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PROJECT: Old Kent Road

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Old Kent Road
Infrastructure Coordination Development Service Summary Report

Final Report

Contents

1. Executive Summary

This report summarizes the work conducted by the Greater London Authority's (GLA) Infrastructure Coordination Development Service (ICDS) on Old Kent Road from 14 December 2023 to 31 May 2023. The ICDS aimed to find collaborative opportunities between Southwark Council, utilities and services, and developers that would result in cost-savings associated with utilities and highways works. These cost-savings would, in turn, enable the delivery of more affordable housing on Old Kent Road.

The ICDS conducted outreach with several developers on Old Kent Road to understand their utility infrastructure challenges. Developer contacts were provided by Southwark Council - a total of 21 developers were contacted, of which, 6 were interviewed. Furthermore, the ICDS engaged with utilities including Thames Water, UK Power Networks (UKPN), SGN, and the district heat network operator, Veolia. Strategic discussions were also held with Transport for London (TfL) and the GLA's Connectivity team.

The key themes from the engagements conducted include:

- The main uncertainty facing developments was whether developments would meet heating requirements through electricity or district heating sources. Most developers were not sure if they would receive a connection to the district heat network and what the process, costs, and timelines would be. As a result, their design for their development was not finalized as they were not sure if they needed to design for electrical power or heat energy in the building.
- There are no major concerns from UKPN regarding electrical capacity in the Old Kent Road area.
- Regarding telecoms, it became clear that coordination between developers, mobile network providers and fixed connectivity providers is necessary to avoid the risk of fragmented and inadequate connectivity in Old Kent Road.
- There is an opportunity for utility roadworks collaboration over time. These could include:
    - Aligning TfL's Healthy Streets work programme or the proposed cycle track along Ilderton Road with other utility works in the area
    - Developer-to-developer collaborations with UKPN - this may be viable pending UKPN's ability to strategically identify areas for collaboration.
    - Roadworks collaboration between Veolia's heat network, Thames Water diversions, and TfL's cycle track – may be possible but warrant further review.

A summary of collaborative opportunities and next steps from the ICDS has been outlined in **Section 5.**

2. Introduction

a. Site Context

The Old Kent Road Regeneration Project ('OKR') is a major development in Southwark, London. The project aims to transform Old Kent Road, a major arterial road that runs through the heart of the borough, into a vibrant and sustainable mixed-use neighbourhood. OKR is being led by Southwark Council in partnership with the Greater London Authority (GLA), Transport for London (TfL), and other stakeholders. OKR is expected to deliver over 20,000 new homes, 10,000 new jobs, and a range of new public spaces and amenities.

OKR is being delivered in two phases over a period of 20 years. The first phase, which is currently underway, includes 9,500 homes being committed to from 2018 – 2023. This phase includes enhancements to the existing public transport network. The second phase includes the commitment of 10,500 homes from 2023 – 2027. This second phase of OKR is dependent on the Bakerloo Line Extension (BLE) which is planned for extension to Lewisham. Due to funding uncertainties, it appears likely that the BLE (including delivery of Phase 2) may be delayed.

Given the amount of development occurring over a relatively brief period, there are infrastructure challenges that may pose risks to the on-time delivery and viability of affordable housing. As a result, the GLA's Infrastructure Coordination Development Service (ICDS) offered a free trial of their paid-for service to Southwark Council to help identify opportunities for developers, utilities, and the borough to collaborate on the delivery of utility infrastructure. In doing so, the GLA aimed to help save teams time and money, to mutual benefit.

b. ICDS Scope

The ICDS conducted three steps to support the collaborative delivery of utility infrastructure within OKR. This report summarizes the work undertaken during the free trial of the ICDS from 14 December 2022 to 31 May 2023.

Step 1: Local Insights
The ICDS connected with each homebuilder/developer to discuss specific issues they are experiencing at project level. The intention was to collate all significant infrastructure challenges that developers are facing in OKR and identify common themes to be addressed.

