GREATER**LONDON**AUTHORITY

[redacted]
(By email)

Our Ref: MGLA280721-9443

5 October 2021

Dear [redacted]

Thank you for your request for information which the Greater London Authority (GLA) received on 28 July 2021. Your request has been dealt with under the Environmental Information Regulations.

You asked for:

> *Can the GLA supply documents that relate to Sutton Councils application for grant money and financial assistance from the Decentralised Energy Enabling Project (DEEP) for SDEN. Suttons decentralised energy network. Can the GLA please provide copies of documents supplied under categories 1-10 in the table below? Can the GLA also say how much money Sutton council received from the GLA/ EU DEEP funds as a result of submitting applications for funding and grants?*
>
> 1. *Tender brief*
> 2. *Letters of invitation to tender (i.e. notifying potential bidders on the sub- lot).*
> 3. *Record of tenders received*
> 4. *Copies of tenders received*
> 5. *Signed scoring/summary sheets*
> 6. *Copy of the tender report*
> 7. *Copies of the award/unsuccessful letter(s)*
> 8. *Copy of the signed contact*
> 9. *Decision to award contract*
> 10. *Signed conflict of interest declaration form*
> 11. *The advert*

Our response to your request is as follows:

Please find attached the documents for 1-10 for all four projects which have been funded by DEEP. However, the Signed Conflict of Interest form is not included for the Aecom Energy Master Plan and SDEN PM projects (A & B below), as we do not have a copy of these documents. You will need to contact the London Borough of Sutton for these documents.

A summary of the funding DEEP has provided for the SDEN project is as below. Note that Sutton Council has not received any funds directly, as the GLA paid the suppliers directly (this is how payments from the DEEP project were made).

Project I.D.	Project Name	Supplier	Contract Value
A	Town Centre - Energy Master Plan (including all options for low carbon energy not just SDEN)	Aecom	£ 74,886.75
B	SDEN PM (Sutton District Energy Network Project Manager)	WEC	£ 124,800.00
C	SDEN PM & Commercialisation	WEC	£ 96,792.00
D	Town Centre Extension SDEN	Aecom	£ 72,630.00
		Total	**£ 369,108.75**

Please note that some of the content falls under the exception to disclose in Regulation 12 (5)(e) (confidentiality of commercial or industrial information) of the EIR.

Applying the four-stage test from *Bristol City Council v Information Commissioner and Portland and Brunswick Squares Association (EA/2010/0012, 24 May 2010):*

- The information is commercial or industrial in nature.

The redacted information includes:

  - Business methodologies (4 – Tenders)
  - Pricing / Resource schedules (4 – Tenders)
  - Commercial scores (5 - Scoring / Summary sheets and 7 - Unsuccessful letters)

The information can therefore be considered as commercial or industrial in nature.

- Confidentiality is provided by law.

The information is covered by the common law obligation of confidentiality, the information is not trivial in nature, nor is it in the public domain. The bids were submitted on the expectation and understanding that they would be held in confidence for the purpose of procurement activity in relation to the Decentralised Energy Enabling Project (DEEP) for SDEN

The redacted Information is therefore to be protected by confidentiality provided by law.

- The confidentiality is protecting a legitimate economic interest.

The confidentiality is protecting the legitimate economic interests in each of the following categories;

  - Business methodologies (4 – Tenders)
  - Pricing / Resource schedules (4 – Tenders)

The above information constitutes a business secret. The information is not generally known among, or readily accessible to, people within the circles that normally deal with that kind of information and has a commercial value, because it is secret. Disclosure would be likely to cause real (or significant) harm to the owner or be advantageous to any rivals.

- Commercial scores (5 - Scoring / Summary sheets and 7 - Unsuccessful letters)

The commercial scores could indicate pricing and therefore fall under the scope of business secret.

- The confidentiality would be adversely affected by disclosure.

Disclosure of the information would inevitably harm the confidential nature of it and therefore the exemption at Regulation 12(5)(e) is engaged in respect of disclosure of the redacted information.

- Public interest

Regulation 12(5)(e) constitutes a qualified exemption from our duty to disclose information under the EIR, and consideration must be given as to whether the public interest favouring disclosure of the information covered by this exemption outweighs the public interest considerations favouring maintaining the exemption and withholding the information.

The GLA acknowledges that there is a public interest in the activities being undertaken with regards to procurement activity and interest in the transparency of the GLA's achievement in delivering Mayoral commitments. However, it is not in the public interest to prejudice the commercial and negotiating position of the appointed contractors and unsuccessful bidders in future procurement related activity.

We therefore find that the public interest is therefore balanced in favour of non-disclosure of the redacted information because of the harm its release would cause.

- Regulation 13

Please note that the names of members of staff and the biographies and CV's contained within the bids are exempt from disclosure under Regulation 13 (Personal information) of the EIR. Information that identifies specific employees constitutes as personal data which is defined by Article 4(1) of the General Data Protection Regulation (GDPR) to mean any information relating to an identified or identifiable living individual. It is considered that disclosure of this information would contravene the first data protection principle under Article 5(1) of GDPR which states that Personal data must be processed lawfully, fairly and in a transparent manner in relation to the data subject

If you have any further questions relating to this matter, please contact me, quoting the reference MGLA280721-9443.

Yours sincerely

[redacted]
Information Governance Officer

If you are unhappy with the way the GLA has handled your request, you may complain using the GLA's FOI complaints and internal review procedure, available at: Freedom of information | London City Hall

Sutton Town Centre and London Cancer Hub Energy Masterplan Outline Specification

1.0 Summary

The London Borough of Sutton supported by the Greater London Authority (GLA)'s Decentralised Energy Enabling Project (DEEP) – 50% funded by the European Regional Development Fund (ERDF) - are inviting tenders for the production of an Energy Masterplan for Sutton Town Centre (STC) and the London Cancer Hub (LCH) site.

1. The Energy Masterplan will identify key opportunities for affordable, decentralised and low carbon energy supply for each sites, including:
    a. Investigate the potential for developing district heat networks to serve new and existing developments within the town centre and LCH and
    b. Update/create heat-maps for both sites
2. Develop high-level technical plans and economic assessments to that identify an optimal way that building energy demand could be reduced, and energy be supplied in the town centre and LCH in order to maximise opportunities for reducing energy costs, reducing CO2 emissions, improving local energy resilience and grow the local green economy
3. Develop high level strategy and implementation plan which brings together technical and financial viability through detailed consultation with London Borough of Sutton.

2.0 Background

Requirements of Energy Masterplan

The London Plan (policies 5.5, 5,6) and the Mayor's Climate Change Mitigation and Energy Strategy place a requirement on boroughs and the GLA to work together to facilitate the delivery of the Mayor's target for 25% of London's energy to be supplied from decentralised energy by 2025. Policy 5.5 especially encourages the preparation of an energy master plan where an Opportunity Area Action Plan or Area Action Plan or Site Allocations element of a Local Plan are being prepared.

The Council requires a consultant to develop an Energy Masterplan for the Sutton Town Centre (STC) and the London Cancer Hub (LCH) sites.

The Town Centre

The Sutton Town Centre Masterplan, approved by the council June 2016, outlines a new vision for the future of Sutton town centre, setting the direction for investment and development for the next 15 years. The Masterplan includes a wide array of recommendations and projects including new developments, public realm improvements and transport proposals, all set within the context of several strategic projects.

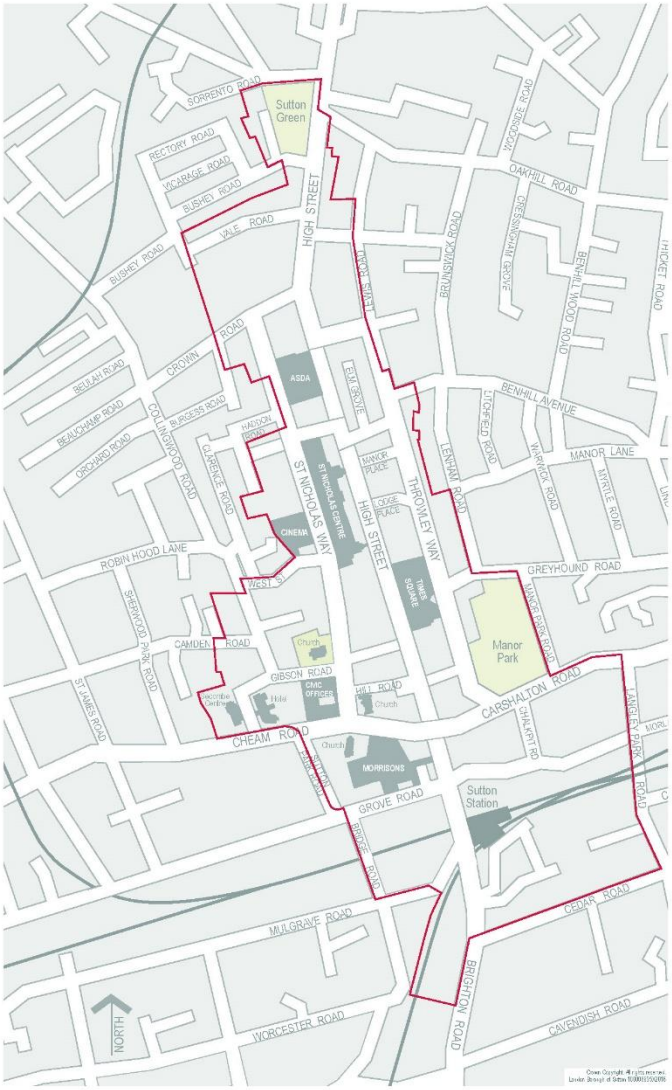
The delivery strategy for the Masterplan recognises the importance of working in open partnership with local organisations and institutions from elsewhere to assist the creation of fresh ideas and ensure sustainable growth. The Masterplan also recognises the council's strategic place-making role, and influential position given its significant land ownership within the town centre.

In addition to commissioning the Masterplan, £1.2 million has been allocated to its delivery for the next two years to produce planning and development briefs, obtain legal advice for site development, enable joint ventures with private sector partners, marketing and

promotion and to secure two dedicated Masterplan delivery fixed-term posts. This proactive investment in the town centre by the council sends a clear message to developers, investors and our partners that the council is committed to delivering positive change within Sutton town centre.

The economic regeneration arm of Sutton Council, Opportunity Sutton, has already secured grant funding to deliver a range of improvements to Sutton town centre. This includes £690,000 from the New Homes Bonus to improve the North Sutton Gateway area and £1.8 million from TfL to improve the Sutton Station Gateway area. In addition, Sutton has recently become the only London borough and 1 of 8 locations nationally to receive Historic Action Zone (HAZ) funding from Historic England for Sutton town centre's conservation area.

A map of the area covered by the STC Masterplan is provided below.



The Masterplan includes a commitment to producing a comprehensive energy strategy for the town centre,

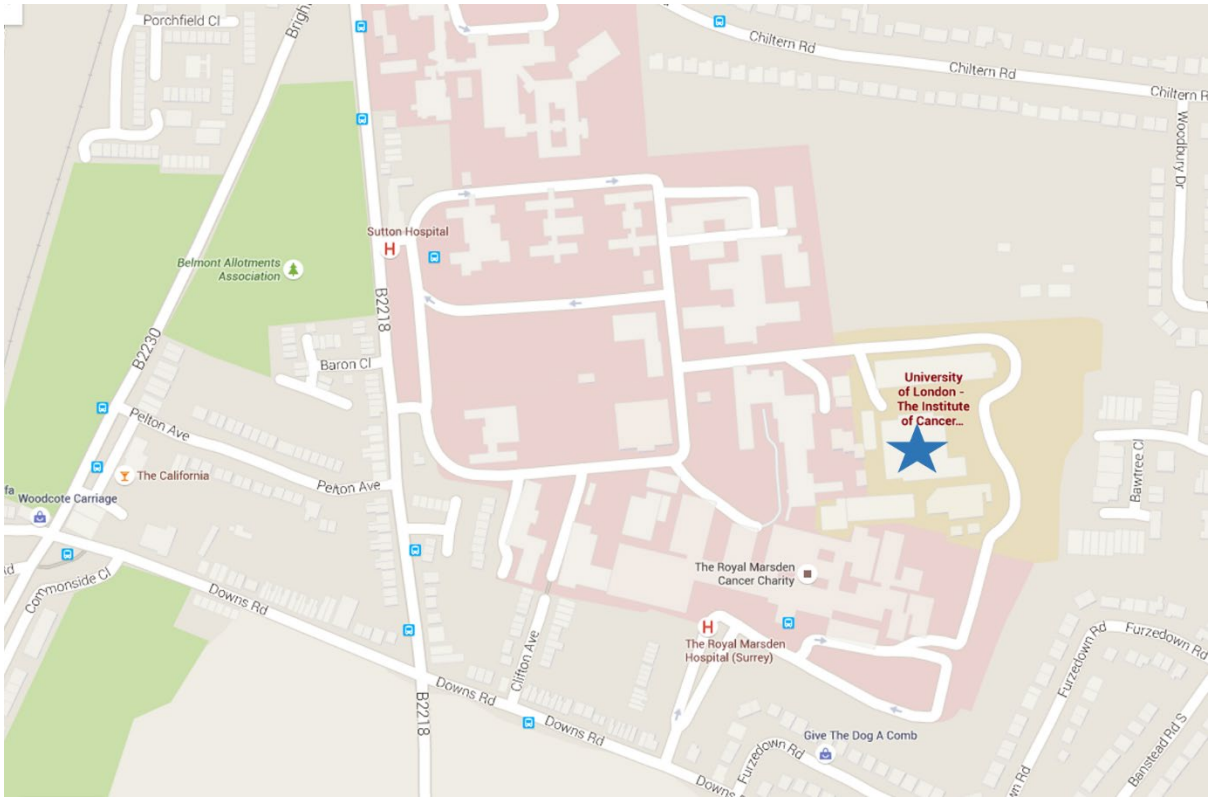
The London Cancer Hub

The London Cancer Hub is a partnership between the London Borough of Sutton and The Institute of Cancer Research, London, with the support of The Royal Marsden NHS Foundation Trust and the Greater London Authority.

Through the creation of the London Cancer Hub, London has the unique opportunity to be

the world’s leading centre for cancer research, treatment and drug development. Set to deliver a 40 per cent increase in cancer drug discovery, this development has the potential to deliver benefits on a global scale.

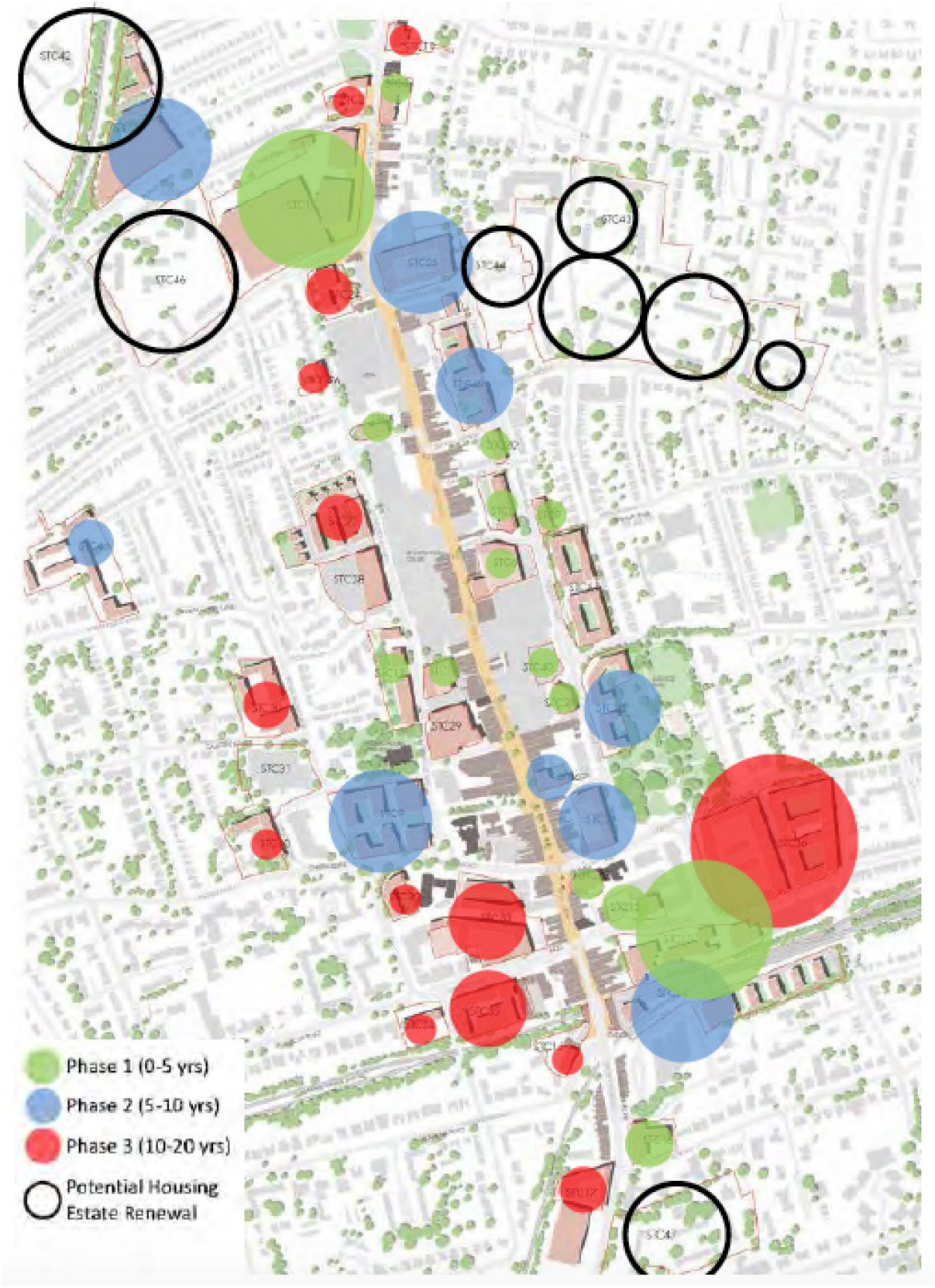
The London Cancer Hub will be a community of scientists, doctors, innovative companies and patients, anchored by new research buildings, hospital facilities, restaurants and hotels. It will create 13,000 jobs and contribute £1.2bn to the UK economy per annum.



