

Report for: Cabinet

Item number:

Title: North Tottenham District Energy Network

Report authorised by : Lyn Garner – Director of Regeneration, Planning and Development

Lead Officer: Joe Baker – Head of Carbon Management

Ward(s) affected: Northumberland Park Ward

**Report for Key/
Non Key Decision:** Key

1. Describe the issue under consideration

1.1. The Council has a major commitment to growth in housing and employment both through the Council’s own Corporate Plan ‘Building a Stronger Haringey together’, and Local Development Plan, with significant regeneration to be delivered at North Tottenham, Tottenham Hale and Wood Green. In addition, the delivery of a District Energy Network (DEN) is a requirement set out in the National Planning Policy Framework (NPPF), London Plan and the Local Plan on all major development sites. District Energy can deliver energy in a more efficient, lower carbon manner. The development and expansion of the DEN in the North Tottenham area is a core contribution to the Corporate Plan Priority 4:

Corporate Plan Priority	Objective
<p>Priority 4: Drive Growth and Employment from which everyone can benefit</p>	<p>Objective 4: Manage the impact of growth, by reducing carbon emissions across the borough with the aim of meeting our 40:20 goal, while growing the green economy</p>

1.2. The purpose of the report is to present the proposal to establish a District Energy Network (DEN) for the North Tottenham area to support regeneration. Following design, technical studies and analysis of options by WSP Parsons Brinkerhoff, financial appraisal by Deloitte, and legal appraisal by Pinsent Masons the report recommends a 100% Council owned SPV. The report also highlights the merits of partial private-sector investment and contractual performance related payments. It recommends that through the SPV these are considered further and the possibility of minority stake interest by a private entity be investigated as part of a soft market testing exercise. This report has been peer reviewed by Nordic Heat (a Scandinavian District Energy Company) and analysed by the Department for Business, Energy and Industrial Strategy (BEIS, formerly part of DECC) and the GLA.

1.3. In presenting the business case for the preferred delivery structure supporting this, we seek approval to commence a procurement process to procure contractor/s to design, construct, operate and maintain the DEN infrastructure, as well as perform billing and metering of customers.

2. Cabinet Member introduction

2.1. Haringey is taking a leading role to deliver carbon reduction within the borough through a number of initiatives. We are currently on target to deliver a 40% carbon reduction by 2020. To maintain this ambition this report sets out the case for a Council owned District Energy Network to support carbon reduction while delivering the growth and regeneration of North Tottenham. This aligns with our local ambition, and regional and national policy.

2.2. Decentralised Energy Networks are an expectation of large regeneration areas through planning to deliver locally secure energy supply to deliver growth, affordable energy for our new communities and deliver carbon reduction. This project will enable the Council to ensure that its growth objectives and priorities are delivered while reducing our carbon emissions. This report sets out the

business case for change, the options assessments for delivery and how we will deliver this network.

3. Recommendations

It is recommended that Cabinet:

- i. Considers the Business Case attached as Appendix 1 in the open report and Appendix 2 in the exempt report setting out the preferred delivery approach for the North Tottenham DEN and demonstrating project viability.
- ii. Agrees to establish a District Energy Network for the North Tottenham area, subject to recommendations iii) and iv) below.
- iii. Agrees that Option 2 as set out in paragraphs 6.25 to 6.31 and 6.60 to 6.64 of this report (the 100% Council Owned Special Purpose Vehicle) is the most appropriate delivery structure and gives delegated authority to the Director of Regeneration, Planning and Development in conjunction with the Council's s151 officer after consultation with the Cabinet Member for Economic Development, Social Inclusion and Sustainability, to refine and finalise the delivery structure. The final structure and design of the SPV will be reported back to Cabinet for approval.
- iv. Gives Delegated Authority to the Director of Regeneration, Planning and Development in conjunction with the Council's 151 officer, after consultation with the Cabinet Member for Economic Development, Social Inclusion and Sustainability, to agree amendments to the Business Case (and the supporting technical and financial models) that may be required, insofar as the overall objectives and parameters of the Business Case can still be achieved (as set out in section 6.18). This will ensure that the project can alter based on key dependencies and sensitivities changing, and that all agreements (including pricing structure) can be put in place to ensure that the business case can be delivered. Any substantial changes in the business case will be reported back to Cabinet for approval. The business case prior to Financial Close including supporting agreements will be reported back to Cabinet for approval.
- v. To facilitate the development of the Business Case including financial model give Delegated Authority to the Director of Regeneration, Planning and Development in conjunction with the Council's s151 officer after consultation with the Cabinet Member for Economic Development, Social Inclusion and Sustainability, to progress the project and agree all documentation required to enter into agreements with customers for the supply of heat and electricity and funding agreements to reach financial

close. This will be a commercially viable rate for both parties, and address future energy pricing mechanisms and regulation frameworks.