This work included:

- Conducting an Infrastructure Mapping Application (IMA) assessment of OKR and identifying proposed utility works – see **Section 2b** for more information.
- Holding meetings with individual housebuilders to understand their project and infrastructure needs.
- Convening meetings with key utilities to understand their work plans and the potential for collaboration.
- Gather information for required utility reinforcements, for individual development plots.
- Collate findings into a coordinated understanding of opportunities and constraints.

Step 2: Collaboration Opportunities
At a neighbourhood level, the ICDS engaged with larger stakeholder groups to identify challenges that require greater collaboration and communication. In practice, this meant holding strategic discussions with utility providers to enable cohesive utility infrastructure delivery for OKR. This is opposed to the conventional approach where development applications are submitted in isolation, which can lead to a fragmented and inefficient utility connections process.

This work included:

- Chairing collaboration workshops to identify opportunities to streamline infrastructure delivery, thus reducing project risk for homebuilders.
- Holding meetings with utilities and infrastructure asset owners to communicate overall infrastructure requirements in Old Kent Road.

Step 3: Next Steps
Following the completion of the first two steps, the ICDS provided suggested next steps to Southwark Council. This includes further engagements to undertake and where there is room for further collaboration between developers and utilities.

3. Local Insights

a. Insights from Developers

Across the Old Kent Road regeneration area, there are an estimated 75 developments as of February 2023, of which, roughly 34 are residential developments with over 25 proposed homes each. Throughout December 2022 – March 2023, the ICDS conducted one-to-one interviews with developers with the intention of understanding their infrastructure constraints and challenges. Through the contacts provided by Southwark Council, a total of 21 developers were contacted, of which, 6 developers went through with the interview.

The key themes from the six developer interviews are presented below:

- Developers faced major uncertainty about how to provide heat and power to their new buildings. They were unsure if they would be able to connect to the district heat network, and if they could, they didn't know what the costs or timelines would be. As a result, they were unable to finalize their development plans, as they didn't know whether to prioritize designing for an electric or district heating system.
- Regarding UKPN, some developers mentioned that their biggest problem was that connections quotes needed to be accepted within a brief period of time, but developers were not able to commit within that timeframe as they were still doing feasibility assessments.
- Regarding telecoms, one developer mentioned that coordination was necessary due to the addition of new internet services and expansion of existing infrastructure. The absence of coordination could mean diminished mobile coverage as development progresses in OKR.
- No major risks facing other utilities, such as gas and water.

Given that the main concern from developers was regarding the uncertainty of connecting to heat network and coordination across telecoms, this prioritised the outputs of the ICDS and its engagements with utilities during this trial period.

b. Infrastructure Mapping Application (IMA)

The IMA houses future investment data for infrastructure (including road resurfacing data from boroughs, planned SuDS, future public realm schemes, asset renewals/upgrades, planned rollout of EV charge points etc.). The GLA's Infrastructure team also has a Streetworks team who reviews the data on the IMA quarterly to identify overlaps in space and time between planned works, generating a list of opportunities for collaborative streetworks. The team then works with the relevant partners to deliver the collaborative streetworks, which has saved numerous days of disruption, saved costs for works promoters, reduced air pollution, etc. Most of this data is held on a private site, accessible only to organisations who have signed an NDA. The private IMA site has been shared with key representatives from Southwark Council.

- The IMA is a central register for data on growth in London and on future infrastructure investment, enabling infrastructure providers, local authorities, and the GLA to work together to undertake collaborative streetworks and invest in infrastructure ahead of demand. Access to the public site is here. It is a key tool underpinning the ICS.

- Data in the map: the IMA houses data on location, timescales, scope, and nature of future infrastructure investment in London and asset condition and capacity. Speculative data is just as valuable as planned future works, as it helps us plan further in advance. Particular datasets of interest from boroughs include highways surveys and interventions, planning and housing data, and public realm schemes.

The ICDS' review of the scheduled asset upgrades in OKR area yielded some collaborative opportunities with TfL and Veolia, with further collaborative opportunities between developers and UKPN. These have been detailed further in the Sections below.

4. Collaboration Opportunities

From January 2023 to May 2023, there were ongoing discussions with infrastructure owners, including: Thames Water, UKPN, SGN, TfL, and the district heat network operator, Veolia. There was limited engagement with telecom companies as further detailed in the subsection below.