Energy Masterplanning Work to Date

As part of the preparation of the Masterplan, in June 2016, the GLA undertook a preliminary assessment of heat demand and possible phasing at each of the key redevelopment sites identified in Sutton town centre.

The Energy Heat Map shown below identifies the heat demand associated with each of the opportunity sites in MWh/year. The larger the circle the higher the level of heat demand. The map also shows the possible phasing of developments coming on stream. The updated heat map and phasing of delivery identifies that there will be a continuous supply of potential new connections over the 15 year time frame however significant loads are anticipated to come on-line by 2026.



The original borough heat mapping conducted in 2011 identified several key areas of Sutton with the potential to deliver district heat networks including Hackbridge, Sutton town centre and St Helier. The council is already developing plans for a district energy network in

Hackbridge, and now aims to explore the town centre site in more detail (alongside a new masterplan for the London Cancer Hub).

Since 2011 and in line with Sutton's planning policies there have been a number of significant planning permissions for major redevelopment at both north and south ends of the High Street which have required the introduction of site-wide heat networks served by CHP systems and/or gas boilers.

These have been 'future-proofed' to enable connection to any future district heat network serving the town centre by providing sufficient capacity within the energy centre to support such a connection and to accommodate an eventual switch to the use of heat exchangers.

There is now a need to update the initial heat mapping work conducted for Sutton town centre to take account of a number of major developments which have been granted planning permission within the town centre since 2011 and future strategic development sites identified in the emerging Local Plan. The Energy Masterplan will build upon this initial heat mapping work.

Policy Context

National planning policy requires local authorities to adopt proactive strategies and plan for new development in ways which reduce emissions and address fuel poverty by identifying opportunities where new and existing buildings can draw their energy supply from DE sources and for co-locating potential heat customers and suppliers.

The Mayor's Climate Change Mitigation and Energy Strategy sets targets to achieve a 60% reduction in London's CO_2 emissions and ensure that 25% of London's energy is delivered through DE by 2025. The new Mayor has pledged London to be a zero carbon city by 2050 and is rewriting the London Plan and Environment Strategy. The current London Plan requires all developments to minimise emissions in line with the Mayor's energy hierarchy (1) Be lean: use less energy (2) Be clean: supply energy efficiently, and (3) Be green: use renewable energy. In applying step 2 of the hierarchy, Boroughs are encouraged to identify opportunities for new district heating networks and prioritise connection to existing or planned networks where feasible. London Plan Policy 5.2 sets a target for all major residential developments to achieve at least at 35% reduction in on-site CO_2 emissions compared to the current Building Regulations with the remaining regulated emissions, to 100%, to be off-set by developer contributions to fund the delivery of equivalent CO_2 savings elsewhere.

In line with Sutton's One Planet Vision, the Council is committed to minimising CO_2 emissions throughout the Borough by promoting the highest standards of energy efficient design, on-site renewable energy and district heat networks powered by low or zero carbon energy sources. A corporate target has been set to reduce CO_2 emissions across the borough by 20% by 2017.

Accordingly, Sutton's Core Planning Strategy (2009) seeks to "maximise opportunities for new district-wide networks supplied by DE in partnership with key stakeholders" and supports the sustainable regeneration and growth of Sutton Town Centre as a low carbon zone. Where such opportunities have been demonstrated, Sutton's Site Development Policies DPD (2012) requires proposed developments to be designed to connect to and, where appropriate, contribute towards existing or future DE networks, supplied by low or zero carbon energy.

3.0 Aims

The purpose of this study is to develop a location specific, strategy for developing decentralised energy (DE) in the two sub-areas. This study will be a key evidence base document that will inform development of planning polices and project plans in the area, and appraise future proofing and potential interconnection to a wider scheme when this is in place, its spare supply capacity, etc.

The study will use techno-economic modelling to determine the extent of a DE system that has the potential to supply market competitive, low carbon energy to new developments and existing properties in each sub-area.

As a minimum the study should establish:

- Heat demand mapping and assessment for both existing and new build with possibility of connection to District Heating (DH) networks (including but not limited to council owned communally heated housing estates, public buildings, private new developments, leisure centres, educational facilities, etc). The assessment must include current and future (i.e. next 25 years or according to phased development plan) load profiling, energy supply and demand balance
- an overarching DH network connecting to and utilising existing and future low to zero carbon energy sources supplying the identified energy loads, including:
    - preferred and alternative locations for energy centres and requirements, including its plant, location(s), approximate size and phasing, any flue requirements, any need for heat storage;
    - network pipe routes (mapped on GIS) and size, taking into account relevant barriers and constraints, for the purposes of safe-guarding and future-proofing their later installation where other works take place in the meantime e.g. road improvements, public realm works, etc;
- the environmental benefits in terms of carbon dioxide savings compared with 'business as usual'[1];
- a techno-economic model, including capital and operating costs and revenues for the various phases, carbon savings and financial analysis (i.e. via IRR, NPV, PBP, etc) in order to appraise technical and financial viability of the proposed DE scheme over its whole life cycle[2];
- an incremental DE delivery plan based on consecutive construction phases, clearly identifying where the scheme should be 'kick-started' and how, including scheme-specific business model/commercial structures options identification and evaluation, whether temporary Energy Centres should be considered and taking into account the energy loads development etc;
- Implications for planning policy and guidance, including sites to be allocated for energy centres, pipe routes to be safeguarded, guidance on system design and use of temporary boilers, and a calculation of the contribution from developments that would be used to invest in the heat network in the form of connection charges, realised through the heat supply agreements.
- Calculation of KPIs towards the targets set by the GLA's Decentralised Energy Enabling Programme (DEEP), specifically with regards CO2 savings and renewable energy installed capacity
- Production of data and layers in the relevant format for upload onto the London Heat Map

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[1] BAU is represented by heat from gas boiler at a certain efficiency (i.e. 86%) and electricity imported from the grid only for existing buildings or buildings not subject to regulations such as requirement for CHP installations, etc. In other cases BAU corresponds to what is indicated in energy strategies, i.e. part of the heat and electricity is supplied from CHP in new residential blocks over a certain number of units, etc.

[2] To include lifetime replacement and decommissioning costs where applicable.

Key challenges for the study to address include:

- Site for the energy centre or centres - These will have to be delivered as part of a private development, therefore considerations of delivery mechanisms and the impact on development viability will be critical.
- Fragmented land ownership - There is a need to catalyse collaboration between developers/site owners to deliver the network, including by clearly demonstrating:
    - i) the benefits of a decentralised network to landowners/developers (e.g. in terms of avoided costs of plant/equipment investment, space savings, carbon savings) relative to each land owner/developer installing their own stand alone systems; and
    - ii) how the cost/opportunity cost impact of the land take required for the energy centre and centres can be shared or mitigated.

The study should develop a discrete and well defined project with an indicative delivery plan and a economic model. It should be undertaken in the context of relevant national, regional and local policy advice and regulation; and should allow for amendments according to changes in the regulatory framework as well as the use of new technologies as they become available. The strategy shall meet all objectives and sub-objectives within section 2 of the CIBSE/ADE Heat Networks Code of Practice (http://www.cibse.org/Knowledge/knowledge-items/detail?id=a0q200000090MYHAA2) relevant to this stage of work.
Information on preferred energy centre locations and network routes will be important in informing policy and site allocations in the area, as well as delivery planning (e.g. coordination of installation of network pipes with installation of new roads).
The study should establish any role for Heat Network Investment Project (HNIP) capital funding[3], to help deliver the network.

The Energy Masterplan will be used to achieve the following outcomes:

- Support the Council's One Planet Vision and growth agenda by providing a roadmap for reducing and meeting the predicted energy needs within Sutton Town Centre and the LCH through the use of cost effective, low carbon energy supplies in a way which contributes to the creation of a resilient and economically successful town centre;
- Provide an evidence base in support of the Council's emerging Local Plan policies on promoting the development of a district heating (and cooling) network in Sutton Town Centre and LCH together with other sources of renewable and low carbon energy sufficient to ensure that the Local Plan is deemed 'sound' at Examination in Public (scheduled for late 2017);
- Provide planning policy advice to inform the emerging Local Plan and set out detailed technical guidance for prospective developers to ensure that all major developments with Sutton Town Centre, LCH (and other decentralised energy Opportunity Areas) are equipped to connect to and contribute towards planned district heat networks in line with the Mayor's Energy hierarchy;
- Enable new developments to meet the CO_2 reduction targets in the London Plan (the Mayor's 'zero carbon' target for major residential developments is introduced in October 2016);
- Provide overarching strategic guidance and evidence for the council to enable clear pathway for implementing other forms of decentralised energy within existing and planned development.

[3] Department for Business, Energy and Industrial Strategy (BEIS) recently launched the pilot for the Heat Network Investment Project (HNIP), the first year of the £320 million scheme that will provide capital investment funding for district heating networks through 2021.

To ensure the recommendations of the study are taken forward it will be essential to embed recommendations within other strategic policy documents e.g. a new Supplementary Planning Document (SPD) or technical guidance.

Key information sources will include:

- The Sutton Town Centre Preliminary heat demand assessment
- information on existing and planned development in each area, including the quantum and mix of uses in different locations
- appropriate benchmark data[4] (for Building Regulation compliant development, taking into account anticipated future changes in requirements over the plan period)
- GLA's London Heat Network Manual (https://www.london.gov.uk/sites/default/files/london_heat_map_manual_2014.pdf)

4.0 Outline Scope of Study

The project should be considered according to the following breakdown:

- energy production
- energy demand,
- energy sale,
- energy distribution,
- carbon dioxide reduction and renewable energy generating capacity calculations,
- economic appraisal
- Planning policy
- outline project plan and risks register

Energy production

- Identify any low to zero carbon energy sources (including heat, cooling and power) that could be utilised over the next 40 years, including heat pumps, solar thermal, energy storage, smart energy networks and low temperature sources
- Identify the energy supply characteristics, capacities and phasing opportunities for the above identified energy sources.
- Identify energy centre requirements (both temporary and permanent), including plant, location(s), approximate size and phasing and any flue requirements
- Locations of energy centres (both temporary and permanent) will be informed by consideration of the phasing of developments and connection of heat loads, as well as landownership, viability and planning policy.
- Allow for at least one meeting with stakeholders (including landowners/developers in the area) to generate buy-in and agreement to preferred location/s for temporary and/or permanent energy centres.
- Provide as minimum the following details for each energy supply:
  a. Assess energy potential and supply strategy for each available resource
  b. Identify current technologies available to supply energy and confirm relevant performance parameters.
  c. Determine the heat supply arrangements and confirm relevant performance parameters. This should include low temperature heat supply alternatives
  d. (MW) and production (MWh/annum), including any phased supply

[4] See Section 2 of the CIBSE/ADE *Heat Networks Code of Practice.*

e. Determine the Energy Centre(s) size, installed capacity, indicative assets and location
f. Assess the role of heat storage where appropriate
g. Determine the carbon dioxide emission reduction potential compared with 'business as usual'
h. Estimate capital and operating costs
i. Produce the following preliminary drawings: plant lay-outs and elevations, flow single line diagrams
j. Determine the most probable date when the energy would be available for export

- Consultants should also provide their opinion on how 'proven' the proposed technologies are and the likelihood of their securing finance.
- Utilities infrastructure including gas and electrical grid import/export connections will need to be assessed for compatibility with energy centre(s) connection requirements and to determine the technical and cost implications in relation to the scheme. The consultant will be responsible for all necessary discussions, meetings and applications with the relevant utility providers. This should include initial discussions and applications to utilities providers to inform initial capacity options and potential upgrade requirements and costs.
- Investigate options for supplying energy from secondary sources (e.g. waste heat recovery, etc) shall be included.
- Analyse the potential for the incorporation of Solar PV into the Town Centre Scheme and LCH utilising roof spaces on the basis of displacing grid import to the relevant buildings. Such analysis to include a plan of potential roofs and the total potential capacity by roof/site.
- Analyse the potential for STC Tram extension to be powered by renewable energy sources

Energy demand

- Use the latest growth trajectory and site allocations data (provided by the Council) to identify all existing and predicted energy consumers, consumption and profiling, i.e. peak demand, half hourly/hourly demand, annual demand and annual profile for: heat; where relevant for business as usual or scenario analysis, electricity. This should be coupled with realistic sensitivity analysis.
- Prepare a GIS-based **Heat Demand Map** showing heat demand and heat supply layers for existing priority buildings and future planned developments in Sutton Town Centre and LCH;
- Prepare a GIS-based **Energy Supply Map** showing existing, planned and potential sources of heat and power, including renewable energy technologies and any site-wide or communal DE systems served by CHP or gas boilers;
- Liaise with the GLA GIS team in order to provide all heat demand and supply data in the correct format to the GLA, for subsequent uploading on the **London Heat Map**.

- Determine consumers' motivations, commercial drivers (e.g. reduced building costs to meet carbon targets, increased lettable/saleable space, Climate Change Levy exemption) and possible costs to connect to a DE scheme as well as the avoided costs of investing in their own plant and equipment

- For existing sites (where applicable), outline the relevant retrofitting measures for space heating and domestic hot water to enable connection to the network and detail the technical requirements, costs, cost allocation (e.g. DE network operator, connected site, resident/end use customer), and possible funding sources, for each

site, demonstrating the social, environmental and economic case for connection . Gather data regarding the expected asset replacement plan to inform the phasing of connection.

Energy sales

- Investigate the options and economic case to maximise electricity revenue, such as sales to local retail customers via the local electricity distribution network (or other arrangements) based on 'Licence Lite' compared with power purchase arrangements or selling power wholesale / export to the grid.
- Make recommendations about the cost effectiveness, security of supply, logistics and licensing arrangements.
- These considerations should be set out for each of the potential customer types across the project.
- Liaise with the GLA [redacted]@london.gov.uk) in regard to licensing arrangement for local energy generation companies.
- Determine market price for heat supplied to consumers.

Energy distribution

- Determine how energy centres/sources will be connected to consumers across each LDS area.
- Appraise the options for phased energy network delivery given that temporary Energy Centres may need to be constructed to meet developer's immediate requirements in the absence of energy networks.
- Highlight the interim measures required to avoid investment in site-specific Energy Centres which would delay those schemes connecting into a future energy network.
- According to a phased development plan, identify the infrastructure required (heat networks, thermal storage, connection to the electricity national transmission/local distribution system) to connect consumers with the energy sources identified. Electricity should be considered under 'Licence Lite'.

Tasks include but are not limited to:

a. Confirm the feasibility, capacity (MW), design parameters (pressure, temperatures, materials, etc.) and size (mm) of the relevant pieces of infrastructure based on detailed network analysis (including hydraulic modelling) to optimise the heating and cooling system design and to inform cost assessment
b. Identify route layout options for the DE network (including pipe work, dimensioning and future potential connections) and any associated private wire power systems
c. Engage with any relevant parties to clarify potential, constraints (e.g. information of the utilities above and beneath ground)and requirements for pipe work through their land
d. Make recommendations to the Council on enabling actions required (eg. allocation of land for heat network pumping and thermal storage facilities, provision of information on utilities and services, save-guarding district heating routes etc)
e. Estimate capital and operating costs for maintenance and energy supply
f. Drawings: distribution network and points of connection

Based on the work detailed above, design the optimum heat supply system and detail the preferred outline scheme design. This shall include the proposed layouts and schematics for the Energy Centre(s) and technical details of the proposed plant including:

- Energy supply configuration and optimal sizing for all plant (gas CHP, standby/peaking boiler, thermal store, secondary/low carbon sources)
- Energy distribution network (for heat, power, and cooling if applicable), including
    - Pipe work – diameter, network route, calculation of the total pipe length,
- Network phasing and connection strategy, and account for these implications on the energy centre and network design and plant
- The annual energy supply profile including max (peak) and min load (MW) and production (MWh/annum), for kick start (or first stage) network and phased supply

Outline how the energy centre and network could be future proofed to deliver a zero carbon solution.