- vi. Agrees to the commencement of a procurement process to procure contractor/s to design, construct, operate and maintain the DEN infrastructure, as well as perform billing and metering of customers.
- vii. Gives Delegated Authority to the Director of Regeneration, Planning and Development, after consultation with the Cabinet Member for Economic Development, Social Inclusion and Sustainability, to agree all documentation required to support the procurement process subject to funding approval at Council in February 2017.
- viii. Gives Delegated Authority to the Director of Regeneration, Planning and Development, after consultation with the Cabinet Member for Economic Development, Social Inclusion and Sustainability, to deselect bidders, in line with the evaluation criteria, throughout the procurement process and to return to Cabinet for approval of the preferred bidder following the conclusion of the procurement process
- ix. Agree a capital budget for investment in the SPV.
- x. Agrees a capital budget of up to £1.6m to set up the Special Purpose Vehicle and support the process up to establishment, including procurement costs. This would be funded by the Council and grant allocated from GLA and Central Government to support project development.

4. Reasons for decision

4.1. The Council has set out in its Corporate Plan and associated strategies, a set of challenging social, economic and regeneration objectives. It also has challenging economic and housing growth targets from the London Plan.

4.2. The Council set out its commitment to reducing carbon emissions and managing the impact of growth across the borough in the Corporate Plan Priority 4, Objective 4, and stated aspiration to be a carbon neutral borough by 2050.

4.3. The borough-wide Energy Masterplan, undertaken previously by WSP | Parsons Brinckerhoff, identified North Tottenham, along with Tottenham Hale and Wood Green as initial opportunity areas for area-wide District Energy Networks and recommended the Council continue to sponsor development of each network.

- 4.4.** This project will support the delivery of growth in North Tottenham, through the installation and operation of this planning policy requirement.
- 4.5.** The development and expansion of a DEN in the North Tottenham area is a core contribution to Corporate Plan Priority 4.
- 4.6.** In 2015, the Council commissioned Deloitte to examine the case for a North Tottenham DEN to deliver carbon reduction and manage the impact of new housing and economic growth. The detailed work to assess the strategic case, techno-economic assessment, commercial options, monetary and non monetary analysis, and management case is included in the Business Case at Appendix 1 and considered in detail below.
- 4.7.** The option recommended is that the Council should establish a 100% Council Owned Special Purpose Vehicle (SPV) and seek through a procurement process, private sector contractor/s to deliver the design, build and operation of the DEN. This SPV does not preclude private-sector investment and the possibility of minority stake interest by a private entity. This will be investigated as part of a soft market testing exercise through the procurement process as highlighted in sections 6.65 to 6.68.
- 4.8.** The 100% Council Owned model provides the greatest strategic control and flexibility to the Council including:
- Reducing risk to ensure that delivery of the DEN development is aligned to the speed and scale of the High Road West regeneration and Northumberland Park regeneration programmes, as well as the THFC redevelopment in North Tottenham
 - Delivering wider social benefits such as setting energy tariffs for residents, setting up a local company to support local apprentices and skills development, and reinvesting local spend on energy on service delivery and other improvements in the borough
 - Network expansion and evolution (for example to support future regeneration in Tottenham and measures to reduce resident exposure to high and volatile fossil fuel prices),
 - Allows the Council to have the freedom to develop an energy mutual company with the community, whereby share options could be sold to the community of Haringey. This would increase community buy-in, raise capital, and for community to shape the strategic direction of the SPV
 - It maximises exit options and gains
 - the potential to deliver the greatest contribution to the Council's revenue budget as the Council would benefit from 100% of the distributable profit from the entity, and also maximise the interest received on loans to the SPV

4.9. The Council accepts a degree of risk in that it will commit investment to the vehicle. It will bear the costs of the procurement and establishment of the SPV, and some limited development risk. However, the SPV will contribute to the ambition set out in the Corporate Plan for carbon reduction and support growth and higher design standards in new housing. The Council will also receive a financial return that it can reinvest in the fulfilment of its statutory functions, and particularly in measures to achieve such socio-economic objectives.

4.10. The Council has reviewed the delivery of District Energy Networks across the UK and within Europe. The 100% publically owned model is the most common approach and is seen in developments in places such as the London Borough of Islington, and cities of Nottingham, Gateshead, Aberdeen, Westminster and Manchester.

5. Alternative options considered

5.1. The potential alternative options are considered in detail in the business case attached as Appendix 1, and covered below in section 6.

6. Background and Summary information

6.1. The Council has a major commitment to growth in housing and employment both through the Council's own Corporate Plan 'Building a Stronger Haringey together', and through its contribution to the London Plan, which says that the borough needs to provide 20,000 new jobs and 19,000 new homes over the next 15 years or so. The nature and scale of these ambitions are further set out in the council's Economic Development and Growth Strategy, and in the draft Housing Strategy.

6.2. The Council's commitment to low carbon sustainable growth and delivering on the Corporate Plan Priority 4, Objective 4 is demonstrated by the Zero-Fifty Commission, Innovation Hub pilot, Housing Retrofit and SME support programmes (including the award-winning Smart Homes and Smart Business), reducing emissions from the Council's estate, as well as District Energy Networks in appropriate locations.

6.3. In 2009 the Council and in partnership with the community, made a commitment to deliver a 40% carbon reduction from 2005 by 2020. This means delivering a carbon reduction in household, transportation and businesses carbon emissions. District Energy is seen by both national and regional government as an easy way to reduce carbon emissions and deliver local energy security in regeneration areas. In 2016 the Leader of the Council alongside Sadiq Khan (Mayor of London) indicated support for delivering a Zero Carbon Borough / City by 2050. District Energy is a key project in the delivery of both these ambitions.