The intention of the engagement with utilities was to understand their forthcoming workplans for OKR, and whether utility-to-utility collaborations or developer-to-utility collaborations were possible. For example, there could be an instance where proposed works from SGN would overlap with UKPN and a potential collaborative working arrangement could lower costs or reduce disruption.

a. Thames Water

Two calls were conducted with Thames Water. Thames Water outlined that it would be difficult to collaborate with other utilities as their assets are usually the largest and deepest. Therefore, construction is usually quite slow and gradual compared to shallower utilities which can be constructed relatively quickly. The one exception to this is heat networks which is usually constructed at a similar depth to watermains and foul sewer systems. However, given that the service life of the district heat network is approximately 40 years and water is 80 years, ongoing operations and maintenance of the asset would prove challenging to align.

Thames Water also expressed that the biggest constraint to collaboration is the volatility of developer workplans. For example, developers would submit a preliminary connection quote request to Thames Water to understand costs but would not go through with implementation until after they had completed further development viability assessments. This creates uncertainty for Thames Water's infrastructure planning as certainty from developers is required before they can invest in infrastructure.

Thames Water also noted that there were more strategic water management concerns for OKR. Given the amount of development proposed, without the adoption of new, integrated water management measures, there will be significant increases in potable water demand and wastewater discharge, putting additional stress on an already constrained water supply and on the foul sewer network. The 'Old Kent Road Integrated Water Management Strategy' dated May 2018 outlines proposed steps to mitigate this risk.

Currently, additional modelling and underwriting is required from both Thames Water and Southwark Council, respectively. This is further outlined in **Section 5a.**

b. UKPN

i. Collaboration Opportunities

Several engagements were held with UKPN as they were identified as a potential utility partner to collaborate with to reduce disruption, given the amount of development and reliance on electricity in OKR. Through conversation, UKPN confirmed that they did not have much strategic work planned in OKR (e.g., major utility reinforcements and diversions) and therefore would be limited in opportunities to collaborate. This is driven in part by the National Grid Electricity Transmission (NGET) upgrades done in OKR previously to provide additional capacity. However, because of the amount of developer-specific electrical utility work in the area, UKPN noted that they would benefit from insights from a strategic partner that would help consolidate the various workplans from developers, so that road disruption could be minimised.

As a result, the ICDS sought to compile individual electrical utility workplans from developers from OKR. The response from developers however has been limited. Currently, this still is a potential area for collaboration to minimize roadworks disruption but may require further involvement from UKPN as they have utility workplan data from developers.

ii. Electrical Capacity

One of the initial risks that was identified by the ICDS was the potential for electricity constraints. This was based on a review of a July 2019 Utility Results report. The report mentioned that there are two substations in OKR area, including the Bankside and Verney Road substation with a total headroom of 70 MVA that would be available once reinforcements at both substations were completed. There would be no space to upgrade these substations further afterwards.

Given the amount of development, new electric vehicle charging stations and power that would be needed to operate the two new Bakerloo Line stations, the ICDS investigated whether the 70 MVA of capacity would be sufficient. In conversations with UKPN, they confirmed that the current headroom capacity can supply approximately 35,000 homes, enough to support the projected housing growth in Old Kent Road. Additionally, UKPN is looking at:

- A new substation at Canada Water (86 MVA), which through network transfers will create further capacity in the Old Kent Road area.
- The use of flexibility to manage peak demands - UKPN recently published a flexibility tender for more than 600 MW across the region.

It was also raised that UKPN's projected long-term demands for Old Kent Road appeared stagnant despite the increase in development in the area. UKPN explained that the stagnation in electrical demand is driven by their increased efforts to push for energy efficiency – for reference, national statistics suggest that the introduction of LED lightbulbs would reduce peak demand by 8%. This suggests that even in areas of significant growth, the level of demand will sometimes remain steady. Overall, UKPN noted that there are no significant electricity capacity risks in OKR currently.

c. SGN

One meeting was held with SGN on 6 February 2023. SGN's utility works are minimal given that the Old Kent Road Area Action Plan prioritizes the provision of energy through heat and electricity over gas. As a result, there are no reinforcements currently proposed by SGN as there are negligible increases in gas demand. This has resulted in limited collaboration opportunities.