Carbon calculation

- For the various options, determine the environmental benefits in terms of carbon dioxide savings compared with 'business as usual'.
- Clarify the cost and carbon value to developers of the availability of a DE network enabling them to meet their carbon reduction targets, reduced building costs, reduced whole life costs and increased lettable/saleable space. Provide an assessment of the value based on Part L 2013 and the GLA's 'zero carbon homes' requirements.
- Relate these savings to London Plan carbon reduction targets and determine the contribution to said targets.
- Calculation of CO2 savings and renewable energy installed capacity in accordance with GLA's DEEP protocols

Financial appraisal

Conduct a financial appraisal for the project and its elements to help optimise the recommended approach including:

- Capex (including planned asset replacement within the project life cycle)
- Opex (not indexed)
- Fuel costs (not indexed)
- Energy sales income when relevant (not indexed)
- Pay-back-period, IRR and NPV calculation (25 and 40 years, and a range of discount rates)
- Sensitivity analysis
- Explore finance options and how they apply to existing and potential delivery solutions in Sutton eg Sutton's ESCo

The cost-accuracy (+/- %) and contingency must be clearly stated.

Planning Policy

- Assess planning policy options and CO_2 reduction targets (in line with national, regional and local policies and targets)for Sutton Town Centre and London Cancer Hub in order to determine whether the Council's emerging Local Plan targets are deliverable and consistent with a 'sound' development plan (i.e. Local Plan evidence base);
- Provide updated planning guidelines for possible inclusion in a future SPD

Project plan and risks

- Provide a project plan for both sites, which bring together technical and financial viability and implementation options into recommended actions, identifying likely start dates and durations for each project element, cost and financing mechanism
- Workshop commercial options with LBS staff and propose a preferred commercial model for delivering the implementation plan
- Identify key project risks in the delivery of the proposed DE scheme, suggested mitigation measures and action holders. Project risks shall be ranked in order of importance and potential impact.
- Undertake a preliminary emissions review to address planning risk associated with London's air quality issues. The review will identify key air quality considerations that will need to be addressed in subsequent detailed project development. The successful bidder will need to work with the Council / GLA Air Quality Officers.
- Provide a full report and presentation detailing the outcome of the study, and provide a workshop to relevant staff on the findings of the study prior to submission of the final report
- All data in a form compatible with the Council's and the GLA's IT software.

INVITATION TO TENDER

(ITT) For

REF: GLA 80814 – TASK 3

London Borough of Sutton Energy Strategy

European Union
European Regional
Development Fund

Thursday 19 October 2017 11:00am

Mini-Competition Request Form

Framework Agreement Name and Reference Number: **GLA 80814 – Decentralised Energy Framework**

Subcategory: 1.4 FEASIBILITY STUDIES FOR PROJECTS

Mini-competition Reference: **GLA 80814 - Task 3 - London Borough of Sutton Decentralised Energy Network – Feasibility Study** [redacted]

Date: 19 October 2017

This is a Request Form for the provision of Services in accordance with the Agreement referenced above. This is an enquiry document only, constituting an invitation to treat and it does not constitute an offer capable of acceptance. Your Proposal must be submitted as an offer capable of acceptance by the Authority; however such acceptance will not occur unless and until the Authority posts notice of acceptance to you.

Attachment 1 of this Request Form sets out the Services required by the Authority, the commercial model to be used and other relevant information.

In your Proposal, you must respond to the information requested in Attachment 1 by completing Attachment 2.

Attached to this Request Form is a draft Call-Off Contract. The Authority is under no obligation to award any Call-Off Contract as a result of this Request Form.

Your Proposal will be assessed against those submitted by other service providers as part of a Mini- Competition process. The Authority will award the relevant Call-Off Contract to the Service Provider with the Proposal that is the most economically advantageous with reference to the assessment criteria set out in Attachment 1.

Any clarifications regarding this Mini-Competition should be directed per the instructions in this ITT.

This procurement is being managed by **London Borough of Sutton (LBS)**. The process is being carried out electronically via the LBS's eTendering portal: Pro-Contract from ProActis Link: https://procontract.due-north.com

From: London Borough of Sutton (LBS)
Name: [redacted], Sutton Town Centre Masterplan

Sutton

1. INSTRUCTIONS TO CONSULTANTS

1.1 Please read the following instructions carefully before submitting a tender.

1.2 A submission in response to this invitation shall be referred to hereafter as the "Tender" and the organisation making such as submission shall be referred to as the "Consultant".

1.3 All references to "Schedules" in this document refer to Schedules within this document.

1.4 Consultants are asked to confirm their intention to bid by 26 October 2017

1.5 Consultants are required to submit a separate Technical Proposal and a separate Commercial Proposal.

1.6 The technical submission should be no longer than 25 A4 pages (Single Sided) with the font size comparable to Arial 12 points (excluding synopsis and CVs – no more than two pages per CV). must include the following as a minimum:

1.7 The Tender Submission must comprise of 1. **'Technical Proposal' 2. 'Commercial Proposal'** as follows::

1) **Technical Proposal** (response to the Technical Proposal T1, T2, T3, T4 and T5 addressing Attachment 1)
2) **Commercial Proposal**

Please note:
The Technical Proposal and the Commercial Proposal must be separate documents. **Prices must not be included in the Technical Proposal**. The documents must be clearly titled **'Technical Proposal**' and **'Commercial Proposal'**. Submissions must be (**Technical Proposal** in Microsoft Office applications or Adobe Portable Document Format **(pdf)** documents) and (**Commercial Proposal** in Microsoft Office applications or Adobe Portable Document Format **(pdf)** documents).

1.8 Consultants are welcome to partner with other organisations if they feel that they can provide the expertise required to complete the project. Full details of how the partnership would work (governance etc.) should be provided in the Tender Submission.

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1.9 LBS will not pay any costs associated with producing a Tender or incurred in any subsequent discussions or clarifications, regardless of whether that Tender is successful or not.

1.10 Tender returns must have all pages numbered and returns must be submitted in English.

1.11 All communications will be sent via the portal to the main contact who registered on the LBS's eTendering portal: https://procontract.due-north.com

1.12 Consultants that require additional online help to use the eTendering portal must contact the portal's Supplier Help Desk which is available by email to: ProContractSuppliers@ProActis.com as soon as possible.

1.7 LBS reserves the right to award the Call-Off Contract for which tenders are being invited in whole, in part, or not at all.

1.8 LBS reserves the right not to award this Call-Off Contract to the lowest or any Tenderer and LBS will have no liability (contractual, tortious or otherwise) for failure to consider any tender. Following receipt of tender documents, LBS reserves the right to arrive at a shortlist of prospective organisations without any reference to, or communication with any of the Consultants.

1.9 The Call – Off Contract will be awarded post evaluation to the most economically advantageous tender (MEAT) submitted, using the specified evaluation criteria.

1.10 This tender shall remain open for the acceptance by LBS (or its nominee) and will not be withdrawn by us for a period of three calendar months from the date fixed for return.

2. CLARIFICATION QUESTIONS

2.1 Any technical questions or requests for clarification regarding this ITT should be submitted via the LBS e Tendering portal https://procontract.due-north.com . If LBS considers any question or request for clarification to be of material significance, both the question and the response will be communicated, in a suitably anonymous form to all Consultants who have responded. The deadline for any clarification questions is Wednesday **8 November 2017.**

2.2 Please **do not** contact LBS staff directly as it is imperative that the process remains fair and transparent to all Consultants.

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3. CONFIDENTIALITY, PUBLICITY AND MARKETING

3.1 The contents of this Mini-Competition are confidential and must be used only for the purpose of submitting a Proposal. The Consultant must not make any such communication or enter into any collusive arrangement with any third party save for the purpose of sub-consulting.

3.2 Consultants must maintain strictest confidence and not disclose to any third party without prior written consent of LBS, the information supplied by LBS in this invitation to tender document and other confidential information supplied by LBS to the Consultant.

3.3 Consultants must not communicate to any person other than LBS, the amount or approximate amount of the charges and such charges must not be determined or adjusted by arrangement or in collusion with any third party. The Consultant must not make any such communication or enter into any collusive arrangement with any third party whether in relation to this tender or a tender submitted or to be submitted by such third party.

3.4 The technical specification made available to the Consultant during the course of this invitation to tender is strictly confidential. Such information should not be disclosed to any third party including subcontractors without the prior consent of LBS.

3.5 Consultants are not permitted to:

- Make any public statement or communicate in any form with the media in connection with this Tender Process.
- Use any trademarks, logos or any other Intellectual Property Rights associated with LBS.
- Represent that the Consultant is directly or indirectly associated in any way with LBS or this Tender Process.
- Engage in any form of marketing which creates, implies or refers to an association between the Consultant and LBS and/or the Tender Process.
- Do anything or refrain from doing anything in relation to the Tender Process that would have an adverse effect on LBS.
- Consultants must direct any queries from the media to Opportunity Sutton opportunitysutton@sutton.gov.uk.

4. TRANSPARENCY AND PUBLIC ACCOUNTABILITY

4.1 Consultants are reminded that LBS has the highest standards of procurement and intends to maintain a fair and open selection process. It will select a firm best

suited to the brief and is not obliged to select the lowest or indeed any of the returns. Late tenders will be returned unopened and any attempt to influence the outcome through hospitality or other inducements will result in the disqualification of the tender.

5. RETURN OF TENDER DOCUMENTS

5.1 Please complete and return your tender document on or before **Monday 13th November 2017, 12.30pm** via the LBS eTendering portal. https://procontract.due-north.com

5.2 The tender document submitted must be in electronic format such as (Technical Word or PDF) and (Commercial excel). Please note that no other form of document transmission, e.g. hard copy by Courier, will be accepted.

5.3 Tenders submitted after the deadline time will not be accepted.

5.4 The LBS e-Tendering portal will reject any tender submission if it is published after the deadline stated in this document. The Consultant is strongly advised not to leave submission of the tender to the last minute.

5.5 Consultant must note that all files uploaded cannot be amended by anyone once published and that original files published by Consultants will be maintained in an unaltered state on the system right through the procurement process.

6. VALIDITY

6.1 Proposals must remain open for acceptance for 6 (six) months from the return of proposal date.

7. PROPOSAL SUBMISSION CLARIFICATIONS

7.1 During the course of the evaluation of submissions, the Consultant may be asked to answer questions about his submission and other matters related to the Services. The Consultant must respond to such questions as quickly as possible but, in any event, within 2 (two) working days or, if a deadline is specified, responses must be submitted by that deadline. Failure to respond may result in us rejecting the Proposal submission. Any amendments to the Proposal submission arising from these discussions with the Consultant will be taken into account in the final evaluation.

8. PROPOSAL CLARIFICATION MEETING

8.1 To enable moderation of the Proposal evaluation process, we may request a meeting from all, some or one of the Consultants. Failure to attend may result in us rejecting the Proposal submission.

9. PROPOSAL SUBMISSION EVALUATION

9.1 Evaluation of submissions will be on the basis of most economically advantageous proposal as per the assessment criteria set out in the tables contained in this ITT.

10. COMPLIANCE

10.1 All Proposals returned should comply in every respect with the requirements of this Mini-Competition. However, we reserve the right to consider non-compliant submissions where permitted.

10.2 Failure to disclose all material information (facts that we regard as likely to affect the evaluation process), or disclosure of false information at any stage of this procurement process may result in ineligibility for award. The Consultant must provide all information requested and not assume that we has prior knowledge of any of the Consultant's information.

10.3 Proposals that contain Specialist Consultants at above Framework Maximum Charge Out Rates will be deemed non-compliant. If you wish us to consider the approval of Specialist Consultants (at above Framework Maximum Charge Out Rates), this must be requested within the Mini-Competition clarification process prior to submitting your Proposal.

10.4 We shall not be liable for any costs, charges or expenses borne by the Consultant whether or not he is awarded a Call Off Contract, which for the avoidance of doubt includes any costs, charges and expenses arising from or associated with an abortive or cancelled procurement process.

11. ACKNOWLEDGEMENT OF RECEIPT OF THIS MINI-COMPETITION

11.1 The Consultant should acknowledge in the e-tendering portal receipt of this Mini Competition and confirm whether they intend to submit a Proposal. Failure to do so may lead to the Consultant not receiving any amendments, addendums and clarifications to Mini-Competition documentation.

12. CONTACT

The procurement lead allocated to this Mini-Competition is [redacted].

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All contact must be via the e-tendering portal. Only technical issues relating to the e-tendering portal allow for direct contact of the procurement lead. In the first instance, the Consultant should contact the e-tendering portal help desk. If unresolved, contact the procurement lead by email preferably:

[redacted]

13. EVALUATION CRITERIA

Evaluation of submissions will be on the basis of most economically advantageous tender.

Consultants will be scored against the following Scoring Key as detailed in the Table below:

Scoring Key	
5	Excellent; full and accurate understanding of the requirement with some added value
4	Very Good; demonstrates good understanding of the requirement, above minimum requirement
3	Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement
2	Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response
1	Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement
0	No submission/question not answered

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Grade Definitions

Partner/Director

General	For a partnership, a Partner in the practice; for a limited company, any employee who is a "Company Director" as defined in the Companies Act 2006. Responsible for all grades of personnel.
Typical Education /Qualifications and Experience	Hold appropriate professional qualifications applicable to the discipline commissioned to perform and/or corporate membership of a major institution. Must have relevant work experience spanning several major programmes. The ability to demonstrate key involvement in delivering projects of high value and complexity. Overall responsibility for project(s) and for supervision, control and development of subordinate personnel Significant management responsibility and direction within the consultancy including client liaison, specialist skills or experience.

Principal Consultant

General	Reporting to Partner / Director. Member of a company who is able to deputise for the Director. The person will have the ability to manage and control teams and ensure that there are sufficient teams of personnel assigned to commissions. Responsible for all grades of consultants and support staff.

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Typical Education /Qualifications and Experience	Hold appropriate professional qualifications applicable to the discipline commissioned to perform and/or corporate membership of a major institution. Must have relevant work experience spanning several programmes. The ability to demonstrate key involvement in delivering projects of high value and complexity. Must have substantial transport experience and technical skills appropriate to the discipline. Responsibility for project(s) and for supervision, control and development of junior personnel. Significant management responsibility and direction within the Consultancy including client liaison, specialist skills or experience.

Senior Consultant

General	Reporting to Partner / Director or Principal Consultant. Person holding corporate membership of a professional body recognised by TfL and has the ability to demonstrate key involvement in delivering projects of high value and complexity. Responsible for all grades of consultants and support staff on behalf of the Director/Partner.
Typical Education /Qualifications and Experience	Must have relevant work experience spanning several programmes / projects The ability to demonstrate key involvement in delivering projects of high value and complexity. Must have substantial transport experience and technical skills appropriate to the discipline. Responsibility for project(s) and for supervision, control and development of junior personnel.

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	Significant management responsibility and direction within the organisation including client liaison, specialist skills or experience.

Consultant

General	Reporting to Principal Consultant / Senior Consultant. A person with the ability to assist in the management and control of a project team to ensure delivery of the required projects. Responsible for Junior Consultant / administration staff
Typical Education /Qualifications and Experience	Hold appropriate professional qualifications applicable to the discipline commissioned to perform and/or corporate membership of a major institution. Must have relevant work experience spanning several projects Must have some transport experience and technical skills appropriate to the discipline. Responsibility for project(s) and for supervision, control and development of junior personnel.

Junior consultant

General	Reporting to Senior Consultant/Consultant. A person with the relevant experience capable of working on some aspects of the delivery of the required project. Responsible for support staff.
Typical Education /Qualifications and Experience	Must have relevant work experience in at least one completed project.

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1st Stage (Technical Evaluation)

The technical submissions received will be evaluated by the relevant technical personnel and the commercial submissions will be evaluated by Commercial Services personnel. The technical submissions will account for **70%** of the total scoring assessment and the commercial considerations will account for **30%** of the total scoring assessment as detailed below:

The minimum Technical threshold of 50 out of the available 70 points must be achieved for the tender to pass on to the second stage of evaluation which is the commercial stage.

2nd Stage (Commercial Evaluation)

Commercial, bidder's proposed **Fixed Fee** will be evaluated with the lowest total priced bid receiving the maximum score available. Each subsequent submission will be scored a percentage score of the total marks available, based on the percentage variation from the lowest priced bid.