6.4. The borough-wide Energy Masterplan and high level feasibility analysis, undertaken previously by WSP | Parsons Brinckerhoff, recommended North Tottenham, Tottenham Hale and Wood Green as initial opportunity areas for area-wide District Energy Networks. The study demonstrated that the delivery of an area-wide District Energy Network would reduce carbon emissions and offer a financial return on investment under the assumptions modelled. Longer term

there may be potential for expansion / interconnection of networks within the borough and with those in neighbouring boroughs. The study recommended that the Council continue to sponsor the development of each of these DEN projects, and along with the North Tottenham project, officers have secured grant funding and commissioned further technical and economic assessment of DENs serving Tottenham Hale and Wood Green. This study informed the local planning policies.

- 6.5.** In 2015, Deloitte were appointed as the Council's advisors and were commissioned to work with the Council and its external legal advisors to develop the business case and preferred structure for a DEN serving North Tottenham, building on the previous study. The conclusion of this work is detailed in the business case attached at Appendix 1 and Appendix 2 and explained below.
- 6.6.** The North Tottenham DEN Business Case has been Peer reviewed by Nordic Heat (a not for profit peer-to-peer organisation established by publicly owned Swedish energy operators), as well as reviewed by the GLA Energy Team, and the Heat Networks Delivery Unit in the Department of Business, Energy and Industrial Strategy (formerly the Department of Energy & Climate Change, DECC).
- 6.7.** In addition, senior officers of the Council's Regeneration Teams have undertaken site visits to look at various delivery models, including a 100% private and 100% public model.
- 6.8.** Both regional and national government are continuing to work towards the delivery of low carbon energy infrastructure. Although work is proceeding to decarbonise the national grid through the use of renewable and nuclear technologies, district energy remains a planning requirement and expectation. District energy delivers both low carbon heat (through greater efficiencies than individual boilers) and low carbon electricity (through the removal of transition losses on the national grid). As set out in section 6.15 of this report and section 4.7.2 of the Business Case once delivered the North Tottenham Network could connect to a waste heat source which is generated at the North London Energy from Waste plant. This waste heat is deemed by national and regional as a lower carbon heat source and if commercially viable would be the ultimate heat source for this network.

What is a District Energy Network?

- 6.9.** Heating and hot water accounts for around 45% of UK energy use: predominantly for space heating (in homes and offices), heating water, cooking and industrial processes. As a result of this it accounts for around 30% of UK carbon emissions. Based on this National Government has identified that it is more cost effective to tackle heating emissions from homes than emissions in other sectors like heavy industry and transport. It has used this to create the current regulatory framework to increase the deployment of District Energy Networks to address these emissions. This has been further built on in the London Plan. Both national and regional government recognise that within urban areas the business case for District Energy is stronger due to the high density of housing numbers and users. This builds on the approach commonly seen in Northern

European Cities (including Scandinavia) and creates the business case for District Energy.

6.10. A district energy (or heat) network is a system of highly insulated pipes that move energy in the form of hot water or steam from where it is created, to where it is needed for use in space heating and hot water production.

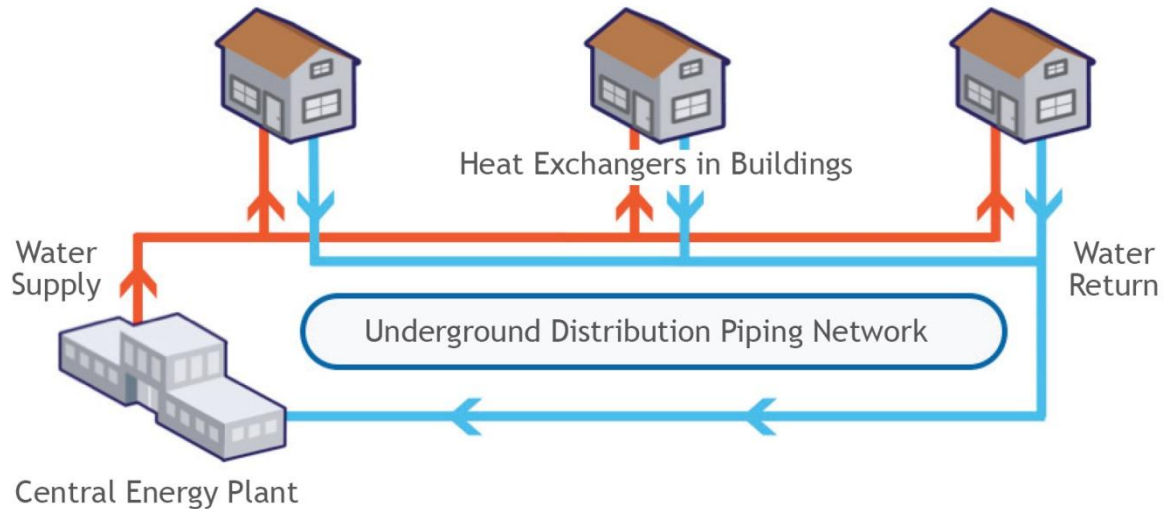


Figure 1 – Schematic of a District Energy Network

6.11. DEN's can provide higher efficiencies and better pollution control than individual household boilers. District Energy Networks with combined heat and power (CHP) is one of the cheapest method of cutting carbon emissions. Developers save on costs as they do not require gas connections to sites and households as all space heating and hot water loads are delivered through the DEN system.