Nevertheless, there are asset relocation works required for SGN at the existing gas holder site. This site has been sold to Avanton and will be partially funded by Southwark Council to include a public lido. The existing 48" gas main is located partially above ground and emits a large noise which may detract from the public realm. As a result, planned SGN works include relocating a gas governor in the immediate vicinity of Avanton's site to either National Grid's or Southwark's land to free-up space for development and enable a better-quality public realm. Ongoing negotiations between SGN, NGET, and Southwark are taking place to identify the best location for the SGN diversions.

Once decided, various underground pipework will need to be diverted. The diameter of the gas main is 24" with an estimated 0.75 metre depth of cover. The work will require temporarily closing local road networks and potentially constructing a new temporary road to provide NGET with access to their substation. The tentative schedule for this work is: 9 months for detailed design from May 2023 – February 2024; Procurement for 9 months from February 2024 – November 2024; approximately 1 year for construction afterwards. The diversions would be completed in 2026 followed by the delivery of a new public park in the area.

The location of the proposed SGN works suggests that there are limited opportunities for utilities collaboration. There is, however, the potential for collaborative works with the Borough highways teams, TfL Healthy Streets, nearby developments, and the adjacent public realm upgrade works.

d. Digital Connectivity

Preliminary discussions were held with the GLA's Connected London team to understand the best way to strategically deliver telecoms infrastructure for OKR. From these conversations, several potential strategic telecoms challenges were discussed.

The proposed regeneration of OKR will increase the number of mobile users. Mobile coverage is wireless and delivered through telecom masts and the increase of users may lead to bandwidth constraints on the existing infrastructure if it is not expanded. For example, coverage will shrink spatially speaking as the telecom masts prioritize coverage to users closest to them. The risk is that telecom masts will be over capacity and coverage will be diminished as the number of users increase in the Old Kent Road area. Therefore, there is a need to coordinate the installation of new telecom masts with developers to ensure consistent and reliable connectivity.

The Connectivity team noted that there is generally a lack of incentivization for mobile network operators to provide new telecom mast infrastructure (e.g., whilst people may move to new areas, they seldom change mobile providers). As such, the provision of telecoms infrastructure tends to be reactive rather than proactive. In other words, there is a risk that without developer to mobile network operator collaboration, these masts will not be constructed. This increases the risk that mobile network coverage will gradually erode as development progresses, taking extended periods of time for mobile network coverage to match customer expectations. Anecdotally, this has become a common issue in Nine Elms and Kings Cross, where residents and businesses have poor coverage.

There is a need to arrange developer to mobile network operator collaboration workshops to address these risks. The proactive delivery of telecoms infrastructure in the Old Kent Road area would maximize the provision of telecoms infrastructure by telecoms companies, which would avoid costly retrofits on buildings and reoccurring roadworks for the underground fibre. A strategic form of infrastructure investment would enable the futureproofing of Old Kent Road. This has been further outlined as a next step in **Section 5a.**

e. Transport for London

One meeting was held with TfL on 27 Feb 2023. TfL shared work on their Healthy Streets programme along Old Kent Road which aims to increase the capacity for public transport and active travel. These upgrades are essential ahead of the Bakerloo Line Extension as well as afterwards to help unlock growth in the area. However, at the time of the call, TfL mentioned funding has not yet been secured and that there are currently no delivery programmes yet.

There is also a proposed cycle track that crosses Old Kent Road along Ilderton Road towards Brimmington Park. This area overlaps with Veolia's heat network expansion and may be a potential area for utilities collaboration. There is currently no work programme for this work yet, but funding is being arranged.

A follow-up conversation with TfL for these two programmes would be beneficial to determine if a work programme has been agreed. Given the amount of roadworks that may be associated with these works, this may potentially be an opportunity for collaboration with TfL.

f. Veolia

Veolia is the operator for the South East London Combined Heating and Power (SELCHP) and is providing the heat network for the Old Kent Road area. The heat network is being delivered in two phases. Phase 1 is being delivered from SELCHP to Brimmington Park and will involve the installation of pipes approximately 3 metres deep. The laying of pipes is likely to require diversions from Thames Water. Phase 2 will be the remaining network that will be constructed heading west from Brimmington Park. See **Figure 1** for reference. Out of the two phases, Veolia has mentioned that Phase 1 will be the most complicated due to the depth of excavation and utilities coordination required along the route.