Submissions & Evaluation Criteria

Technical		
Evaluation**: 70%** and discretionary pass/fail		
The technical submission must not exceed 25 A4 pages (approx.. 450 words to a side of A4) excluding CV's.		
The *Authority* will not appoint a *Consultant* that scores less than **50** out of the available **70** marks		
Evaluation Criteria		**Weighting**
T1	Understanding Outline in brief of your understanding of the purpose of this project.	5%
T2	Methodology Proposed approach to this work, describing the key activities and methodology. The information provided should be specifically applicable to this scheme. (Scope - Attachment 2). • Outline of proposed methodology for undertaking the 'outline scope of study' including detailed description of the deliverables that will be provided and any additional data required from OPDC/GLA or other third parties.	25%

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T3	<u>Quality of Resource</u> For each proposed consultant, supply: ▪ Details of key staff to be involved in this work. This should include synopsis of their role and the expertise they would bring to the project and their level of involvement across the stages the commission ▪ CV (max 2 pages per person with relevant experience) ▪ Confirmation of the consultant's availability for the duration of the contract.	30%
T4	<u>Programme & Risk Register</u> Provide a programme to deliver the services to include: ▪ A full project plan with clear milestones. ▪ A full resource schedule (in person days and broken down by role) for the full programme. ▪ Any risks associated with the delivery of the project, along with rationale.	10%
T5	Conflicts of Interest: Provide details of actual or potential conflicts of Interests that would arise were you to be appointed, and details of how these conflicts would be mitigated.	Discretionary Pass/Fail

Commercial		
Evaluation**: 30%**		
	Evaluation Criteria	**Weighting**
	▪ Price – Fixed Rate for the scope of services ▪ Schedule of resource (resource name, f/w grade, effort days and day rate) Day rates are within the framework agreement, and allowable discounts applied.	30%
	Acceptance to GLA 80814 – Call-Off terms and conditions including limitations of liability.	Discretionary Pass/Fail
	Full contact details of the *Consultant's* bid manager	For info

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Important Notes

- Consultants are required to provide full contact details of the Account Manager within the Commercial submission only for the purposes of clarification.
- Please be aware that failure to accept GLA 80814 – Call-Off Terms and Conditions will equate to a failure, unless in the opinion of LBS, any issues raised are genuine and done so in a timely manner, i.e. at clarification stage.
- All Consultants are reminded of the maximum framework rates upon which the framework operates. Proposals containing rates for personnel who exceed these predefined amounts may lead to your proposal being rejected, if not previously authorized during the clarification process.
- Following the evaluation of the tenders received, LBS may, in its sole discretion, invite Tenderers (by application of the evaluation criteria set out in the ITT) to prepare and submit further opportunities to adjust the price element of their submission. At LBS's discretion there may be up to three such opportunities for adjustment. This is an optional stage.
- Tender price will be evaluated in the first instance by number of days offered by senior graded staff.
- LBS reserve the right to accept all or any part of an offer and, if necessary, establish trading arrangements with more than one supplier.

4. Indicative Procurement Timetable

Activities	Dates
ITT issue date	19/10/2017
Supplier Clarification Questions Received	19/10/2017- 08/11/2017
Deadline for receipt of tender	13/11/2017 - 12.30pm
Tender Evaluation	13/11/2017 - 24/11/2017
Clarifications/presentations/interviews (If Required)	w/c 27/11/2017
Award subject to contract	w/c 4/12/2017
Inception meeting	w/c 11/12/2017
Estimated start date	Mid December
Estimated completion date	May - June 2018

Please note that LBS/OPDC reserves the right to change the above dates and timings

5. Duration

The estimated completion date for this commission will be **May- June 2018**

Sutton

From: [redacted]sutton.gov.uk>
Sent: 18 October 2017 11:36
Subject: Invitation to Tender: Energy Masterplan, London Borough of Sutton. LIVE: Thursday 19 October 2017

Dear Sir/Madam

The London Borough of Sutton supported by the Greater London Authority, are inviting tenders for the production of an Energy Masterplan for Sutton Town Centre and the London Cancer Hub site.

This procurement is being managed by London Borough of Sutton. The process is being carried out electronically via the LBS's eTendering portal 'Pro-Contract' from ProActis.

Link: https://procontract.due-north.com

The tender is expected to go live tomorrow, **Thursday 19 October 2017.** If you are interested in submitting a tender and have any difficulties accessing via the Procontract Portal, please let me know.

Kind regards,

[redacted]

Programme Officer - Sutton Town Centre Masterplan

Opportunity Sutton
Environment, Housing, and Regeneration
London Borough of Sutton
24 Denmark Road, Carshalton, Surrey, SM5 2JG

[redacted]

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On time 3 | Late 1 | Opt out 3 | No response 33

Company name	Workgroup	Version	Published	Verified
AECOM	SDG	1	16/11/17 11:46:51	Yes - Accepted
Ove Arup and Partners Ltd	IMG	1	13/11/17 11:16:24	Yes - Accepted
WSP UK Limited	Major Bids	1	16/11/17 11:36:50	Yes - Accepted

Batch Download Responses

- Send E-Mail on completion
- Include late responses

Prepare Download

Heat Mapping and Energy Masterplanning (GLA 80814 – TASK 3)

For the London Borough of Sutton

AECOM Tender Return

November 2017

Quality information

Document name	Ref	Prepared for	Prepared by	Date	Reviewed by
Sutton Town Centre and London Cancer Hub Energy Masterplan Tender Return		London Borough of Sutton	[redacted]	November 2017	[redacted] Associate Director

Revision history

Revision	Revision date	Details	Name	Position
01	November 2017	Tender Return	[redacted]	[redacted]

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Introduction to AECOM

AECOM are one of the leading district heating consultancies in the UK, with a wide range of experience in assessing district heating opportunities. We have carried out numerous feasibility appraisals for district heating and cooling networks and have extensive experience of following up initial studies and installing the favoured solutions from our findings. We are members of the ADE, we participate in the Ministerial Industry Contact Group for Decentralised Energy within BEIS and we also play an active role within the CIBSE CHP Specialist Group. These affiliations enable us to stay up-to-date with the latest policy and regulatory changes so that we can provide the most relevant guidance to our clients.

AECOM contribute to the development of Decentralised Energy in the U.K through technical guidance and industry leadership. Examples include:

- technical guidance on district heating for CIBSE Applications Manual 12,
- technical guidance on Combined Heat and Power for Buildings,
- co-authored the Code of Practice for district heating for CIBSE and the ADE (formerly CHPA).
- co-authored the DEBIS Detailed Project Development Guide for Heat Networks.
- Advice to DECC on the UK Potential for DH Networks which was used to inform the Government's heat strategy (with Poyry)
- Provision of the role of Chief Technologist Officer for the Energy Technologies Institute Macro Decentralised Energy project
- Negotiating the district heating supply for Stratford City as part of the Olympics energy system
- Feasibility studies for around 40 district heating network schemes, Heat mapping of around 30 local authorities,
- involvement in the setting up of around 30 ESCos

AECOM have built up considerable experience in the field of Decentralised Energy and District Heating (DH) over the last 15 years. AECOM have worked for central and local government, universities, property developers, housing associations, industrial clients and ESCos.

AECOM co-authored the Heat Network Code of Practice. Our team are experts in Decentralised Energy solutions and understand the needs of the client

T1: Our Understanding of the Brief

The heat mapping and energy masterplanning study for the London Borough of Sutton (LBS) will develop the strategy for decentralised heat and power schemes in Sutton Town Centre (STC) and the London Cancer Hub (LCH). This work will build on previous work carried out by the GLA and the existing Sutton Town Centre Masterplan, as well as the original LBS Heat mapping study carried out by URS Corporation Ltd which is now part of AECOM. The current STC masterplan sets out an ambitious vision for the future of Sutton, in which renewable energy will play a key role in delivering affordable low carbon energy.

The study will start with an assessment of the heat demands and available heat supplies in the two study areas (e.g. waste heat or Energy from Waste facilities). Options for district heating will be developed as a result of the mapping study, focussing on key anchor load buildings and areas of high heat demand density. Key stakeholders and LBS will be engaged in this process to ensure that the options that best meet the council's drivers and which are likely to have the most stakeholder buy-in are pursued. A number of heat generation technologies will be assessed for use in Sutton, scoring them against weighted factors in agreement with LBS. Network routing and energy centre locations and plans will be developed in order to inform the cost breakdown of networks. Surveys will be carried out to ensure that information gathered is sound and correct, and that the proposals suggested align with the real world. Air quality aspects of proposals will be addressed, in order to ensure that proposals are not detrimental to air quality in Sutton.

The development of the design of networks will then feed into the economic assessment, where the financial performance of network options will be appraised. These findings will help inform LBS of the best options for DH in the two study areas.

Further to the district heating aspects of the study, the application of PV in Sutton will be investigated, as well as the potential to provide power to the STC tram extension scheme from any proposed power generation. The distribution of power will be assessed through the identification of private wire customers and options for distribution (e.g. the Licence Lite scheme) will be evaluated. Finally, the study will address the planning policy aspects of new developments connecting to the building, to identify how the requirements of the emerging Local Plan can be met through connection to the network.

The breadth of AECOM's reach across engineering disciplines will add value to the study and enable the energy team to specifically address the planning, solar and air quality aspects of the work.

AECOM understands the council's drivers, reflected in its Town Centre Masterplan to make Sutton a destination of choice and its One Planet Vision drive to reduce carbon emissions across LBS. We have worked with LBS to develop the original Heat Mapping Study from 2011 and clients such as Buckinghamshire County Council, the London Borough of Merton, Kent County Council, Middlesbrough and South-Tees, all of whom have similar drivers in terms of developing greener solutions to heating buildings, to optimise the efficient use of energy, tackle fuel poverty and mitigate the impact of climate change through the reduction of carbon emissions.

Our methodology will comply with the relevant sections of the CIBSE/ADE CP1 Heat Networks: Code of Practice for the UK, which AECOM co-authored. Our detailed methodology is detailed in the following sections.

T2: Methodology

Heat Mapping

Inception and Preparation

The project inception meeting is critical to the success of the project. Paths of communication are established and the scope is defined, ensuring buy-in from all stakeholders, setting their expectations and defining what success looks like. Agreeing the scope and deliverables is key to ensuring that the project is delivered to programme, budget and the satisfaction of the client.

Prior to the inception meeting AECOM will review any information made available and prepare a list of further information required for the study which will be submitted to the LBS PM. From AECOM's previous work with other Local Authorities on district heat networks, there is an understanding of the type of information relevant to our work that should be available. This list is likely to include asset management plans, details of existing renewable energy and energy efficiency projects, information on current and proposed planning policies, proposed developments in the area, energy consumption data, council owned GIS maps and contact details for key stakeholders. AECOM will provide this list with sufficient time for LBS to review ahead of the inception meeting. At this meeting AECOM will also agree with LBS a deadline for the return of the required information.

AECOM will also review the red line boundary with attendees to discuss and consider the potential inclusion of neighbouring demands and sources of energy.

Data Collation and Energy Mapping

The study will start with a thorough review of the previous heat mapping study and other relevant information made available. AECOM will aim to identify the heating, cooling and power requirements of all existing and planned residential and non-residential buildings (including industrial sites) within the red-line boundary.

We will work with the Council to obtain as much actual energy consumption data as possible. Where possible we will use energy consumption data obtained from Council energy management datasets, estates/energy managers, Display Energy Certificates (DECs) and Energy Performance Certificates (EPCs). Where half hourly data is made available we will assess peak and baseload requirements of the buildings.

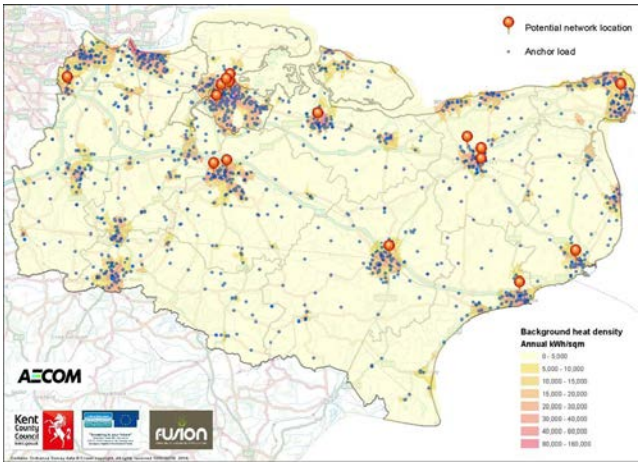


Figure 1 - Example of heat map (Kent County Council)

Where metered data cannot be obtained we will use benchmarking tools to provide evidence-based estimates of energy demand. For existing loads, these tools are likely to be CIBSE TM46, CIBSE Guide F, Ofgem Typical Domestic Consumption Values and AECOM models based on our professional experience. We will use the Valuation Office Agency (VOA) database to identify commercial buildings in the area and their internal floor areas.

For future developments we will determine building type, internal floor area, phasing and development density assumptions through liaison with LBS. AECOM models, based on our professional experience and evidenced projections regarding future Building Regulations requirements, will be

used to assess the energy consumption requirements of the new developments. AECOM has extensive experience of developing such models and a strong understanding of current and potential future standards, having acted as technical advisor to DCLG on recent updates to Part L of the Building Regulations.

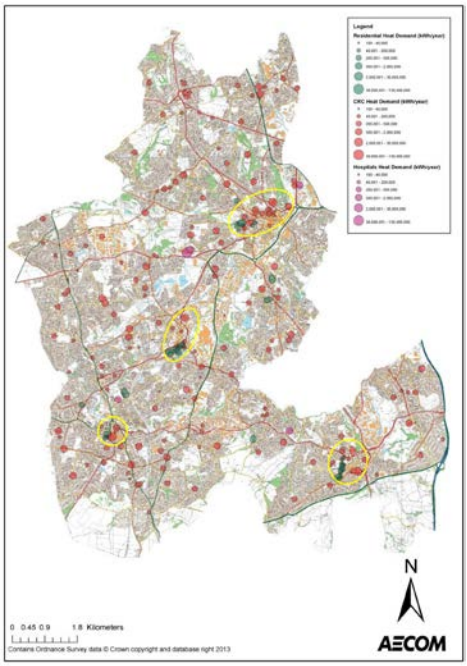


Figure 2 - Example of heat map (Showing Heat Clusters in Dudley)

During this phase of the study we will seek to agree with LBS a threshold heat consumption below which buildings will be omitted. We will provide information from previous studies and make recommendations for this threshold. From experience, the data collection process can be extremely time-consuming. We will propose a cut-off point in the programme after which assumptions will be used based on the best information available to date.

We will also identify further opportunities for heat supply in the area, such as:

- Energy from Waste (EfW) plants, for example the Beddington Energy Recovery Facility, due for completion in 2018;
- Waste heat export opportunities from industrial or power station applications, as well as other novel heat recovery opportunities;
- Other reasonable renewable low to zero carbon sources;
- Existing decentralised energy schemes;
- Existing gas CHP, biomass, geothermal and solar thermal installations;

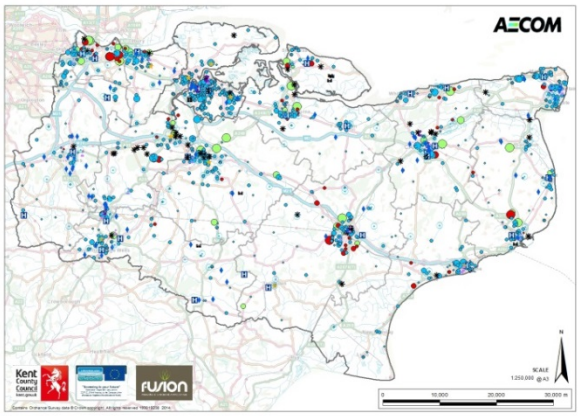


Figure 3 - Example of heat map (Kent County Council)

All data and information will be collated into a central database, with the source of information for each building or energy source clearly identified. The building consumption data will be used to produce three separate energy demand GIS maps showing heating, cooling and electricity demand in the study area. The maps will be designed to allow identification of existing and future buildings, and also to distinguish between building type. Additionally, an energy supply map will be produced, showing the location, capacity and type of identified energy sources in the area. Finally, a map combining both the supply and demand opportunities identified will be produced and used as the basis of discussions informing the next phase of the study.

Energy Masterplanning: Technical Assessment

Identify Network Opportunities

Following production of the energy demand and supply maps, we will identify key constraints and risks to decentralised energy schemes in the study area. This will include reviewing key infrastructure, utilities, environmental, flood risk and geographical designations (such as AQMAs, Green Belt Land and SSSIs) aspects within the area.

AECOM will have an internal workshop to shortlist all potential clusters of high heat, cooling or electrical demand and key

strategic areas that may be relevant to both high and low temperature network opportunities. We will present these clusters and network options alongside the energy demand and supply maps at the first stakeholder engagement workshop, where we will seek to shortlist the options and gauge customer motivations for connecting to the proposed networks.

For both areas, AECOM will select the buildings and potential supply opportunities that are most likely to form the basis of heat networks. Buildings will be shortlisted for connection based on their heat demand and suitability as an 'anchor load', their heating system type, the physical barriers to connection and an economic assessment based on their distance from anchor load areas.

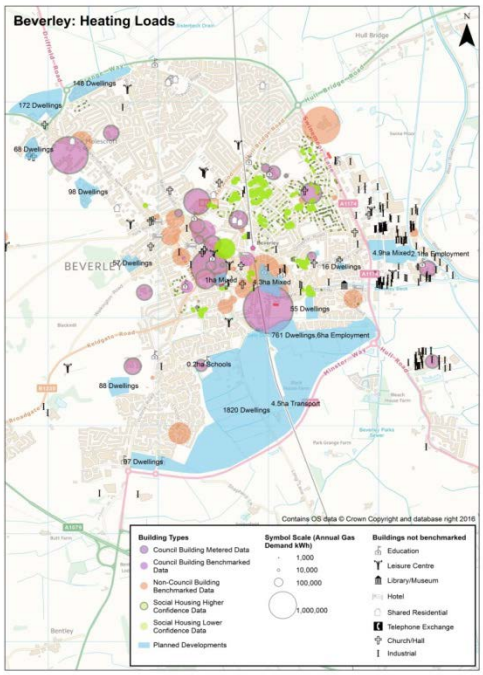


Figure 4 - Example of heat map (Showing Heat Clusters in East Riding)

AECOM will develop area-specific maps showing the buildings, any energy sources present in the area, key physical infrastructure or environmental constraints, as well as indicating both council owned and private land areas that may be suitable for the location of an energy centre.