6.12. Historically district and community heating has been seen as inefficient and “one size fits all” with only an “on/off function” that is controlled centrally. Modern heating systems provide end users with the same autonomy as if they had their own boiler. Just as with their own independent heat source, users will pay for only the energy they use. The heat interface units in each dwelling incorporate an energy meter, which accurately monitors and records the energy used to provide heating and hot water. Users also can control the temperature of the heating to suit their needs.

The North Tottenham DEN concept

6.13. Tottenham, in the east of the Borough, has the potential for up to 10,000 new homes and 5,000 new jobs. The change at North Tottenham is already evident, with construction commencing on the £600m new Tottenham Hotspur Football Club Stadium and mixed-use redevelopment, and the Council launching two major procurement exercises in 2016 to deliver a significant number of new homes and jobs at High Road West (HRW) and Northumberland Park as part of its regeneration programme. With HRW and Northumberland Park regeneration anticipated to progress over the next three to five years, the development partners will need to include zero carbon solutions and energy centres as part of

the infrastructure. The Council can capitalise on this planning and development process to ensure an area wide solution is selected and developed in order to meet its objectives and carbon targets.

6.14. The DEN at North Tottenham will include a central energy centre within the High Road West (HRW) development. This will house gas-fired combined heat and power (CHP), gas boilers and a thermal store. CHP is a more energy efficient process than traditional energy processes, generating electricity and heat. This in turn reduces carbon dioxide emissions.

6.15. The North Tottenham DEN would deliver hot water (heat) to High Road West regeneration, Tottenham Hotspur Football Club and Northumberland Park regeneration for the space heating and hot water needs. It will aim to supply electricity to Spurs. Heat and electricity would be supplied from an energy centre within the HRW regeneration area, with potential for longer term option to interconnect to the Lee Valley Heat Network (LVHN) or other low carbon affordable heat sources in future.

6.16. There is an interdependence between the North Tottenham DEN project and HRW regeneration, Northumberland Park regeneration and the Tottenham Hotspur redevelopment, and the timing of the DEN will need to align with the timing of the other developments.

6.17. The overall objective of the Business Case was to determine the optimal scope and technical feasibility of the DEN in the North Tottenham area and, if feasible, to establish an appropriate corporate delivery structure and arrangements to deliver the Project.

6.18. The following Strategic Objectives for the North Tottenham DEN underpin the approach. They were set by the Cabinet Member for Economic Development, Social Inclusion and Sustainability alongside officers. They will underpin the procurement process, the set-up of the SPV and the operation of the DEN and importantly the ability of any solutions are required to meet them:

- To reduce carbon emissions and assist in managing the impact of growth at North Tottenham
- To ensure we have the energy infrastructure to deliver growth and create homes that are affordable for residents
- To contribute to the regeneration of the North Tottenham area and supply low carbon energy to a mix of private and public sector developments
- To improve energy affordability and security for residents and businesses
- To obtain a reasonable return on investment

6.19. The model recommended by Deloitte, and discussed in detail below, is a new separate entity set up as fully owned Council vehicle. This is the model that best provides the means by which the Council can achieve its strategic objectives, and it allows the Council to retain control of the DEN development and potential future expansion.

6.20. Alongside carbon reduction and local energy generation, a DEN can deliver wider social and economic benefits to the community. It can deliver local training and jobs during the construction and operation of the network, fuel affordability

and energy advice to customers, and deliver improved local air quality against a business as usual scenario

The Options

6.21. The business case attached considers in detail the following potential delivery structures which the Council could implement in order to fulfil its objectives.

Option 1: Base Case – “Do Nothing”

6.22. Under this option, no Council led DEN is developed, and the energy solutions and planning requirements are undertaken by the private sector on a site by site basis in line with planning regulations

6.23. Multiple energy centres would not offer the support to the local grid and further public investment in the grid would be required. The Council would still be required to invest in infrastructure on its own sites or sites that it brought forward with partners such as the HDV. Multiple energy centres would be less efficient and result in higher carbon emissions.

6.24. This option carries limited risk to the Council, but in this case the Council would not harness any revenues from selling heat and power to private sector developments. The public sector would also not have control over reducing fuel poverty and carbon emissions, or delivering low carbon energy for new or existing developments in North Tottenham, except through planning requirements. The public sector would not have control over the provision of affordable heat to residents in North Tottenham and there would be no structure in place for a flexible and expandable local energy supply, and impeding connectivity to future schemes or alternative lower cost energy sources.

Option 2: 100% Council Owned Special Purpose Vehicle (SPV)

6.25. A vehicle is established which is wholly owned by the Council. This vehicle is an independent company (i.e. wholly owned by the Council, albeit as an arm's length organisation). Establishing an independent SPV company would allow the Council set its strategic objectives and if needed control an exit route in future if the need arises. The Council would be responsible for developing and implementing the DEN. The Council would create a wholly owned subsidiary, and the vehicle would contract with private sector contractors for works. The Council would retain strategic control of the DEN.

6.26. The SPV would sell heat and power to consumers on the DEN and collect revenues.

6.27. To achieve the Council's aspirations through a wholly-owned company, the Council would need to support all the costs of constructing the DEN through borrowing and grant. The Council has a successful track record of securing

grants to this effect with nearly £3m secured in the last 4 years. All this investment and all the development risk would be the Council's responsibility throughout the process.