Both phases are aiming to start by 28 Jan 2024. The first phase will be commissioned by the end of 2024 while the second phase will be commissioned by the end of 2025. It is anticipated that the entire system will become operational in early 2026.

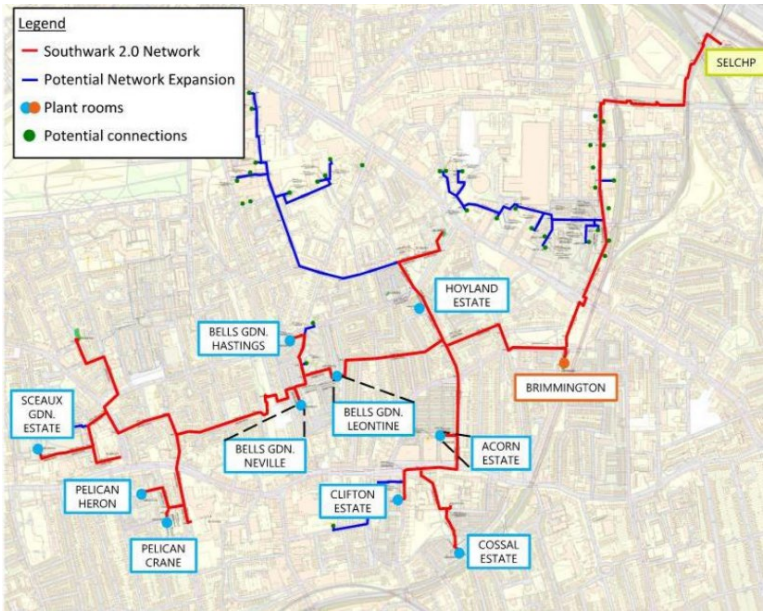

Figure 1: Proposed Heat Network Expansions

The primary aim of these two phases is to provide heat to Southwark's existing council-owned developments, including schools, council estates, etc. Connecting to private

developers or new developments is not within the current scope. Given that OKR is expected to deliver over 20,000 homes and Southwark's Area Action Plan and incoming heat zoning regulation requires all developments to connect to the district heat network or to be future proofed to enable a connection, there is a clear gap in getting new developments connected.

Veolia was supportive of connecting to as many developments as possible in Old Kent Road. Veolia had also commissioned the services of Buro Happold who identified that the heat network could potentially expand to service adjacent development clusters – see **Figure 1 & 2** for reference. However, there were certain challenges outlined with expanding the heat network including but not limited to:

- Obtaining developer buy-in to finance the capital-intensive infrastructure.
- Difficulty in obtaining certainty from developer's energy strategy. The process was 'chicken and egg' in the sense that developer's generally do not want to commit to the heat network until it is confirmed, but Veolia cannot provide the heat network until they receive commitment.
- Given the ongoing developer applications along Old Kent Road, Veolia needs to effectively 'cut-off' the design at a certain point and construct the system. Otherwise, the design will continue evolving in scope, affecting the timely delivery of the infrastructure.
- Veolia's contract with SELCHP allows them to utilize a certain capacity of heat. If too many developments request heat, Veolia may not have the adequate supply to provide heat.
- Acquisition of additional land from Southwark Council to provide back-up energy to development clusters.