Analysis of Technologies

Where networks are proposed to be fully or partly supplied with heat from an external third party (e.g. an energy from waste facility), the technical and economic requirements of such connections will be assessed. This assessment will be carried out for short, medium and long term operational timescale scenarios (to be agreed with LBS), with a view to recommending initial and future heat generation technologies for network scenarios and achieving zero carbon heat in the future. This assessment will include an assessment of the risks associated with each generating option with regard to the projected decarbonisation of the national grid and the required continuation of the generation of private wire electricity (where relevant).

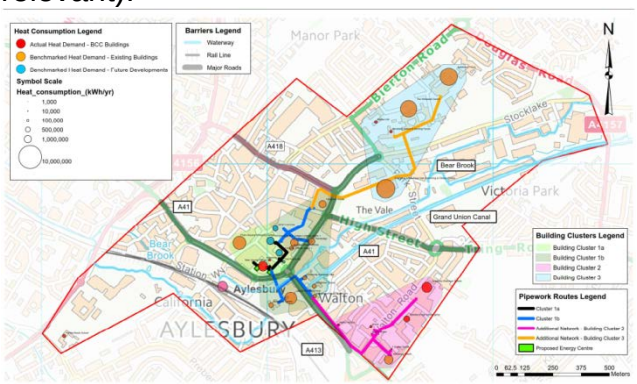


Figure 5 - Identification of Network Opportunities in Aylesbury

Where potential networks options would require the installation of new heat generation technologies (i.e. no third party heat supply is available), AECOM will conduct a multi-criteria analysis of low carbon and renewable heat generation technologies.

Using the CIBSE Heat Networks Code of Practice, and in consultation with LBS, AECOM will produce a set of technical, economic, risk and environmental criteria against which the technologies will be assessed. These will include their suitability to the area, financial performance, CO_2 emissions, cost per tonne of CO_2 saved, technology maturity and development/supply risk, network design and space implications as well as their reliance on third parties. This analysis will investigate biomass, biomass CHP, geothermal, solar thermal, water/ground and air source heat pumps, and gas CHP. The study will include recommended futureproofing measures, such as developing a network that is

compatible with alternative prime movers and identifying what these prime movers might be. We will specifically seek to develop low temperature network opportunities for (existing and future) compatibility with a wider range of heat generation technologies. The preferred central plant options will be selected to provide at least 50% of delivered heat from renewable sources or 75% from gas-fired CHP (if relevant).

We will conduct a high level desktop study to assess the potential for solar PV electricity generation in both areas. This will include an estimation of the available roof spaces and viability for PV installation. We will assess likely generation capacities for each location identified.

In schemes where generation of electricity is proposed (e.g. solar PV or co-generation schemes), AECOM will seek to maximise revenues from the sale of electricity. This will include the identification of potential private wire electricity customers in the area. Liaising with the GLA, we will look at the options for the sale of electricity, comparing Licence Lite arrangements, power purchase agreements and wholesale/export of power to the grid. Where Licence Lite is proposed, we will make recommendations of the likely Third Party Licenced Suppliers best suited to the proposed network(s).

The potential to supply renewable energy to the STC Tram extension from the STC scheme will be reviewed with a high level desktop study. We will liaise with colleagues within AECOM who have specific experience of working on the development of this scheme.

As part of the scheme development, our air quality experts will carry out a review of measured concentrations in each of the two study areas. This information would be obtained from Local Air Quality Management (LAQM) reports produced by the LBS, data held on the London Air website and through liaison with the Environmental Health Department at the LBS. Air Quality Management Areas (AQMAs) and Focus Areas in the vicinity of the study areas would also be identified. From this and information on land use, the sensitivity of each study area to increases in pollution would be assessed.

“

Kent County Council would definitely use AECOM again, and I would happily recommend AECOM to others. We have been very pleased with the work that you have undertaken on the Heat Network project as well as the work previously undertaken on our Renewable Energy study for Kent. These are tricky areas that need a partnership approach to delivery, and I have been impressed by AECOMs approach to this, and willingness to work collaboratively.

[redacted] ”

The proposals for the DE schemes would be reviewed to identify any sources of NOx and PM10. A modelling methodology would be proposed for these sources and discussed with the Council / GLA Air quality officers and a finalised methodology produced.

Site Surveys

The success of the project from heat mapping to a robust techno-economic assessment of opportunities for district heating will depend on the detail and quality of information collected. There is significant value gained from the ‘on the ground’ contacts, which need to be developed through the project, culminating in the successful connection to a Decentralised Energy network. As this is the first step in this process AECOM see the site surveys as a critical component.

These site visits, a combination of building audits for key sites and pipework routing investigations, will aim to establish as far as possible the information that we cannot

gather remotely. One full day of surveying has been allowed for each area.

The nature of these visits will be confirmed at the time as they will depend on the nature of the networks proposed, and the potential future customers included in the network scenarios. Where building audits are arranged by LBS, we would seek to identify:

- The nature of the existing heat system (operating temperature, age, location and nature of plant room etc.).
- Where and how connections could be made for heating.
- The outline extent of work needed to allow connection.
- Energy use information from meters if available, and assumptions to use for modelling if not.
- Current energy costs.
- Whether there is interest in connecting to the new system, and if not, why.
- Local route options and challenges associated with these.

Alongside internal building audits, we will seek to survey the proposed pipework routes and to carry out non-intrusive surveys of the buildings proposed for connection. These elements of the survey will seek to:

- Clarify the buildings identified are of the type and age assumed and that they are not vacant, demolished or located incorrectly on the maps to date.
- Assess the technical viability of any significant road, railway or waterway crossings that might be necessary for the network routing.
- Investigate potential energy centre locations.

For this study we expect the key client representative will be the LBS PM. We will co-ordinate our planned visits closely with the PM to utilise his/her knowledge of and contacts with businesses in the local area. We will provide a draft letter for the Council to send to contacts informing them about the study and requesting their engagement. AECOM understand that LBS may have contacts already within many of the stakeholder organisations. Making use of these existing relationships will enable us to complete this element of work more effectively.

Network Development

The maps developed, alongside information gathered on the site surveys and the technology assessment will be used to refine network opportunities, thermal storage optimisation, the buildings proposed for connection and network routes. Potential energy centre locations and scales will be mapped, based on factors including integration with masterplans for the study area and surrounding areas, proximity to heat loads and electricity supply, land availability, ownership and compatibility with planning policies. As these centres will have to be delivered as part of private development the relevant delivery mechanisms and the viability of each proposed development will be assessed in detail including energy centre configuration. A preferred energy centre location for each area will be recommended.

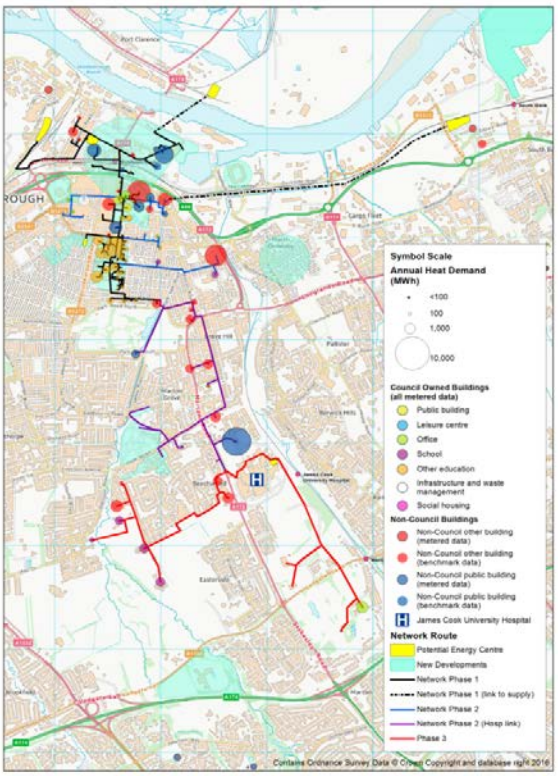


Figure 6 - Example of heat network design (Middlesbrough)

We will develop a schedule of pipe lengths and diameters, plant sizing and other energy

centre specifications to enable estimation of the capital costs of each network. Network phasing will be considered with connection strategy for each proposed network developed. All cost assumptions and a capital cost breakdown for networks will be provided.

Opportunities for future connections will be clearly identified. High level technical requirements for new developments to connect to future networks will be identified. Thermal storage requirements will be identified with commentary provided on its performance implications.

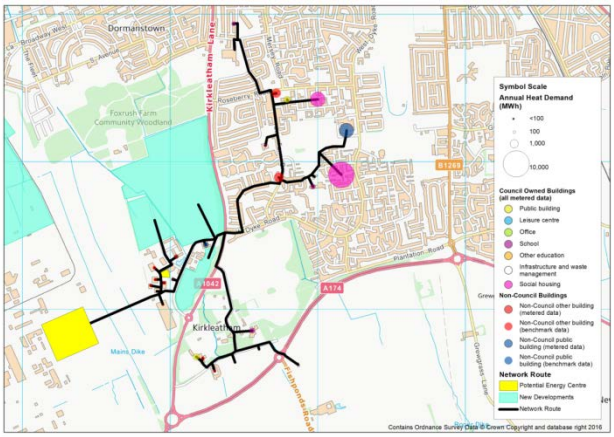


Figure 7 - Example of heat network (Redcar and Cleveland)

Energy Masterplanning: Techno-Economic Assessment

AECOM will use our in-house techno-economic modelling tool for the financial model. This has been developed over years of working on DENs and has been refined with lessons learnt through actual projects at various stages from feasibility to procurement and construction/occupation. This model will allow AECOM to:

- Update technical / energy inputs
- Review, maintain and align the design with input factors such as capex, opex, and revenue items
- Ensure that the financial model is aligned with the design.
- Further develop the agreed Technical Solution (i.e. different forecast heat demand and associated plant and pipe network size assumptions) and challenge the high level assumptions, bringing the design in line with industry best practice and the CIBSE/ADE Heat Networks Code of Practice.
- Assess alternative technologies given the developing context of the expected decarbonisation of grid electricity and increasingly stringent air quality concerns in London. This could include the use of heat pumps and emerging new technologies such as large scale battery and energy storage technologies
- Update assumptions regarding the potential customer base, customer type, quantum of development, heat loads and phasing
- Continuously assess the viability of the scheme based on customers' appetite to connect, reassess the scheme with different configurations of buildings
- Update the associated energy centre plant configuration, heat network and other design factors considering the design of the scheme
- Advise the Client on how best to maximise electricity export income for the Special Purpose Vehicle (SPV), for CHP-led schemes including private wire and 'licence lite' arrangements.
- Ensure the assumptions within the Financial Model also reflect the Client's emerging procurement and contracting strategy,
- Work with the Client to refine the Tariff and connection charges, meeting the Heat Trust requirements with an appropriate split between fixed and variable elements, allowing for different customer types, and Connection charges

AECOM will continue to provide this support across all stages of the project, until financial close.

The model process begins with gathering information regarding quantum, type and phase (if known) of development. This information will be matched against a series of industry benchmarks which will allow the energy demand for the scheme to be validated.

AECOM's Energy model then calculates hourly energy profiles for each building in line with CP1s best practice guidelines.

We will produce a phased development plan, enabling the network heat supply profile to be built up on a year by year basis.

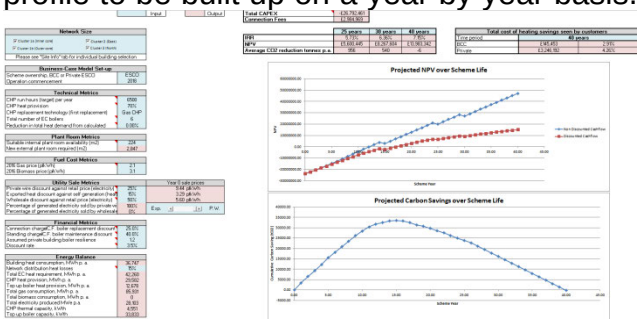


Figure 8: Example economic modelling dashboard (Aylesbury)

The TEM will calculate the capital cost, maintenance costs, payback period, building connection costs, Internal Rate of Return (IRR), Payback Period (PBP) and Net Present Value (NPV) for the proposed networks. The TEM will also calculate the carbon emissions of the network when compared to a predetermined business as usual base case in line with GLA's DEEP protocols. The TEM will allow AECOM to optimise the network to provide the best solution.

The TEM will be used to test the sensitivity of the solution against current and future energy prices, carbon factors, private wire arrangements, phasing, grants, incentives and heat losses. The output can be developed into 25 and 40 year cash flow models, which will feed into the financial model.

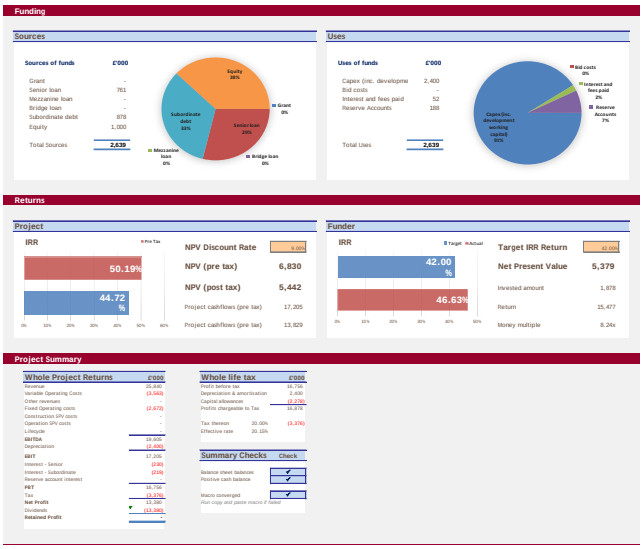


Figure 9 – Example model dashboard

The methodology behind the TEM and the design will comply with the relevant sections of the CIBSE/ADE CP1 Heat Networks: Code of Practice for the UK, which AECOM co-authored. The TEM, financial model and the Heat Network Delivery Unit (HNDU)

Project Metric Template will be provided as unlocked copies. In addition, the completed CP1 checklist will be issued.

Planning Review

It is understood that the emerging Sutton Local Plan will require new developments to meet a 35% on-site CO_2 emission reduction from Part L 2013, in line with the GLA's London Plan. Major new domestic developments will also be required to 'zero carbon homes' which can be met through payment into an offset fund.

The London Plan Policy 5.6 is also relevant to the Energy Masterplan as it promotes connection of new developments to district heating networks. In addition, the emerging Local Plan also currently requires, through Schedule 10.A, that major developments within 500m of a proposed network should commit to connecting requires developments within close proximity to existing or proposed district heat networks to investigate connection. Therefore, the ability of new development connection opportunities, as identified within the Sutton Town Centre and London Cancer Hub Energy Masterplan, to meet development local CO_2 emission reduction targets will largely depend on the performance of District Heating Networks within this study which will have been established in the TEM.

In order to determine whether the Council's emerging Local Plan CO_2 emission targets will be deliverable through connection to the heat networks we propose that the CO_2 performance of two development sites (one domestic and one non-domestic) will be assessed as a representative sample of the other proposed developments in the area. The development sites to be tested will be determined through consultation with the London Borough of Sutton.

The baseline conditions will then be determined for the new development site using Part L approved modelling software. The CO_2 emission performance will be based on AECOM Part L 2013 benchmarks that are representative of the use types expected to be developed and which represent good practice design.

Once the baseline conditions for the development have been determined we will estimate the potential for meeting the LB of Sutton Local Plan CO_2 emission target through connection to the Sutton Town Centre District Heat Network.

In line with the Local Plan and GLA energy hierarchy new developments should also include measures to reduce CO_2 through energy efficiency and building integrated low carbon or renewable technology. Therefore, in order to understand the potential for meeting the on-site 35% CO_2 emission improvement over Part L 2013 an estimate of savings for energy efficiency measures and building integrated renewable technology will also need to be assessed.

We will assess the savings obtainable through connection to the heat network and compare them to the Local Plan requirements. The ability to meet the overall planning target will also be through the implementation of energy efficiency measures and renewable technologies. We will provide high level commentary on the likely savings achievable through these means.

Schedule 10A of the emerging Local Plan details the requirements for connection to heat networks. We will provide updated guidelines where relevant, based on the outcomes of this study.

Opportunities, Prioritisation and Recommendations

The results of the energy masterplanning, technology options appraisal, economic assessment, and consultations with the Council will be used to prioritise projects suitable for progression to more detailed techno-economic feasibility.

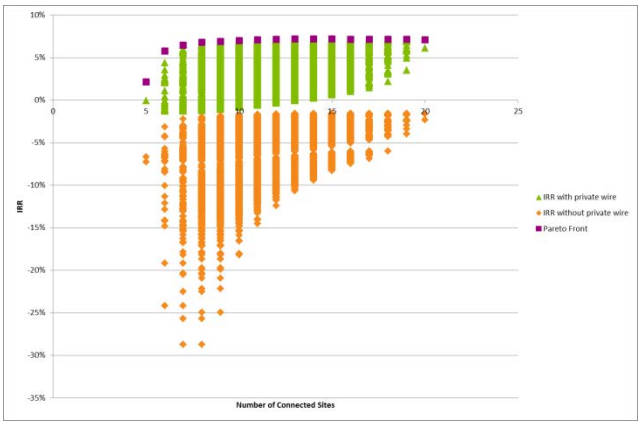


Figure 10 - Example plot of IRR against number of sites connected

If multiple feasible projects have been identified, AECOM will liaise with the Council to agree a set of criteria for systematic prioritisation of projects. AECOM will include a clearly defined rationale for project selection and prioritisation in the final report, presenting the potential benefits to stakeholders compared with business as usual.