- 6.28.** Positively, this option has the potential to deliver the greatest contribution to the Council's revenue budget as the Council would benefit from 100% of the distributable profit from the entity, and also maximise the interest received on loans to the SPV.
- 6.29.** The assets and debts of the company will remain on the public sector balance sheet, with private sector involvement limited to works and services paid for by the company.
- 6.30.** This option would also allow the Council to sell the SPV to a third party as an exit route in future if the need arises (without the complication of a private partner as in Option 3).
- 6.31.** Also known as the 'Municipal Energy Company' model, this approach is common in the Nordic Countries. In the UK, this approach has been taken by Westminster (Pimlico District Heating Undertaking), Woking (Thamesway) and Aberdeen (Aberdeen Heat and Power), with each operating for over 10 years. Enfield (Lee Valley Heat Network), Sutton and Gateshead Councils have also chosen this approach more recently and are currently in the process of implementing their schemes.

Option 3: Joint Venture (JV)

- 6.32.** In this option the Council would partner with the private sector to form a new joint venture (JV) company. For modelling purposes, a 50:50 JV was assessed in the business case in Appendix 1. Under this scenario the investment in the JV and profits are both split 50:50 between the private sector partner and the Council. The JV would finance, develop, implement and operate the DEN. The private sector partner may be involved in some of these tasks, or the JV would contract with separate private sector companies to perform tasks such as construction and maintenance.
- 6.33.** The JV funding will be primarily debt finance from each of the JV partners. The mix of share capital vs. debt will depend on the funds available from each partner, and the offer that the private sector partner brings to procurement.
- 6.34.** The Council would have the option to borrow from PWLB or another similar source of finance and on-lend to the JV in a state aid compliant manner. Loan repayments including interest would be made by the JV to the lenders. Remaining profits would be distributed as dividends to the JV owners in proportion to their shareholding.
- 6.35.** The JV would sell heat and power to consumers on the DEN and collect revenues.
- 6.36.** This option has the highest Net Present Value return to the Council under the assumptions modelled in the business case. However the option may limit the

Council's ability to determine energy prices and their impact on consumers, given the impact of such decisions on the private partner's profitability.

6.37. The JV partner would be selected following a competitive procurement process. The length of the JV is typically aligned with the economic life of the assets and can for DENs run anywhere between 20 years and 40 years with an option to extend, with some models designed to run for 80 year agreements. This would mean that the partnership relationship would have to be strong enough to deliver this long term arrangement while ensuing key performance targets are achieved.

6.38. The view of Deloitte is that this approach will start to move the company away from some of the wider social and affordable warmth aspirations that had been agreed as an objective for the DEN delivery.

Option 4: Outsource fully to the private sector

6.39. The Council would actively procure a third-party private sector partner, who would be responsible for developing, implementing and operating the DEN. The private sector would provide all investment required, and all aspects including strategic control would be retained by the private sector.

6.40. This option is relatively low financial risk, but with the loss of strategic control, the Council risks that private sector operator may not develop or expand the network in line with the Council's wider regeneration, carbon reduction and affordable warmth ambitions. As with Option 1, the public sector would not have control over the price of heat to residents in North Tottenham and there would be no structure in place for a flexible and expandable local energy supply, and impeding connectivity to future schemes or alternative lower cost energy sources.

6.41. As a perceived low risk option, this option was historically a favoured model for Local Authority led schemes. However the preferred public sector models have now moved to the favoured position as they provide Local Authorities better direct control of delivery of their strategic objectives (such as housing growth, the price of heat to residents and reducing fuel poverty) as well as new revenue funding to the Council.

Option 5: GLA led infrastructure vehicle

6.42. This option is similar to Option 4, the private sector led solution, except it is led by the GLA and the Council would not go through a procurement process to identify an operator and it would not deliver direct financial returns to the Council.

6.43. At the most basic level, the GLA would maintain strategic control, however there may be an opportunity for the Council to enter into a partnership agreement of some form with the GLA to agree wider regeneration, carbon reduction and affordable warmth ambitions and deliver non monetary benefits.

6.44. If this option was delivered at scale across London, this may allow for a step-change in network development and future expansion and connection with networks in neighbouring local authority areas, delivering 'city-scale' networks, mirroring the scale that has been achieved in cities elsewhere in Europe and

North America, and overcoming perceived commercial and institutional barriers to developing heat network infrastructure in London

- 6.45.** At present this model does not yet exist and a business case has not been developed by GLA. If the 100% publicly owned SPV (Option 2) was delivered, this option could easily be explored at a later date with the GLA, without the complication of a private sector partner.

Additional option not modelled in the Business Case

Option 6: Overarching DEN Vehicle

- 6.46.** This option builds on the initial concept set out at Option 2 (100% Council owned SPV) and 3 (Joint Venture). Under this option the Council or a strategic partner e.g. an energy company, could create an overarching strategic partnership through an Overarching Vehicle (“OV”) to develop all DENs in the borough.
- 6.47.** Feasibility studies are currently under way for DENs to support the Council’s ambitions for Wood Green and Tottenham Hale. It is too early to include these DENs in the business case in Appendix 1. However, if feasible, the OV could then take these (or other) DENs forward by way of different delivery mechanisms beneath the overarching level through, for example, project development agreements etc. DENs could be taken forward individually, as each business case is developed, and subject to the approval of the Board and partners.
- 6.48.** A local example is the Lee Valley Heat Network Ltd company established by Enfield Council to bring forward both the ‘strategic’ heat network around Meridian Water, and also smaller ‘satellite’ networks as part of Council led estate regeneration projects, such as Alma Estate.
- 6.49.** The SPV will be designed to enable it to grow and become an OV as and when business cases for the other two DENs are delivered and this business case is made. Keeping this option open will deliver efficiencies if the Council procures the projects at Tottenham Hale and / or at Wood Green.

