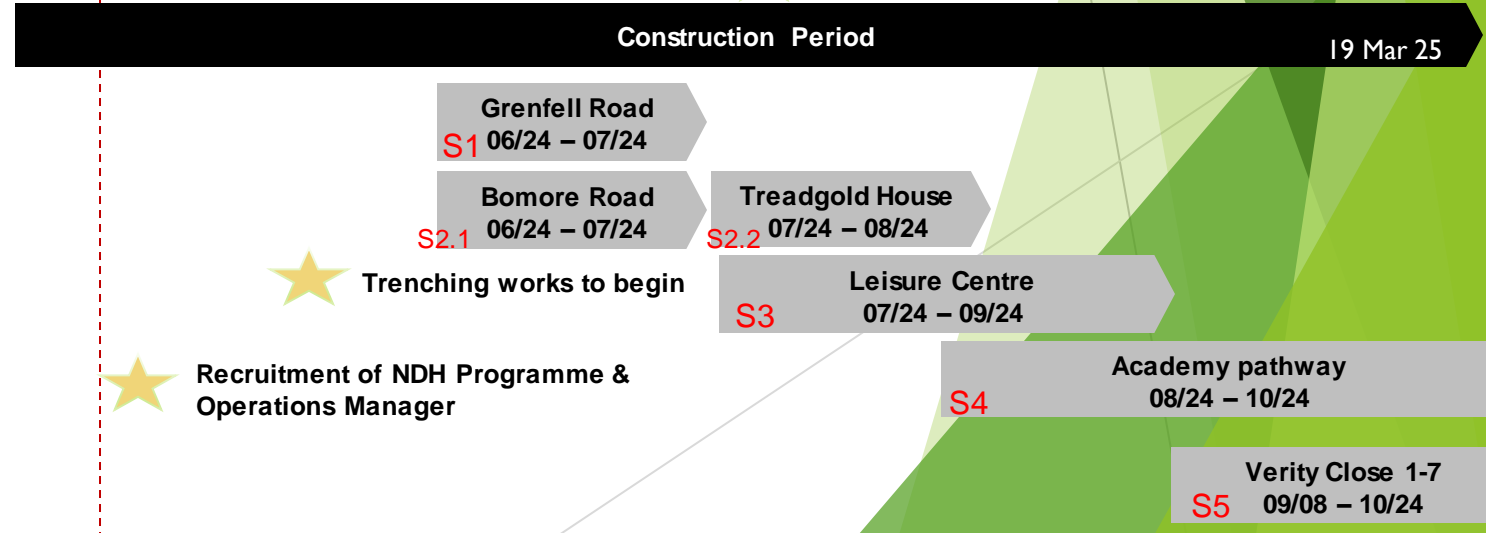
Applications



Resident Communications



Project Delivery



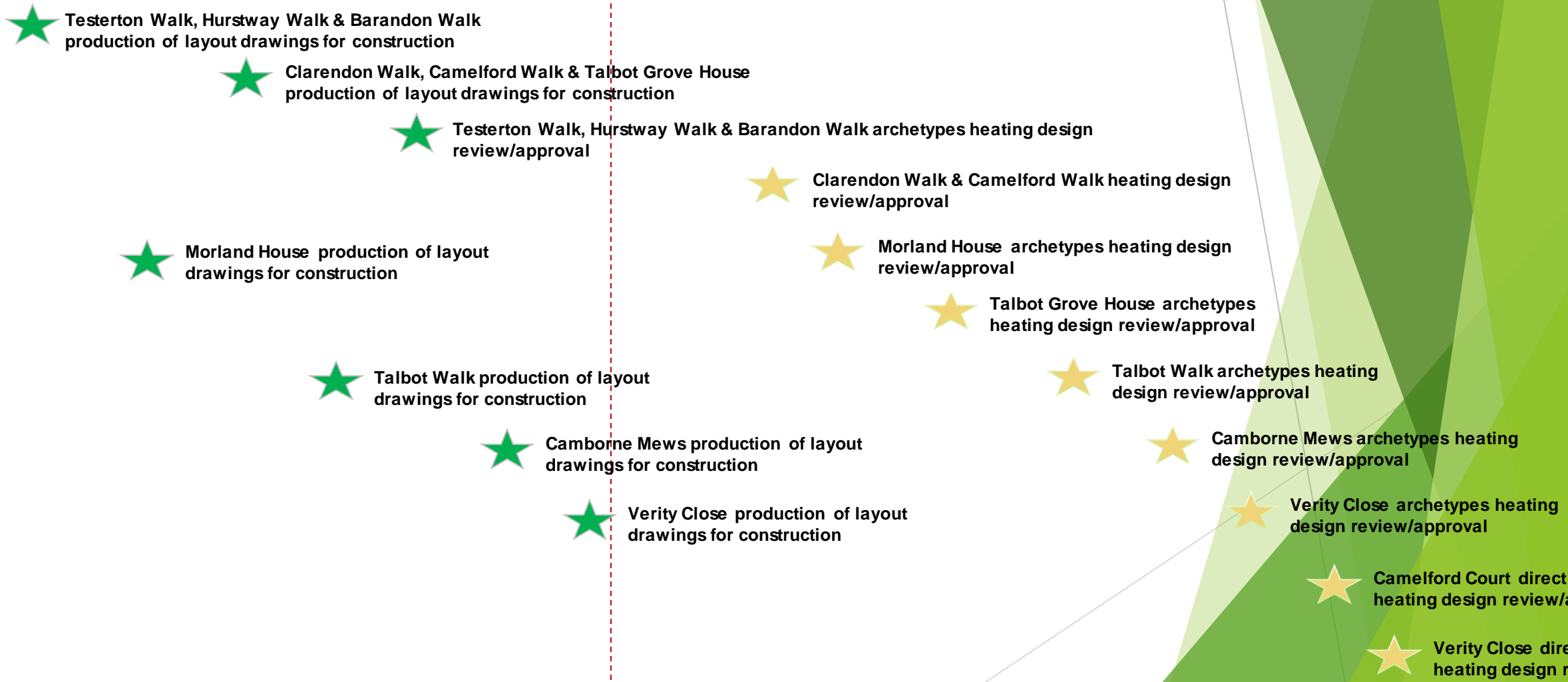
# Programme: Secondary Plant (Cenergist)