AECOM will deliver one report at the end of the project containing the requested deliverables, including recommended DH network scheme options, an incremental delivery plan, a detailed summary of the techno-economic model and an assessment of key risks and benefits to stakeholders.

AECOM will provide the energy maps and master plans as GIS layer files and digital maps, ensuring they are in the relevant format to be uploaded to the London Heat Map. Within the final report AECOM will include recommendations on which network opportunities to progress and why, a delivery programme of next steps for the recommended project(s) including the roles of stakeholders and projected costs.

AECOM will first prepare a draft report for client review, after which we will request a single set of consolidated comments to facilitate the swift completion of the final report. The reports will include an executive summary and non-technical summary and will be written in plain English to be accessible to a wide audience including residents, businesses and other key

stakeholders. This first draft will be presented and discussed at a workshop with key council staff, which will assist LBS in formulating their comments.

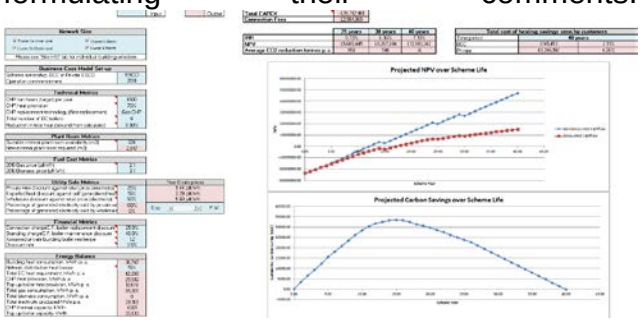


Figure 11: Example economic modelling dashboard (Aylesbury)

The sensitivity analysis carried out as part of the economic analysis will identify a number of areas of risk in terms of input variables. AECOM will use the information supplied by the Council, and also keep a running record of any other economic, technical, social and environmental risks we have identified throughout our work on the project. We will identify different categories of risk, specific risks under each category, their level of impact, likelihood of occurrence and proposed mitigation measures. Identified risks will be documented and provided in a Risk and Issues Register.

Figure 12: Example CHP capex Model

Meeting the local objectives

Understanding how an area is used is critical to understanding how Energy is used

In an effort to support its One Planet Vision, growth agenda for the STC and LCH sites, as well as comply with the reduction targets in the London Plan, the London Borough of Sutton is commissioning an Energy Master planning study. This study will address the council's key aims, supporting the transition to affordable low-carbon decentralised energy and providing an evidence base for future development planning.

AECOM aims to undertake the methodology detailed in this document specifically in order to achieve the outcomes specified by the LBS.

- The study will help Sutton achieve their 'One Planet Vision' by providing a roadmap to efficient and low carbon energy supply which will help both business and community to thrive
- The study will provide high level development advice for district heating networks on the STC and LCH sites.
- This study will support to the Council's emerging Local Plan policies by providing a sound evidence base for promoting district heating and renewable energy sources.
- The study will provide planning policy advice and set out technical guidance for prospective developers to ensure future developments are compatible with the Council's vision.
- The study will help enable Sutton in working towards the Mayor's 'zero carbon' target for major residential developments.
- The study will outline impacts to air quality arising from the proposed energy centres.
- The study will provide clear strategy and guidance for the Council and its ESCo moving forwards with regard to its decentralized energy plans.

Considering the council's drive to produce low cost heat that is greener than the status quo, the considerations around carbon factors and energy costs is paramount.

Energy prices and the carbon emission factors associated with different fuel types hugely affects the type of heat generation technology used in district heating. For example, the supply of heat with gas CHP can often be more economically attractive

than with heat pumps, especially in the winter months when heating supply temperatures are at their highest and source temperatures (e.g. air, rivers or lakes) are at their lowest (i.e. the heat pump efficiency is at its lowest). However, with the generation of electricity in the UK set to become less carbon intensive, heat pumps will become an increasingly green way of producing heat in comparison to gas CHP.

District Heating projects have a very long life span, and it's critical that considerations between future energy costs and carbon factors are correctly modelled. Going forward, this issue will provide an interesting juxtaposition between IRR and CO_2 savings. Any proposed solution must take this into account and achieve a balance by providing a solution that makes both an attractive investment opportunity and a viable carbon saving solution.

Whilst future energy price and carbon emission factor projections are published by a number of bodies (for example BEIS and National Grid), the values are uncertain and designing systems based on a single fuel source is risky. Increasingly, where no supplementary heat source is available (e.g. EfW), clients are moving towards hybrid district heating networks that combine both gas and electrically based heating technologies. Such systems provide future energy security and future proof against a number of future carbon emission or fuel price scenarios.

AECOM's recent experience building diverse technical and economic models that combine a number of heat sources will be particularly valuable to distinguishing the needs of Sutton Town Centre and the London Cancer Hub. In line with the STC Masterplan, the STC plan will have a joint commercial and residential focus to compliment the economic regeneration of the town centre and the new housing developments such as those planned for the North Sutton Gateway area. The London Cancer Hub site will incorporate a number of non-residential buildings which will not only provide high demand for heat but sources of local waste heat as well. In these instances we will encourage the council to engage with these stakeholders, assisting with correspondence to notify them of the study and how it could be of benefit to them.

AECOM bring a large portfolio of successfully completed District Energy projects, ranging from masterplanning to construction. We believe that understanding the practical reality of installing energy networks is required before you can write about them

---

AECOM have highlighted two recently completed projects; Heat Mapping and Energy Masterplanning projects for the London Borough of Merton and Middlesbrough and Tees Valley. In addition to this we have also completed the following in the last 3 years:

- Aylesbury Heat Mapping and Masterplanning
- Leicester Heat Mapping and Masterplanning
- Maidstone Heat Mapping and Masterplanning
- Kent County Heat Mapping and Masterplanning
- Old Kent Road Heat Mapping and Masterplanning
- Cheshire East Heat Mapping and Masterplanning
- Warwick Heat Mapping and Masterplanning

We believe that our wide ranging experience in the field of decentralised energy through all stages of projects, from opportunity identification to practical delivery, as well as our strengths in both the technical and financial aspects of the analysis required, gives us the best perspective to conduct this analysis and advise the client on the feasibility of the identified local heat network opportunities.

HNDU Heat Mapping and Masterplanning

Merton

Client
London Borough of Merton

Services
Energy Mapping
Energy Masterplanning
Techno-economic modelling
Detailed financial modelling

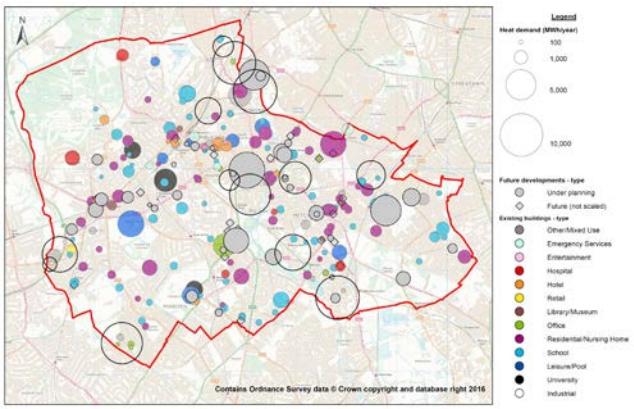
Overall value
£99,000

Start date
April 2016

Key contact details
[redacted]

AECOM is collaborating with Grant Thornton to investigate the potential for a decentralised energy network in the London Borough of Merton.

A heat mapping exercise was undertaken across the whole of the borough, identifying existing and future developments. Energy maps were produced to illustrate the size and location of the key energy loads in order to facilitate the load prioritisation process.



A masterplanning exercise was undertaken including:

- Load prioritisation and identification of suitable development areas;
- Investigation of suitable heat sources such as energy from London Underground network ventilation shafts, waste facilities, anaerobic digestion plants, electrical substations and CHP units within existing buildings; and
- Investigation of potential Energy Centre and network opportunities, taking into account main physical constraints, load priorities and coordination with existing energy utilities.

Following masterplanning analysis, a high-level technical and commercial evaluation was undertaken for the network options identified to test the level of viability over 25 and 40 year project lifetimes and inform LBM's decision on which could warrant further investigation.

As an outcome of this exercise, recommendations for the two most technically and commercially viable network options were made. These include a range of buildings including the Merton Civic Centre, three large new mixed use developments, leisure centres, schools and hotels.

Stakeholder engagement has been a key focus of the study, with meetings held between AECOM and TfL in order to explore heat recovery opportunities, as well as developers working in the area that may be interested in future connection.

Site surveys were carried out for both opportunity areas, assessing buildings externally and surveying assumed network routes. The project is about to move into the detailed financial modelling phase, which will be undertaken by Grant Thornton.

HNDU Energy Mapping and Masterplanning

Middlesborough and South Tees

Client
Middlesbrough Borough Council
Redcar and Cleveland Council and
Tees Valley Combined Authority

Services
Energy Mapping
Energy
Masterplanning
Techno-economic modelling
Detailed financial modelling and
Commercialisation

Start date
January 2016

Completion date
Ongoing
Overall value
£371,000

Key contact details
[redacted]

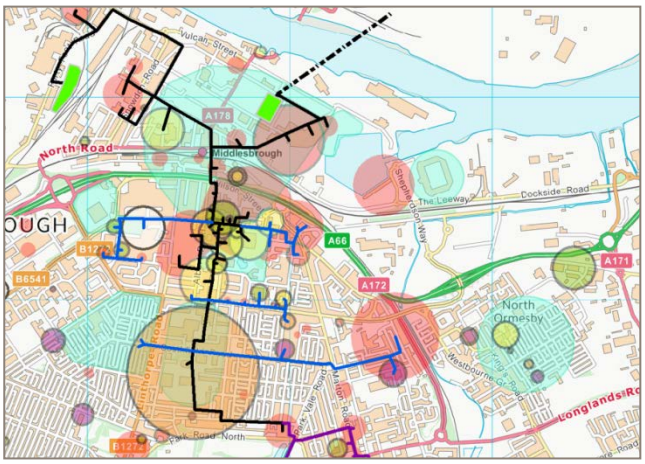
AECOM and Grant Thornton have collaborated on the energy mapping, feasibility assessment and initial business modelling for a series of district energy networks in Middlesbrough and South Tees.

The area is home to several large industrial plants and so AECOM's heat mapping study identified a wide range of potential energy supply opportunities ranging from industrial waste heat, existing anaerobic digestion plants and purpose built energy centres housing a range of different technologies. AECOM's Phase 1 heat mapping and masterplanning study identified seven potential networks in the area of which five progressed through to the Phase 2 techno-economic assessment. AECOM and Grant Thornton are now progressing to the final stages of feasibility assessment and economic modelling.

AECOM drew on information provided by the councils and obtained further information through letters and phone calls directed to over 500 local organisations to develop a comprehensive energy supply and demand map covering South Tees using GIS. These maps were reviewed to identify potential district energy network opportunities. High level network designs were produced for the most promising clusters, and technical and financial analyses conducted to assess carbon savings, capital costs and cashflows for the different network options.

To support the assessment of heat networks across this large area AECOM developed our district energy modelling tool to systematic analyse several thousand network permutations by systematically switching through the many possible combinations of buildings and energy sources. As part of the sensitivity analysis the effects of excluding certain buildings from a proposed network were tested.

During Phase 2 the information gathered during Phase 1 was revisited and refined through further engagement with stakeholders and through the development of a more detailed design. The resulting refined techno-economic models are being used to identify the network permutations that best address the Councils'' objectives.



T3: Quality of Resource

Our People make AECOM what it is. We pride ourselves on our values which are:

Safeguard, Collaborate, Inspire, Anticipate, Deliver & Dream

Team Overview

[redacted]

[redacted]

Team Members

[redacted]

[redacted]

Project management

AECOM offers a total project management solution.

We have prepared a tailored management plan for this project which aligns with PRINCE2 processes as follows:

Starting up the project

The brief provided sets out the background, motivations and requirements of the project, and will act as the Project Mandate, along with any additional information provided by LBS at inception and throughout the project.

Initiating the project

As described in our methodology, we will use the inception meeting to ensure that all parties are in agreement on the goals, methods and timescales for the project. In AECOM's IMS, a Project Plan is produced. The Project Plan is the over-arching control document that is used as a planning and management tool and means to share project information and expectations with the project team. In addition to the inception meeting we will hold an internal kick-off meeting with the entire project team.

Managing stage boundaries

Every month we will produce a 1 – 2 page project highlight report to keep LBS fully informed of progress on the project.

Controlling stages

As project manager and single point of contact, [redacted] [redacted] will be responsible for day-to-day management of workflows, risk management, and receiving and responding to client instructions for changes to work, either by carrying out the required action, or delegating to the appropriate team member.

Managing delivery

The AECOM's IMS system sets out robust procedures to ensure that high quality work is delivered on time. This includes an internal checking and review process which ensures that at least two people within AECOM approve a deliverable before it is issued.

Escalation Procedure

Any issues or concerns that LBS has in relation to the project can be brought up with [redacted], the Project Director.

Maximum Response Time

We will commit to responding to project management related issues within a day and more specific technical requests within 3 days.

Closing the project

The IMS Project Closure procedure sets out processes to ensure that all project and performance goals and requirements have been successfully achieved.

Quality Assurance

AECOM is accredited to ISO 9001, ISO 14001 and OHSAS 18001. We have a robust quality assurance system, designed to ensure high quality output and customer satisfaction. This is reflected in our approach to project organisation and management.

All deliverables (e.g. the reports) must be signed off by both a 'checker' (Project Manager, [redacted] [redacted]) and an 'approver' (Project Director, [redacted] Moreover, all deliverables will be verified by a technical person, who will not be directly involved in the project, in order to ensure an impartial view on any work undertaken.

T4: Programme and Risk Register

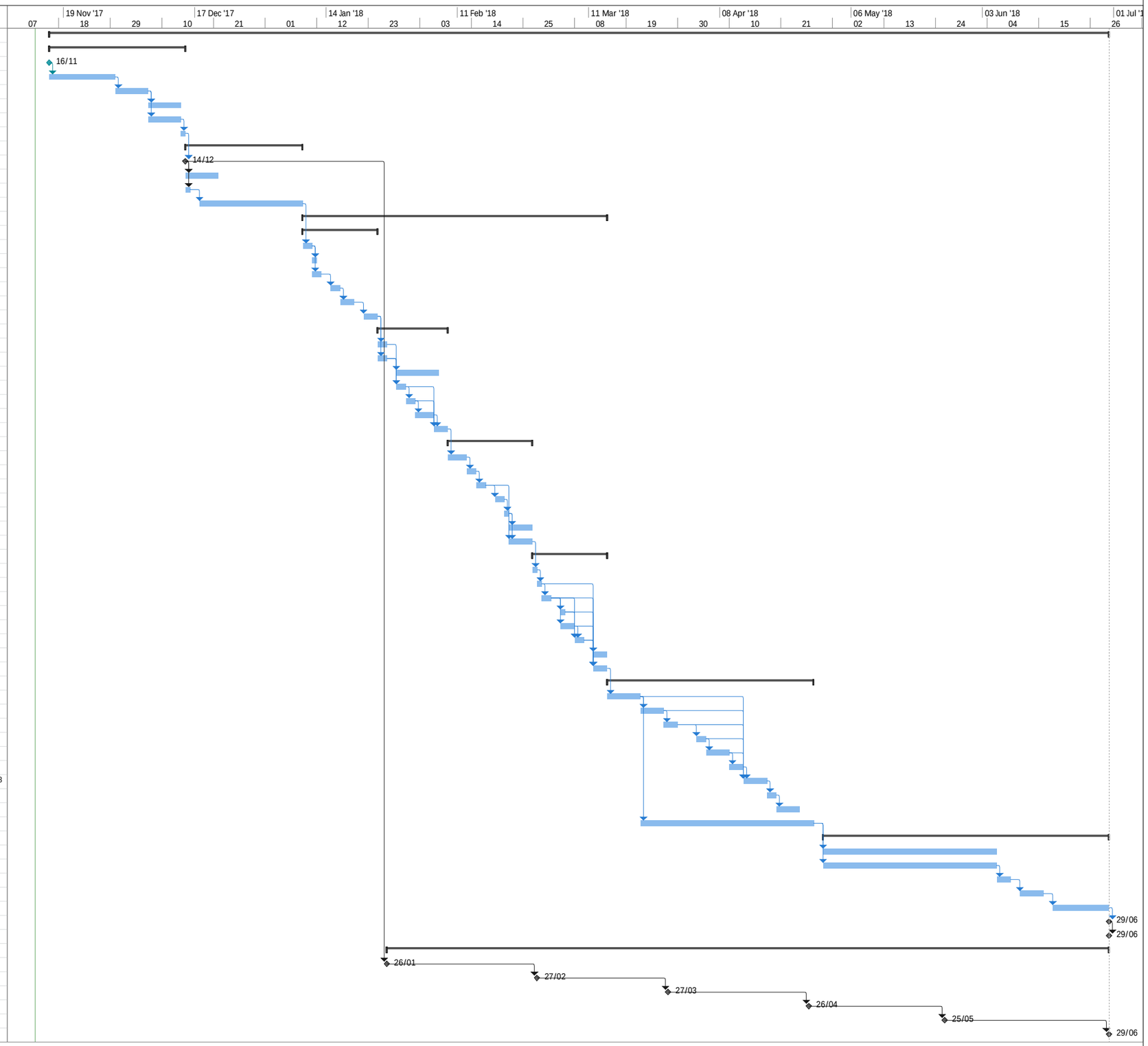
We have outlined an indicative risk register with some example risks typical to projects of this type. This will be updated as the project progresses, in conjunction with LBS client team.