Analysis of options

- 6.50.** The business case considers the pros and cons of each of the options 1-5 in detail, and carries out a qualitative analysis based on the Council’s objectives and each option. Both Option 2 (100% Council Owned SPV) and Option 3 (JV) scored well and both provide many monetary and non-monetary benefits.
- 6.51.** The monetary evaluation examines the monetary benefits and costs of each shortlisted commercial option to the Council. The basis of evaluation includes Return on Investment (“ROI”), Net Present Value (NPV) and cumulative contribution to budget where applicable. The analysis was carried out on the basis of supplying hot water (heat) to High Road West regeneration, Tottenham Hotspur Football Club and Northumberland Park regeneration and electricity to Spurs. Three development scenarios were modelled, with the Low scenario being

fewer homes and less commercial space developed (resulting in a lower consumer base) and the High scenario being a larger volume of homes and commercial space.

6.53. Potential non-monetary benefits were identified and assessed against each of the identified options, benefits were considered in-line with the Council's objectives and will be tracked throughout the Project to ensure realisation.

Option	Meets Objectives?	Notable Benefits	Notable Downsides/Risks
1 – do nothing	No	<ul style="list-style-type: none"> - Low risk - No upfront costs 	<ul style="list-style-type: none"> - Objectives not met - No impact on energy affordability - No control over strategy - Higher costs of the alternative
2 – 100% SPV	Yes	<ul style="list-style-type: none"> - Council retains control/influence - Maximise cash return potential - Maximise exit gains and flexibility - Maximises building of skills and capabilities 	<ul style="list-style-type: none"> - Council takes 100% of risk - Council provides 100% of funding - Increased reputational, operational, construction risk
3 – 50/50 JV	Yes	<ul style="list-style-type: none"> - Council shares risk including decision risk - Private sector skill base to deliver Project - Council can benefit from learning from private sector partner 	<ul style="list-style-type: none"> - Council shares reward - Council loses partial control - Conflict between affordable tariff pricing and commercial return. - Relies on interest from enough potential private partners to drive a competitive process - Exit options for the Council would be more complicated as the interests of the private partner would need to be considered, as well as third party market appetite to take on part ownership
4 – 100% private sector	Few	<ul style="list-style-type: none"> - Accesses 3rd party private sector expertise; - Transfers risk away from Council 	<ul style="list-style-type: none"> - Lack of Council control/influence - High profit expectations in the private sector - Less ability to meet carbon and heat supply stability objectives

Option	Meets Objectives?	Notable Benefits	Notable Downsides/Risks
5 – GLA led	Some	- It is assumed that the GLA and Council would have aligned views on Project development	- Lack of Council control/influence - Doesn't improve Council skills/capabilities;

Table 2 – Non-monetary Assessment Results

6.54. The analysis demonstrates that Options 2 and 3 are finely balanced, with a decision to be made based on the Council's appetite for control/flexibility, exit options, risk, and reward, as well as in the case of the JV model - finding a suitable partner willing to invest for the forecast returns.

6.55. It is recommended that Option 2 (the 100% Council Owned SPV) is pursued as the preferred option. This is based on the balancing of the benefits and risks set out in the table above, plus the following considerations.

6.56. Compared to other cases where a joint venture approach may be preferred – for example in a property development context such as that sitting behind the creation of the proposed Haringey Development Vehicle – the investment required from the Council in order to secure the benefits of a 100% Council Owned option is on a scale that is manageable in the context of the Council's wider capital programme, and appropriate in light of the risk profile associated with an energy project.

6.57. As set out in the table, in order to successfully pursue the JV option in a way that secures value for money for the Council through a competitive process, it will be essential to attract a number of potential JV partners to this opportunity. However, based on the Council's soft market testing, there are reasons to believe this may be a challenge including:

- a) The rate of return indicated by the modelling would not be attractive to a number of private investors
- b) The uncertainty associated with timing of returns – given the current position with development proposals at High Road West and Northumberland Park – may also be an issue, especially as (unlike the Council) a prospective private partner would have little control over the timing of these developments.
- c) A 50% stake (compared to a larger stake, and correspondingly larger degree of control and greater returns) may be less appealing to potential partners than infrastructure investment opportunities elsewhere where a larger stake is on offer.
- d) The transaction costs, complexity and risk associated with a JV might be offputting, especially given the relatively small scale of the project and the likely rate of return. Even where a potential partner was prepared to bid, they may seek to pass back a significant proportion of risk to the

Council, diluting the benefits of the JV approach while still ceding 50% of financial returns.

6.58. The Council through its direct control of the DEN can influence the low carbon heat source, stabilisation of end user prices and consumer protection. In the current absence of regulation for heat by ofgem (as exists for gas and electricity), this consumer protection exists within the Council.