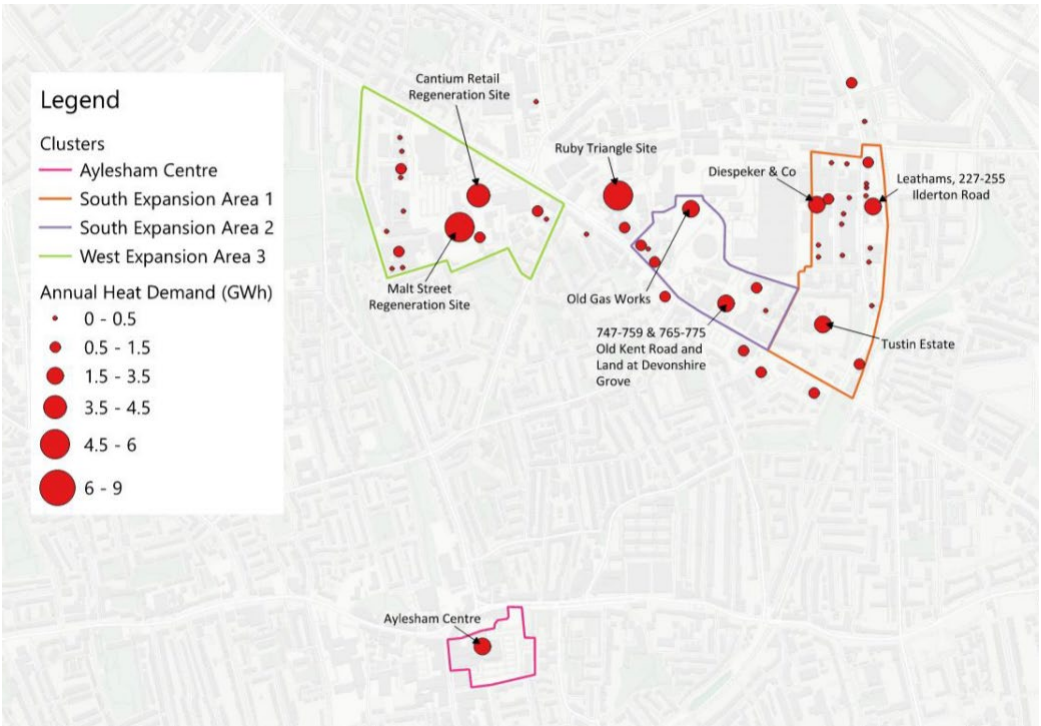

Figure 2: Heat Loading from Development Clusters (Source: Buro Happold, Future Expansions Note, Dec 2022)

i. Heat Network Workshop

Following engagements with Veolia and developers, it became clear that a workshop would be mutually beneficial for both parties. Developers desired more clarity on the connection's timelines, costs, and processes, whereas Veolia needed to divulge information to developers to test the viability of expanding the heat network beyond its base design. As a result, the ICDS organized a workshop with Southwark Council, Veolia, and the GLA on 30 March 2023. Minutes were produced from the workshop and are attached in **Appendix A.** The key outputs from the workshop included an overview of the upcoming heat zoning requirements from Southwark along with Veolia providing a contextual explanation of its connection processes, costs, and timelines to connect for developers.

Overall, developers found the workshop positive and informative and the key result from the workshop was that developers were keen to collaborate to co-finance the expanded heat network but required more detailed information. It was agreed that an initial feasibility study providing developers with estimates of costs and timelines to connect for their specific development would be useful to progress discussions. As a result, further workshops are currently postponed until the feasibility studies are completed. This is further detailed in **Section 5a.**

5. Next Steps

A summary of the key next steps has been summarized in **Table 1**, below.

Table 1: Summary of Next Steps

Utility/Service	Summary of Next Steps
Thames Water	Underwriting and modelling to proceed with Thames Water so that assessments can be made about strategic infrastructure investments needed to accommodate the forthcoming developments. Diversions of Thames Water's assets for the heat network will likely be necessary, which may present an opportunity for future roadworks collaborations.
UKPN	Discuss with UKPN a new strategy to consolidate various developer utility workplans to reduce road disruption. It may be possible that UKPN develop the strategic insights for potential developer collaborations as they have the data on-hand and the ICDS perform the engagement with developers to obtain buy-in for collaborative roadworks.
NGET	Arrange meeting with NGET to discuss their workplans in OKR and subsequent collaboration opportunities.
SGN	Confirm SGN's forthcoming work delivery programme and identify potential overlap with Borough highway's works, TfL Healthy Streets programme, utility works, and developer/public realm improvements.
Telecoms	The GLA and Southwark Council will need to play a proactive role in