The risk register will be set out in a clear manner, with details of the risk identified and a likelihood, impact and severity score assigned to each risk. A mitigation strategy will also be proposed, with a post mitigation scoring provided.

Risk	Rational
The stated site development does not occur as predicted by Client team	This will affect the energy load for the network and is outside the control of the LBS and project team.
Carbon emissions will face more stringent regulation	It is expected the emission factors used in Part L will change in future versions.
Gas utility infrastructure deemed unsuitable for the option	Lack of capacity will hinder development of heat networks.
The difference between gas and electricity retail prices will converge, altering the financial case for the chosen solution	DH networks have been shown to be price sensitive.
Air quality in the area is adversely affected by the proposed network	DH networks often incorporate NOX emitting combustion technologies
Fuel prices may not change as predicted	The financial performance of networks is dependent on the cost of fuel
No private wire customers identified	To the detriment of financial results

AECOM have the benefit of having carried out these types of projects in the past and are able to draw from the lessons learnt to provide realistic project timelines.

ID	Task Name	Duration	Start	Finish	Predecessors
1	London Borough of Sutton - Energy Masterplanning	152 days	Thu 16/11/17	Fri 29/06/18	
2	Contract Milestones	21 days	Thu 16/11/17	Thu 14/12/17	
3	Tender submission	0 days	Thu 16/11/17	Thu 16/11/17	
4	Tender evaluation	10 days	Thu 16/11/17	Wed 29/11/17	3
5	Clarification Meetings	5 days	Thu 30/11/17	Wed 06/12/17	4
6	Contract award	1 wk	Thu 07/12/17	Wed 13/12/17	5
7	Contract signed and PO raised	1 wk	Thu 07/12/17	Wed 13/12/17	5
8	Estimated start date	1 day	Thu 14/12/17	Thu 14/12/17	7
9	Mobilisation	11 days	Thu 14/12/17	Mon 08/01/18	
10	Inception meeting	0 days	Thu 14/12/17	Thu 14/12/17	8
11	Define key objectives and deliverables	5 days	Fri 15/12/17	Thu 21/12/17	10
12	Issue RFI for development data	1 day	Fri 15/12/17	Fri 15/12/17	10
13	Receive RFI information	10 days	Mon 18/12/17	Mon 08/01/18	12
14	Technical Analysis	47 days	Tue 09/01/18	Wed 14/03/18	
15	Heat Mapping	12 days	Tue 09/01/18	Wed 24/01/18	
16	Review developments in the area	2 days	Tue 09/01/18	Wed 10/01/18	13
17	Assess opportunities to extend/amend the red line boundary	1 day	Thu 11/01/18	Thu 11/01/18	16
18	Identify appropriate benchmarks for load analysis	2 days	Thu 11/01/18	Fri 12/01/18	16
19	Calculate heating, cooling and power loads using benchmarks	2 days	Mon 15/01/18	Tue 16/01/18	18
20	Assess phasing of development and loads	3 days	Wed 17/01/18	Fri 19/01/18	19
21	Heat profiling and peak/baseload calculations	3 days	Mon 22/01/18	Wed 24/01/18	20
22	Energy Technologies	11 days	Thu 25/01/18	Thu 08/02/18	
23	Review on-site heat sources, incl. aquifer and sewers	2 days	Thu 25/01/18	Fri 26/01/18	21
24	Review off-site heat sources, incl. EfW, canal	2 days	Thu 25/01/18	Fri 26/01/18	21
25	Engagement with stakeholders of potential off-site heat sources	7 days	Mon 29/01/18	Tue 06/02/18	24
26	Evaluate energy technology options, for current and future operations	2 days	Mon 29/01/18	Tue 30/01/18	23,24
27	Selection of baseload technologies	2 days	Wed 31/01/18	Thu 01/02/18	26
28	Selection of peaking technologies	2 days	Fri 02/02/18	Mon 05/02/18	27
29	Formulation of energy technology blend	3 days	Tue 06/02/18	Thu 08/02/18	26,27,28
30	District Heating Masterplan	12 days	Fri 09/02/18	Mon 26/02/18	
31	Review existing utilities infrastructure	2 days	Fri 09/02/18	Mon 12/02/18	29
32	Identify key constraints and opportunities for network routing	2 days	Tue 13/02/18	Wed 14/02/18	31
33	Identify potential heat network routes	2 days	Thu 15/02/18	Fri 16/02/18	32
34	Calculate hydraulic sizing requirements of network	2 days	Mon 19/02/18	Tue 20/02/18	33
35	Assess potential for network phasing/build-out	1 day	Wed 21/02/18	Wed 21/02/18	34
36	Assess network capital costs	3 days	Thu 22/02/18	Mon 26/02/18	35
37	Outline concept heat network design	3 days	Thu 22/02/18	Mon 26/02/18	35,33
38	Energy Centres	12 days	Tue 27/02/18	Wed 14/03/18	
39	Review land availability and ownership	1 day	Tue 27/02/18	Tue 27/02/18	37
40	Identify potential energy centre locations	1 day	Wed 28/02/18	Wed 28/02/18	39
41	Determine key energy centre requirements	2 days	Thu 01/03/18	Fri 02/03/18	40
42	Peaking plant sizing	1 day	Mon 05/03/18	Mon 05/03/18	41
43	Baseload sizing and calculation of energy technology contributions	3 days	Mon 05/03/18	Wed 07/03/18	41
44	Assess potential for energy centre phasing/build-out	2 days	Thu 08/03/18	Fri 09/03/18	43,42,41
45	Assess energy centre capital costs	3 days	Mon 12/03/18	Wed 14/03/18	44
46	Outline concept energy centre design	3 days	Mon 12/03/18	Wed 14/03/18	40,41,42,43,44
47	Techno-Economic Analysis & Modelling	30 days	Thu 15/03/18	Fri 27/04/18	
48	Set up functionality of techno-economic model	5 days	Thu 15/03/18	Wed 21/03/18	46
49	Provide estimates of capital costs	3 days	Thu 22/03/18	Mon 26/03/18	48
50	Provide estimates of cyclical replacements costs	3 days	Tue 27/03/18	Thu 29/03/18	49
51	Review forward projections of energy costs	2 days	Tue 03/04/18	Wed 04/04/18	50
52	Provide maintenance and ongoing operational costs	3 days	Thu 05/04/18	Mon 09/04/18	51
53	Provide estimates of revenues, incl. connection charges and heat sales	3 days	Tue 10/04/18	Thu 12/04/18	52
54	Calculate IRR, NPV, life-time costs	3 days	Fri 13/04/18	Tue 17/04/18	53,52,51,50,49,48
55	Review forward projections of carbon intensity of energy	2 days	Wed 18/04/18	Thu 19/04/18	54
56	Calculate carbon emissions savings	3 days	Fri 20/04/18	Tue 24/04/18	55
57	Repeat techno-economic modelling for different modelled scenarios	25 days	Thu 22/03/18	Fri 27/04/18	48
58	Reporting	43 days	Mon 30/04/18	Fri 29/06/18	
59	Review technical analysis	25 days	Mon 30/04/18	Tue 05/06/18	57
60	Review Techno-Economic analysis	25 days	Mon 30/04/18	Tue 05/06/18	57
61	Finalise DRAFT Report	3 days	Wed 06/06/18	Fri 08/06/18	60
62	Client review of draft Summary Report	5 days	Mon 11/06/18	Fri 15/06/18	61
63	Finalise Report	10 days	Mon 18/06/18	Fri 29/06/18	62
64	Issue Report	0 days	Fri 29/06/18	Fri 29/06/18	63
65	Client signoff & Final Presentation	0 days	Fri 29/06/18	Fri 29/06/18	64
66	Meetings	106 days	Fri 26/01/18	Fri 29/06/18	
67	Monthly progress meeting 1	0 days	Fri 26/01/18	Fri 26/01/18	10FS+25 days
68	Monthly progress meeting 2	0 days	Tue 27/02/18	Tue 27/02/18	67FS+22 days
69	Monthly progress meeting 3	0 days	Tue 27/03/18	Tue 27/03/18	68FS+20 days
70	Monthly progress meeting 4	0 days	Thu 26/04/18	Thu 26/04/18	69FS+20 days
71	Monthly progress meeting 5	0 days	Fri 25/05/18	Fri 25/05/18	70FS+20 days
72	Monthly progress meeting 6	0 days	Fri 29/06/18	Fri 29/06/18	71FS+24 days



Project: msproj11

Task		Summary		External Milestone		Inactive Summary		Manual Summary Rollup		Finish-only		Manual Progress	
Split		Project Summary		Inactive Task		Manual Task		Manual Summary		Deadline			
Milestone		External Tasks		Inactive Milestone		Duration-only		Start-only		Progress			

Resource schedule

A detailed breakdown of resources against the main work tasks identified in section 4.0 of the ITT is shown below.

GLA 80814 – Task 3 - London Borough of Sutton – Energy Masterplan
Resource Schdule

AECOM Imagine it. Delivered.

REV	Tender Submission		13/11/2017		Page				
Resources Schedule									
	Day								

T5: Conflicts of Interest

AECOM can confirm that as far we are aware there is no current conflict of interest and we don’t expect any conflicts of interest to arise during this proposed scope of work.

Assumptions and exclusions

The following is a schedule of clarifications on the tender submission provided by AECOM;

- We have not allowed for the cost of application of utility provisions, associated with this project. AECOM have allowed for time associated with the application process. Should applications, such as G59, be required, AECOM will contact the client with the relevant change control order
- AECOM will base all capital and operational cost data on best available information and time of assessment. Budget quotations may be sought for key equipment, if deemed appropriate.
- AECOM may request utility searches via Sutton
- AECOM will request to liaise with council teams that may provide specific, local and relevant information to the proposed schemes;
- AECOM will attempt to identify existing operating parameters of buildings proposed for connections. AECOM have not allowed for any physical testing or inspection of existing installations. AECOM have allowed for two days of site surveys, including a representative sample of operational buildings, with access arranged in coordination with the council;
- AECOM will use existing published data to ascertain the possible thermal performance of any heat pumps. No physical measurements are to be undertaken as part of this project;
- Future utility trends (cost and carbon) will be based on the latest IAG data sets. If the council would like alterative data sets to be considered, this is to be discussed at the inception meeting;
- AECOM has not allowed for any 3D drawings as these are not deemed to be required;
- AECOM will consider geography, utility connection points and sensitivities of pollution but shall not be using land surveyors to establish topography. AECOM will be reviewing local geography as part of the one day planned survey;
- AECOM will be able to provide further information, if the council requires, supporting our bid.
- AECOM will not be reviewing thermal loads, outside the red line boundary, in excess of economic limits of a conventional heat network;
- We have not allowed for the role of Principal Designer under CDM
- AECOM assume that all commercial, legal and financial matters will be undertaken by others. AECOM have allowed for technical advice and coordination of service delivery only.
- The Solar PV analysis shall not include any surveys such as structural surveys and shall be a desktop study only.
- Solar PV input to the STC Tram extension shall be high level and desktop only.
- Air quality review excludes dispersion modelling and is desktop based study only, with a recommendation for future methodology provided.
- Future emission factors are not included in the planning policy review.
- Energy options appraisal at a building level are not included in the planning policy review.
- All design work shall be to RIBA 2 standard.

Appendix: Team CVs

About AECOM

AECOM is built to deliver a better world. We design, build, finance and operate infrastructure assets for governments, businesses and organizations in more than 150 countries.

As a fully integrated firm, we connect knowledge and experience across our global network of 85, 000 experts to help clients solve their most complex challenges. From high-performance buildings and infrastructure, to resilient communities and environments, to stable and secure nations, our work is transformative, differentiated and vital. A Fortune 500 firm, AECOM companies have annual revenue of approximately US$18 billion.

See how we deliver what others can only imagine at aecom.com and @AECOM.

Contact

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aecom.com

GLA 80814 – Task 3 - London Borough of Sutton – Energy Masterplan Commercial Submission							
REV 1	Tender Submission	Date	13/11/2017	Page	1	of	4

Rate Table - From Framework

Ref	Grade	£/day
[redacted]		

These rates will be used for any additional or adhoc requirements which will be subject to a separate brief/s and approved by the Client in advance

Fixed Fee Services Total £ (ex VAT)

Consultancy Services in line with the Brief

Scope Items	Description	Fee (ex VAT)
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REV 1		[redacted]	Date [redacted]		[redacted]			3	of	4		
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London Borough of Sutton

London Borough of Sutton Energy Masterplan

Tender Application

GLA 80814 - Task 3

Issue | 13th November 2017

Job number

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ARUP

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Appendices

Appendix A

Previous Experience

Appendix B

Arup CVs

Cover Letter

We are pleased to submit our proposal to support you in your efforts to deliver an energy masterplan for Sutton Town Centre and the London Cancer Hub.

This commission will be running at a time when the market is moving to support major investment in heat networks, creating conditions to maximise the potential scale and impact for projects which are strategically aligned with national and regional drivers as the Sutton area undergoes a transformation as one of the Greater London Authority's (GLA) opportunity areas.

In this proposal we have set out our response to your invitation to tender. This includes details of the team members, who have a proven track record in advising on the technical, commercial and financial viability of heat network schemes and their procurement for both the public and private sector.

We are confident that this team can demonstrate the full breadth of services required to input into the Masterplan for Sutton Town Centre and the London Cancer Hub:

- Firstly, our team has proven track record in energy masterplanning, low carbon technologies and stakeholder management in both public and private sector, with specialist knowledge in each field.
- Secondly, we believe we are ideally placed to support your strategic objectives, ensuring an outcome that leads to successful project procurement and delivery structures, aligned in a way that best suits your future ambitions.

The investment in Sutton Town Centre Masterplan combined with Sutton's One Planet Vision means that now is the time to further develop plans for the energy provision for Sutton Town Centre and the London Cancer Hub. Both areas will have substantial development over the next 15-20 years, so a roadmap to zero carbon by 2050 is important.

If our proposal is of interest to you, we would like to agree a limit of liability as per our framework agreement.

We note the provided call-off special conditions. If our bid is of interest to you, we would request to sign the call-off conditions agreed as part of our signed framework contract.

We look forward to an opportunity to discuss our offer with you.

If you have any questions regarding this proposal or the proposed project in general, correspondence should be directed to:

[redacted] Associate Director
Email: [redacted]arup.com
[redacted]

1 T1: Understanding the Brief

1.1 Background and Purpose

We understand that the Greater London Authority (GLA) carried out preliminary heat mapping work for Sutton Town Centre (STC) in 2016. These assessments concluded that there will be a continuous supply of new connections between 2016 and 2030.

Based on the tender specification, a review of the development area documentation and Arup's knowledge through working in the area, we understand the purpose of this commission is to provide the following.

- Investigate the potential for decentralised energy networks in STC and for the London Cancer Hub (LCH). This includes reviewing and updating the heat demand maps.
- Investigate low carbon energy sources and identify the optimal supply option according to energy potential, capital and operational costs, technology availability and carbon dioxide emission reduction potential.
- Develop a techno-economic model to appraise technical and financial viability of a decentralised energy network. This includes carbon calculations and assessment of the planning policy to determine whether the Local Plan targets are deliverable and consistent.
- Produce a project plan for both sites, including recommended actions for implementation and the key risks and challenges to delivery. We would also hold a commercial options workshop with London Borough of Sutton (LBS) staff.

We fully understand the dilemma of fast-paced development, which needs guidance to become carbon neutral by 2050 and we will assist you by producing an indicative delivery plan to meet your policy targets.

1.2 Our approach

Arup has been working with local authorities for over a decade on modern, low-carbon heat network planning, procurement, design and delivery. Our approach has developed as our experience has shown us that successful networks come from an integrated approach which considers technical, economic and commercial issues from the start. We will take account of best practice guidance, including the Heat Networks Code of Practice and the BEIS Heat Network Detailed Project Delivery Resource (the latter incorporating Arup's guidance on strategic and commercial drivers).

We will examine, test and produce an overarching energy strategy considering heat network possibilities through an assessment of the technical and economic performance of any potential heat network scheme. Fundamentally, heat networks rely on a high density of demand to be economically viable. Therefore, it is

essential to understand the potential for heat demands to be connected to potential heat sources.

Arup has assisted numerous local authorities through this process, resulting in the successful establishment of heat networks. We have been commissioned to undertake the North Acton study on the same GLA framework. Since 2015, we have completed sixteen HNDU funded studies; prior to this we ran the four-year £3m London Decentralised Energy Project Delivery Unit (DEPDU) for the GLA which undertook over 80 studies and produced over £100m of procured networks.