6.59. Through direct control the Council is also able to see that the investment and revenue spending contributes to local jobs and business opportunities, and support for residents

The preferred option – 100% Council Owned Special Purpose Vehicle

6.60. As a result of the analysis, Option 2 (the 100% Council Owned SPV) is the recommended option. This model provides the best means by which the Council can achieve its strategic objectives and maintain full control of the DEN development and potential future expansion. Alongside these strategic management issues, the financial returns are positive, delivering a high contribution to Council revenue in the long term. This revenue could be maintained by the SPV for re-investment or returned to the Council. It keeps all options open at a later date should the Council seek a new management structure or private investment. This makes Option 2 a compelling route to delivering a successful DEN.

6.61. The rates of return offered through this project are not attractive to the private sector to fully invest and deliver. But there are merits of partial private-sector investment and performance contracts which will be considered further. This includes the possibility of minority stake interest by a private entity this would increase capital funding into the project and incentivise performance. Increased performance can also be secured through performance related contractual arrangements. Therefore to maximise performance with the private sector both these options will be investigated further as the Council designs the SPV, and investigated as part of a soft market testing exercise through the procurement process.

6.62. A company limited by shares ("CLS") is the recommended vehicle for the SPV as it provides the appropriate level of flexibility; governance; Council control; ability to introduce new partners; and exit provisions.

6.63. A schematic of the proposed structure is provided in Figure 2

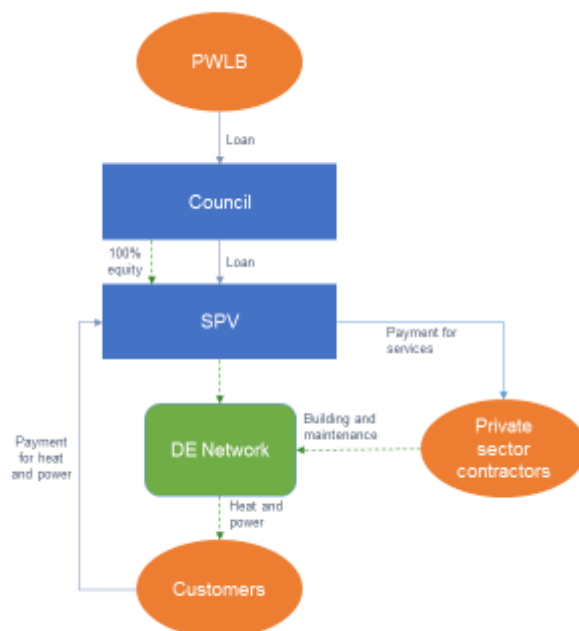


Figure 2 - Option 2: 100% Council Owned Special Purpose Vehicle

6.64. To ensure that the project remains on target with its objectives, there will be a report issued to the Council’s Cabinet in Spring 2022 (the 5 year point). This report will report on the SPV performance against the agreed objectives, ensure that the project is on target with its financial profile, and highlight any issues that have arisen during the delivery of the network. It will also report on the ownership model of the DEN and whether the 100% SPV model is working to maximum effect and commentary on methods of improvement for the SPV.

Procurement and Commercial Development

6.65. The Council would need to procure from the market:

- Design and Build contractor – engagement of contractors to design and construct the DEN infrastructure
- Operation and maintenance contractor/s – For operation, maintenance, monitoring, verification of the network
- Customer services – metering, billing and business development
- Optional: funding partner – potential opportunity for any of the above to help fund the project via a loan facility or minor equity

6.66. The option exists to engage a single contractor by competition to ‘design, build, operate and maintain’ to include the comprehensive services described above.

6.67. The preferred procurement process is to be determined subject to soft market testing outcomes. All procurement will be undertaken with the procurement team and legal advice. As above (in section 6.61), the potential for minority stake equity and/or investment, or performance related contracting arrangements will be investigated as part of a soft market testing exercise.

6.68. It is proposed to cast the scope of the procurement wide enough to include potential future phases (e.g. Tottenham Hale and Wood Green), giving the Council the option to move towards an 'Overarching Vehicle' model (as described above) over time. This will be articulated within the OJEU Notice and provision included within the contractual documentation to enable the Council, at its option, to introduce additional sites/schemes on a non-exclusive basis.

6.69. A Communications plan for the project for internal and external stakeholder groups will be developed with the input of the Council Communications team

7. Contribution to strategic outcomes

7.1. The proposal contributes to achieving the strategic outcomes set out in the Corporate Plan 'Building a Stronger Haringey together'. District Energy ensures we are taking action on our 40:20 commitment to reduce the borough's emissions (Priority 4, Objective 4).

7.2. Alongside delivery of the Corporate Priority, the North Tottenham DEN offers a return on investment to cover public borrowing and a revenue stream for either the SPV or the Council to use.

8. Comments of the Chief Finance Officer and financial implications

8.1 This new project creates an additional financial call on the Council's 10-year capital strategy approved by Full Council in July 2016.

8.2 The financial requirements of the project will be assessed for affordability alongside the Council's core capital programme for 2017/18 and beyond which will be presented to Council in February 2017.

Exempt - This is restricted due to issues of commerciality and impact on future procurement.