	enabling the digital connectivity of OKR. Continued coordination with the GLA's Connectivity team is recommended, along with strategic coordination between developers, mobile networks operators and the Borough and fixed connectivity providers. In discussions with the GLA's Connectivity team, three initial workshops were suggested: one with fibre companies, another with telecom companies, and a final one to introduce developers to these organizations. The intention of the workshops would be to strategically enable proactive infrastructure investment in OKR; otherwise, there may be connection issues or challenges in the future.
TfL	Confirm updated work plans for the upcoming cycle track and health streets works and identify potential overlap with other utility works and public realm improvements occurring in OKR.
Veolia	Veolia to produce a developer questionnaire to understand the energy strategy for each development. The questionnaire should also assess whether developers would be interested in a collaborative, co-financing arrangement. The data from this questionnaire should be used to inform the workshop – who participates and how it is run. High-level feasibility studies need to be conducted for the various development clusters in Old Kent Road, so that developers understand the costs and timelines to connect to the heat network. A follow-up, collaborative workshop would be beneficial once these feasibility studies are produced. Funding opportunities for the feasibility studies also need to be investigated, including the GLA's Local Energy Accelerator program. Failing that, alternative funding arrangements should be discussed with Southwark. Once the feasibility studies are completed, a Part II workshop should be held with developers, Southwark, and Veolia as soon as possible to broach the conversation of collaborative co-financing for the expanded heat network. Additionally, Veolia, Southwark and the GLA should convene to identify what commercial arrangements would be viable for development clusters. These commercial arrangements should be presented during the developer workshop for input. Otherwise, developers may be forced to negotiate during the workshop which may adversely impact collaboration opportunities.
Collaborative Opportunities	Routinely check the IMA to identify the potential for future utility works in the area and discuss the results with associated utility companies and Southwark Council's highways team.

Appendix A – Minutes from the Heat Network Workshop

MEETING MINUTES

OLD KENT ROAD – HEAT NETWORK WORKSHOP

Meeting Date:	30 March 2023	**Date of Issue:**	25 April 2023
Start Time:	12.00		
End Time:	14.00	**Prepared by:**	Richard Dieu
Location:	Southwark Council		

PLEASE NOTE: These minutes are the writer's best interpretation of discussions held during the meeting. Inform the writer of any noteworthy omissions or errors within 5 days of the distribution date. Otherwise the content will be assumed to be correct

Meeting Attendees:

Richard Dieu	Greater London Authority
Kosh Kar	Greater London Authority
Tara Clinton	Greater London Authority
Tim Cutts	Southwark Council
Colin Wilson	Southwark Council
Richard Johnson	Veolia
João Sousa	Veolia
Various Developers	N/A

Item	Notes	Action
1.0	**General Updates**	
1.1	The council has consented 9,500 new homes in the Old Kent opportunity area, of which 700 are completed and 1,800 are currently under construction. In line with the council's Climate Emergency declaration, reducing carbon emissions in both new and existing development is a priority. Policy and modelling at local, regional and national government indicate that district heating networks (DHNs) will have a key role to place in reducing emissions. The government estimates that by 2050, 1 in 5 homes will be connected to DHN and the council has been working with BEIS over the last year to pilot analysis around heat network zones. The AAP identifies the council's ambition to extend the DHN from SELCHP to Old Kent Road and Peckham and requires all development to be future proofed to enable a connection.	Southwark
1.2	The Old Kent Road area's DHN has a baseline design that will be implemented starting next year ("Planned Upgrades" marked with	Veolia