## External Designs are progressing well, with the team embedded and on track

Current activity  Milestone achieved  Risks/issue events  
Future activity  Milestone to be achieved  Current time

Jan 24    Feb 24    Mar 24    Apr 24    May 24    June 24    July 24    Aug 24    Sept 24

Design






Pre-Construction



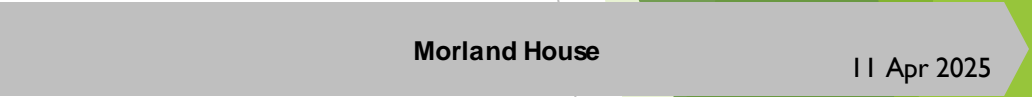
# Programme: Cenergist

## Internal Designs are progressing well

Current activity 
Milestone achieved 
Risks/issue events 

Future activity 
Milestone to be achieved 
Current time 

Secondary pipe work



# Programme Outputs

306

+18 from March



New domestic or residential systems installed  
306 / 826

1



Heat Interface Units (HIU) installed  
1 / 826

312

+18 from March



Smart Thermostat installation  
312 / 624

170

+10 from March



Gas meters removed  
170 / 575

112



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

37%

0.10%

50%

29.5%

0



Meters of heat network pipe installed  
0 / 1000 meter

15 weeks



Weeks until thermal store arrives

17 weeks



Weeks until ASHP arrives

# Key Strategic Risks

Phase of work	Issue/Risks	Current Status	Actions to mitigate risk	Owner	Update
Heat Demand	<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 £4.8m Salix grant for KLC to enable heat network connection for Kensington Leisure Centre and potentially part-fund the remaining roof replacement 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 helps to fill the KAA gap up to 2030 and enables KLC to benefit from 100% renewable heating and hot water in 2025., reducing the Council's carbon footprint</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,</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>

# 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 to construction team; high churn; lots of 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>Review with Project Sponsor, with aim of escalating with the Vital team and potentially Vital's Managing Director for London.</li> <li>Meet with RLB and client team to review Works Failures and associated KPI points.</li> </ul>	Terry McDermott (M&E Senior Project Manager)	Significant 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 required to push Vital to ensure timely and accurate performance updates.
<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 influencing 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 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. We're awaiting formal approval + commissioning before and after CCTV surveys of the sewer to prove 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 Primary Plant</b>	<p><b>Option for pipes to be internally routed from cleaner's cupboard S1 to cleaner's cupboard S2, which is approximately 50 meters.</b></p> <p>Pipe for this internal section should be manufactured from a non-combustible or non-flammable insulation material as the current buried DHN line pipe is neither of these.</p>	<p>Likelihood: <b>Medium</b></p> <p>Impact: <b>High</b></p>	<ul style="list-style-type: none"> <li>Review line pipe spec accordingly.</li> <li>Only a valid risk if the DHN is rerouted.</li> </ul>	Chris Kemp (HN Project Manager)	Client to confirm connection points and ensure combustible materials are NOT used within the building.
<b>Construction</b>	<p><b>Delays to electric boiler EC</b> due to lift causing delays to both Cenergist's and Vita's programmes and turning heat on.</p>	<p>Likelihood: <b>Medium</b></p> <p>Impact: <b>Medium</b></p>	<ul style="list-style-type: none"> <li>Meetings being arranged to discuss and explore options.</li> <li>The 23-week delay alleviates risk slightly as project delayed by approx. 6 weeks. Possible delay to Cenergist's works and heat on dates.</li> </ul>	Chris Kemp (HN Project Manager)	<p>Fully reliant on lift works completed by Jan 2025. Temporary boiler with two PHEX located in a separate container on the road.</p> <p>Plate Heat Exchanger 1 to feed dwellings Camelford Walk and dwelling downstream.</p> <p>Plate Heat Exchanger 2 to provide network backup upon failure of KLC EC. Likely the lowest cost, however, delays to Cenergist's scope.</p>