9. Comments of the Assistant Director of Corporate Governance and legal implications

9.1. The Assistant Director of Corporate Governance notes the contents of the report.

9.2. The Council's external legal advisors have advised that the Council has sufficiently broad powers to establish a District Energy Network; enter into agreements for the supply of heat and electricity (as long as produced in association with heat); establish a company to trade; borrow funds and on-lend to the company. These powers are explained in more detail in Appendix 11 of the Business Case.

9.3. Legal advice should be sought as appropriate; in particular in the procurement of the contractor(s) referred to in 3(vi) and establishment of the Special Purpose Vehicle and in relation to any potential state aid issues.

10. Equalities and Community Cohesion Comments

10.1. The Council has a public sector equality duty under the Equalities Act (2010) to have due regard to:

- Tackle discrimination and victimisation of persons that share the characteristics protected under S4 of the Act. These include the characteristics of age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex (formerly gender) and sexual orientation;
- Advance equality of opportunity between people who share those protected characteristics and people who do not;
- Foster good relations between people who share those characteristics and people who do not

10.2. Appendix 2 of the accompanying business case for the North Tottenham District Energy Network (DEN) assesses the potential socio-economic benefits of each of the delivery options. It concludes that the preferred 'option 2' for a 100% Council SPV where the Council retains full strategic leverage over the project, has the potential to bring the following benefits for all groups of residents living in and around the North Tottenham area:

- Stabilisation of end user energy prices – the Council's retained influence over the DEN should help ensure that energy prices for groups of residents and business owners occupying buildings connected to the network are kept affordable and reasonable
- Consumer protection – the Council will use its retained influence over the DEN to ensure all groups of residents and business owners connected to the network have adequate protection over the connectivity of their building to energy and heat markets
- Skills and employment opportunities – the Council will use its retained influence to ensure that the DEN capital project and operations supports the creation of local apprenticeship opportunities
- Reinvestment of future revenue generated from the DEN into service and other improvements for local residents and businesses

10.3. Socio-economic impacts and equalities considerations will continue to be monitored and overseen through the SPV company board charged with the governance and delivery vehicle for the DEN. Equalities considerations and compliance with the Equalities Act 2010 will also be built into the procurement exercise for contractors to design, construct, operate and maintain the DEN.

11. Head of Procurement Comments

11.1. It is noted from Para 6.67 that it is intended to carry out soft market consultations to determine the preferred procurement process for the construction and operation /maintenance of the DEN infrastructure as well as the customer services and the option of securing a commercial funding partner.

11.2. Regulation 40 of the Public Contracts Regulations 2015 supports the principles of pre-procurement market consultation by enabling the Council to consult with industry to assist in our procurement preparations and informing industry of our

plans and requirements. This early engagement can help the Council understand the market's current capabilities and interest in the project.

11.3. To avoid prejudicing any future competition, the Council should raise a Prior Information Note (PIN) for any preliminary market consultations. This clearly signals to potential bidders/investors that the Council are making an initial enquiry only. Using other less structured methods will risk creating a perception that there is a definite intent to commit to contract.

11.4. Where the costs are justified, the Council can run Market Interest Days or Industry Days. We must advertise the dates for these days in the PIN, or Contract Notice as appropriate.

11.5. The Council must take care to minimise the risk of any possible conflict of interest due to industry's participation during the pre-procurement definition stage that could later distort competition.

11.6. Central Procurement Unit will allocate a resource to support the project team on the proposed pre-procurement market consultation and implementation of the procurement process.

12. Local Government (Access to Information) Act 1985

The North Tottenham District Energy Network was first proposed to the Council in 2008, as part of the Greater London Authority's promotion of low carbon and locally generated energy. The Council signed up to deliver and develop a network at North Tottenham in line with the London Plan. The first part of the network was secured in the 2010 planning permission for the redevelopment of the Tottenham Hotspurs site. The proposal at this time was for the stadium site to house an energy centre serving heat to local schools.

Since then the regeneration of North Tottenham have developed further and wider, and the opportunities to deliver a larger energy network has been identified. This larger network would be able to offer greater carbon savings and increased local energy supply. The policy basis for this growing the North Tottenham network has been set out through policy documents listed below. And the Council in partnership with the Greater London Authority and the Department of Energy and Climate Change the Council has developed a business case which captures the opportunities and enables the regeneration of north Tottenham to deliver carbon reduction and a business opportunity for investment.

Key papers to support the Council Position:

London Heat Map

This work lead by the Greater London Authority sets out the business case for the strategic ambition of Decentralised Energy Networks across the capital. It frames this deliver alongside policy requirements and technical guidance to ensure delivery.

Haringey Decentralised Energy Master Plan (2015)

This study identifies a number of key areas of high heat densities and development focus, and envisages that in the long term, Decentralised Energy Networks could emerge. This identifies that the regeneration of North Tottenham is a suitable location for a Decentralised Energy Network.

Haringey Strategic Planning Policies (2013-2026)

This builds on the above documents and delivers the planning policy requirements to deliver and grow District Energy Networks in key regeneration areas in the borough.

Tottenham Physical Development Framework: High Road West (2016) This sets out the case for the delivery of a North Tottenham District Energy Network and for the energy centre to be delivered as part of the redevelopment of High Road West in North Tottenham

13. Appendices

Appendix 1 – Business Case

Appendix 2 – Business Case (attached to the exempt report)