MEETING MINUTES

OLD KENT ROAD – HEAT NETWORK WORKSHOP

Item	Notes	Action
	Red Line in drawing "SHN-VE-XX-ZZ-DR-Y-0125"). These upgrades will primarily serve existing and new council housing, with opportunities for private developers and housing associations to connect, along with commercial customers (Schools, Swimming pools, etc). Veolia may also provide a connection to developments further away from the upgrades ("Proposed Upgrades" marked with yellow line in drawing "SHN-VE-XX-ZZ-DR-Y-0125"), subject to viability, funding and agreements.	
1.3	The Planned Upgrades will be delivered in two phases, both starting in January 2024 and expected to be completed by December 2025 and 2026, respectively . Phase 1 will extend the existing DHN southwards from SELCHP to Brimmington Park, while Phase 2 will expand the network south and west from Brimmington Park toward North Peckham.	Veolia
2.0	**Process for Connection**	
2.1	Veolia requires an initial contract ("Project Development Agreement" or "PDA) with developers that includes mutually agreed upon commercial and technical aspects to deliver the heat network infrastructure. An agreement is necessary because internal governance prevent Veolia from investing in infrastructure ahead of demand until customer commitment and a Heat Supply Agreement is executed.	Veolia
2.2	Proposed Upgrades/Connections can be constructed concurrently with Phase 1 or 2, but the system will not be operational until each Phase is completed (i.e. Phase 1 or 2). Development schemes coming online after 2025 are more viable for a connection. Those coming online before 2025 may opt for interim heating systems.	Veolia
2.3	Veolia can provide feasibility studies to inform developer decisions. An initial feasibility study costs approximately £10000 and takes 3 to 4 months to produce, while a more comprehensive study with a higher degree of accuracy requires intrusive ground surveys and costs between 50,000 and 200,000 pounds over 5 to 8 months. The	Veolia

MEETING MINUTES

OLD KENT ROAD – HEAT NETWORK WORKSHOP

Item	Notes	Action
	GLA can help support this decision-making by engaging with clusters of developers.	
3.0	**Financing**	
3.1	Proposed Upgrades may be entirely financed by one developer or jointly financed with multiple developers to reduce costs through a PDA. Developers expressed interest in co-financing. The GLA will support collaborative discussions among developers to improve viability.	Veolia
3.2	Several clusters of developments located at different distances from the primary heat network have been identified. The costs of the Proposed Upgrades decrease as more clusters co-finance the network. For example, a cluster located further away benefits if other clusters located sequentially closer also collectively finance a shared connection, since the connection will now require a shorter distance.	Veolia
3.3	Developers may be eligible for the Green Heat Network Fund, which offers a grant of up to 50% of the CapEx.	Veolia
4.0	**Back-up Power**	
4.1	Developments that connect to the district heat network require back-up power during maintenance periods that require full shutdown of the main energy centre. These periods generally last 1 to 2 weeks and are planned during the summer when demand is lowest. Emergency maintenance may also occur during peak periods (winter), requiring developers to provide backup power. The heat networks will provide 100% of energy needs about 90% of the time, except during maintenance periods at SELCHP.	Veolia
4.2	Unless there is additional investment, the heat network does not have sufficient back-up to cover all developers. For this reason, developers will require a separate back-up system unless a centralized system is identified.	Veolia
5.0	**Standards and Regulation**	
5.1	The heat network has a lower carbon intensity compared to BAU energy systems. However, Table 12 of SAP10.2 lists the heat network with heat recovered from waste combustion with a significantly lower carbon factor which makes it much more competitive to the alternative options (0.015kg Co2 per kWh). • The ESA is working with BEIS and SAP to update this.	Veolia

MEETING MINUTES

OLD KENT ROAD – HEAT NETWORK WORKSHOP

Item	Notes	Action
	• The SAP number associated with heat networks may account for back-up power using gas as it was previously considered in BRE published Technical Note 3 (https://bregroup.com/sap/bre-technical-notes/)	
5.2	Imminent heat zoning legislation will require new developments in certain areas to link to the heat network, while existing developments will have a timeline to connect.	Veolia
6.0	**Next Steps**	
6.1	The GLA will organize mini-workshops with developers in late-May/early-June to help facilitate the co-financing arrangement to connect to the heat network.	GLA
6.2	The GLA is finding ways to deliver collaborative infrastructure across developers and utilities and are conducting a free trial in the Old Kent Road area until June 2023. Developers to reach out to the GLA or Southwark if they are interested in understanding how the service can support them through other utility collaboration works.	GLA
6.3	GLA and Developers to discuss a strategic approach to connecting to UKPNs network as well, as developer applications are largely incremental and thus, cost inefficient for developers.	GLA
6.4	Additional information on the district heat network expansion can be found in the Southwark DHN Veolia slides from March 2023.	Veolia

END OF MEETING MINUTES