In the UK, we have undertaken around 80 separate DE engagements in the past five years across key groupings of energy masterplanning, feasibility studies, design and commissioning, business case and commercialisation, procurement, capacity building, research and guidance.

We would welcome the opportunity to work with the London Borough of Sutton on this exciting heat network project.

2 T2: Methodology

[Regulation 12 (5)(e)]

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3 T3: Quality of Resource

We have selected an experienced, multidisciplinary team of energy consultants, engineers, modellers and specialists to deliver this study. Their qualifications and experience is summarised below. CVs for each staff member are included in Appendix A.

3.1 Team Structure

[redacted] will have overall responsibility for ensuring the delivery of robust and credible information to the LBS on time and within budget. To do this [redacted]s will work closely with [redacted] our proposed project manager, for the commission.

[redacted] will coordinate core team to undertake the majority of the work in a cost effective, efficient manner. She will be the day-to-day contact and will liaise with the LBS's representative(s) through fortnightly teleconferences. [redacted] will also call on a wider team of senior reviewers and specialists who will provide targeted input at each stage of the project. As such, multiple staff will be involved in each task in the programme and are not singled out individually. Arup is recognised as a market-leading, national and international engineering consultant, responsible for the successful planning, engineering and implementation of major building and infrastructure projects – the tools, skills, experience and training associated with which allows our local project staff to plan and deliver quality project outputs on time and on budget.

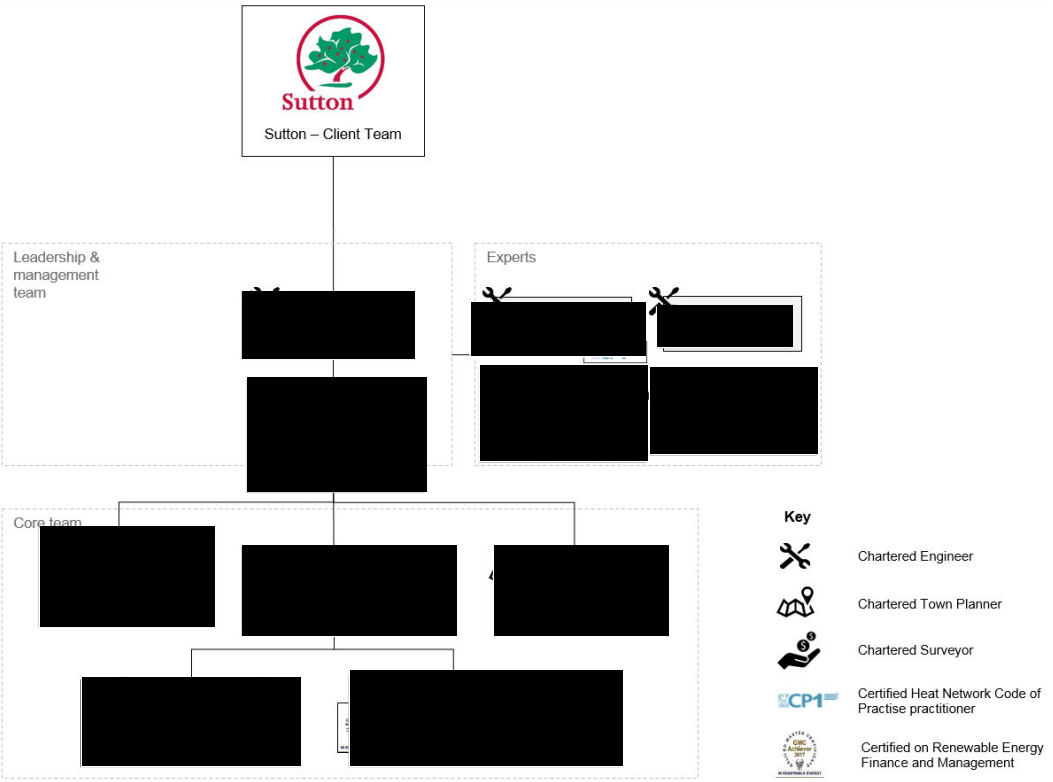


Figure 2: Our Proposed Team Structure

We confirm that we have the appropriate available resources, capability and experience to meet the required timeline. Our project director, project manager and staff qualifications, skills and experience are varied and complementary. We have assembled a team of engineers, analysts, project managers and commercial specialists to provide input to deliverables of the project. As with all our projects, the project team will be able to draw on a wider pool of expertise in Arup where additional input is required.

3.2 Core Team Biographies

Regulation 13 Personal Information

[redacted]

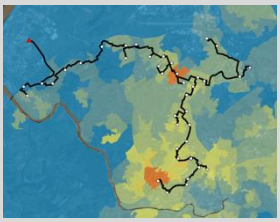
Appendix A

Previous Experience

Table 4 Previous Experience Matrix

	Vision Setting & Planning	Business Models & Finance	Data Analysis	Stakeholder Management	Co-benefit Analysis	Legal Consultation
Heat mapping						
National Grid EfW mapping tool	✓	✓	✓			
Decentralised Energy Project Delivery Unit (DEPDU)	✓	✓		✓	✓	✓
Chippenham Energy Map and Masterplan	✓	✓	✓		✓	
Cornwall Council Geothermal Power Financing Consultancy		✓				✓
Energy masterplanning and techno-economic modelling						
Knowsley Industrial & Business Park District Heat Network Feasibility Study	✓	✓	✓	✓		
North Acton District Heat Network Feasibility Study		✓	✓	✓		
Brighton and Hove District Heat Networks	✓	✓	✓		✓	
Silvertown Quay Masterplan Energy Strategy	✓	✓	✓		✓	
Kingston University Thames River Source Heat Pump Study	✓	✓	✓	✓		
St. Mary's Heat Network, Isles of Scilly	✓	✓	✓			
Lee Valley Heat Network			✓		✓	
Southall Energy Masterplanning study	✓	✓	✓	✓		
Planning policy						
London Heat Network Manual	✓		✓	✓	✓	
Waltham Forest District Heating Feasibility and Business Case Studies	✓		✓	✓		
Decentralised Energy Masterplanning Manual	✓			✓		
Strategic and Commercial Guidance for Heat Networks	✓			✓	✓	

Heat mapping



Energy from Waste Mapping Tool

National Grid

In order to assess the scale of the opportunity for distributed energy from waste incineration in England, Arup created a mapping tool. Open source data, industry expertise and programming were used to create a tool that rapidly automates the assessment of potential revenues and carbon saving associated with different schemes across the UK.

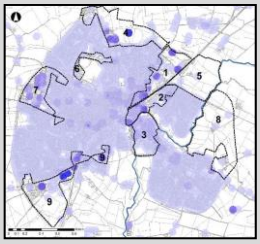
This tool enabled informed prioritisation of schemes so that the client could target a smaller number of opportunities with confidence that those assets were most likely to be best performing given the available information. The tool included automated routing optimisation, high resolution geographical heat demand modelling and financial appraisal.

Decentralised Energy Project Delivery Unit (DEPDU)

Greater London Authority (GLA)

Arup worked with the Greater London Authority (GLA) from 2011 to 2015 to create and operate a Decentralised Energy Project Delivery Unit (DEPDU) in support of the GLA's Decentralised Energy for London programme.

DEPDU provided technical assistance to design and bring to market decentralised energy projects. It operates as a single integrated team which delivers a wide range of technical and commercial advisory services to project sponsors. With €2.9m funding from the European Investment Bank ELENA facility, Arup's work brought to market over £100 million worth of investment in district heating networks, running predominantly from gas-fired CHP.



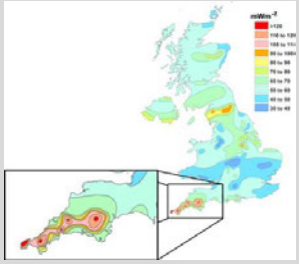
Chippenham Energy Map and Masterplan

Wiltshire County Borough

Arup carried out an energy mapping and district heating masterplanning study in Langley Park, Chippenham on behalf of Wiltshire County Borough.

Co-funded by the Department of Energy and Climate Change's Heat Networks Delivery Unit, this study sought to identify priority heat demand clusters in Langley Park and the surrounds, and investigate the techno-economic potential of a heat network accommodating these.

Arup's energy mapping services included geo-locating of heating, cooling and electricity demands across all buildings in Chippenham, with provision of detailed maps and digital GIS files.



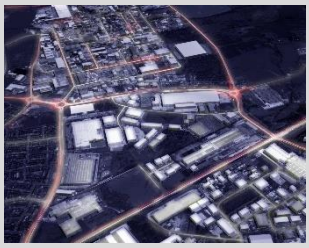
Deep Geothermal Investment Options Appraisal

Cornwall Borough

Arup undertook an appraisal for Cornwall Borough of options for triggering investment in deep geothermal energy. The Borough's objective was to kick-start investment in geothermal energy projects by supporting the delivery of pilot projects.

Our analysis was based on an economic model which tested different commercial arrangements, as well as the level of revenues, subsidies and grants required to make a scheme commercially viable. The Borough also considered supporting the creation of a business park, for which Arup carried out a market study of industrial users that could be attracted to Cornwall to utilise the recovered heat.

Energy masterplanning

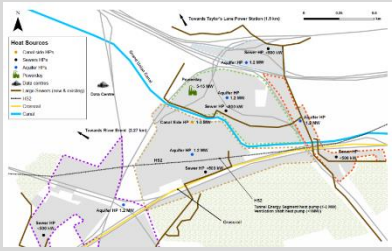


KIBP District Heat Network Feasibility Study

Knowsley Council

Arup completed techno-economic modelling for the development of decentralised energy infrastructure in the form of energy centres and heat networks to provide low carbon energy to Knowsley Industrial and Business Park (KIBP) tenants.

We completed energy masterplanning and feasibility studies, then conducted soft market testing to help inform the preferred business structure for the development of a heat network. We are currently employed as technical lead in developing a 5-case outline business case for a heat network on the Business Park. Our business case work has been aided by a toolkit of mechanisms that we have developed to de-risk heat network projects and used extensively as part of the KIBP District Energy Network project.



North Acton District Heat Network Feasibility Study

Old Oak and Park Royal Development Corporation

Development in the Old Oak & Park Royal opportunity area could deliver approximately 26,970 new homes and over 800,000 m^2 of new non-domestic floor area. Arup was commissioned to provide detailed modelling of the potential energy solutions for the area. This includes innovative technologies including sewage heat pump, aquifer heat pump, data centre heat offtake and others.

Arup scope includes techno-economic modelling, outline scheme design, support in stakeholder and market engagement, technical support and commercial strategic structuring. The complexity and challenges of the project involve detailed specialist modelling to ensure that the best possible scheme can be pursued in tight timelines, with work already beginning on site.

Brighton and Hove District Heat Networks

Brighton and Hove City Council

Brighton and Hove City Council (BHCC) commissioned Arup to carry out a feasibility study for two heat networks within the council jurisdiction. The study includes a feasibility analysis, techno-economic modelling, preparation of business case options and full specifications of the recommended heat network from energy centre to the interface with individual residential units.

Based on the results, Arup developed options for low carbon heat supply and assess the opportunity for strategic growth of the network. This work will enable BHCC to progress on its objective of realising sustainable delivery of energy at a lower cost to residents.

Silvertown Quay Masterplan Energy Strategy

Silvertown Partnership

The Silvertown Quay project is planned redevelopment of 24ha of land surrounding the Pontoon Dock in the Royal Docks area of east London.

Arup undertook technical modelling of the planned new development and tested a range of district-based and building by building heating and cooling strategies. We also considered a range of potential generation technologies including gas CHP, biomass, energy from waste, solar thermal and heat pumps. The proposed scheme includes a 5MW water source heat pump, gas CHP and heat offtake from a primary substation.

Thames River Source Heat Pump Study

Kingston University

Arup was commissioned to undertake a detailed feasibility study for Kingston University, in relation to a proposed river source heat pump led heat network scheme, to supply heating to their Penrhyn Road Campus. The University is considering this installation as part of a range of measures to assist in the meeting of their HEFCE-imposed CO2 emissions reductions target, set at 35% below a 2005/06 baseline figure.

Arup was commissioned to undertake a detailed feasibility study for Kingston University, in relation to a proposed river source heat pump led heat network scheme, to supply heating to their Penrhyn Road Campus. The University is considering this installation as part of a range of measures to assist in the meeting of their HEFCE-imposed CO_2 emissions reductions target, set at 35% below a 2005/06 baseline figure.

St. Mary's Heat Network , Isles of Scilly

Council of the Isles of Scilly

Arup was appointed by the Council of the Isles of Scilly to undertake a heat mapping and energy masterplanning study. The focus of the exercise was on the area between High Town and Old town on the island of St. Mary's.

The study investigated a range of potential energy supply options, heating loads for 28 buildings, potential routing configuration and energy centre location. Preliminary work from Hitachi recommending an Anaerobic Digestion (AD) Plant and gasification system was also taken into account.

In the techno-economic analysis eight scenarios were modelled for both 25 and 40 years Internal Rate of Return (IRR). The scenarios covered various combinations of buildings and generation technologies, tested to understand the optimal combination for a heat network.

Lee Valley Heat Network (LVHN)

The London Borough of Enfield / GLA

Arup has worked over number of years on behalf of the GLA to support the development of a large scale heat network in the upper Lee Valley areas of Haringey, Enfield and Waltham Forest.

This included early CHP feasibility studies for the Opportunity Area Planning Framework and more recent work to identify an appropriate commercial delivery vehicle approach for the scheme. The project encompasses a strategic heat network connecting more than 5,000 homes with heat recovered from the Edmonton EcoPark Energy from Waste facility.

Southall Energy Masterplanning study

Greater London Authority

Arup originally conducted a decentralised energy pre-feasibility study of the Southall Opportunity Area as part of the DEPDU programme.

Following a commission from Ealing Borough and DECC's Heat Networks Delivery Unit, Arup carried out detailed techno-economic feasibility modelling for a 2.5km district heat network aiming to serve heat to over 6,000 new-build homes and non-domestic properties in the Southall area, which is in the process of significant regeneration. The Arup team started with a refreshed energy masterplanning exercise to confirm the scope of the opportunity.

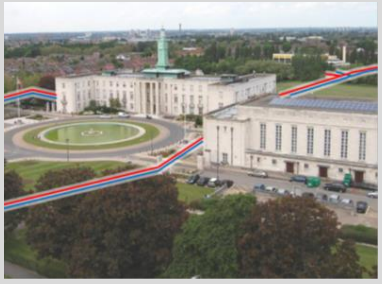
Planning policy

London Heat Network Manual

Greater London Authority

In support of the GLA's Decentralised Energy for London programme, Arup led the production of the District Heating Manual for London in 2013, disseminating knowledge and experience in support of stakeholders with a development interest in decentralised energy projects.

In 2014, Arup produced an update on this document released as the London Heat Network Manual, delivering the latest in development support for London's decentralised energy ambitions. The document provides authoritative guidance on the development and delivery of heat networks in London.

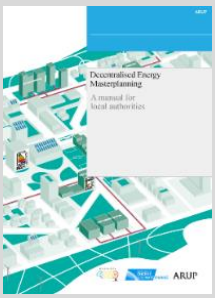


District heating feasibility and business case studies

Greater London Authority (GLA) on behalf of London Borough of Waltham Forest

Arup completed a series of decentralised energy techno-economic and commercial studies along a corridor in Waltham Forest as part of its Decentralised Energy Project Delivery Unit (DEPDU) role for the GLA.

We first undertook a feasibility study for a new district heating network in the Wood Street and Town Hall area serving a mix of new and existing buildings in both public and private sector ownership. The feasibility study included recommendations for procuring delivery of a new network as part of a planned estate redevelopment.

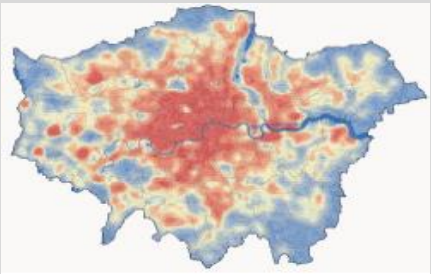


Decentralised Energy Masterplanning Manual

Haringey Borough Council

Arup produced a manual and pre-feasibility modelling tool which would equip local authorities with the ability to produce their own energy masterplans. The guidance manual describes the process, from start to finish, from capacity building and evidence base through to feasibility studies and project delivery.

The tool enables users with limited technical knowledge of Distributed Energy (DE) to prioritise opportunities through strategic scale heat network route planning and high level system cost and payback assessments



Strategic and Commercial Guidance for Heat Networks

Department for Business Energy and Industrial Strategy

Arup was selected to author the commercial and strategic guidance for BEIS's Heat Networks Delivery Unit (HNDU) for issue to local authorities to assist their preparation of heat network business cases and the delivery of new heat networks. Arup brought in specialist legal, tax and insurance sub-consultants to help draft the guidance.

Arup identified strategic drivers, policy and legislation supporting heat network delivery, in addition to 13 key roles and responsibilities, risks, opportunities and considerations associated with structuring these into a model for heat network delivery. This is accompanied by 30 case studies that exemplify the roles and delivery vehicles identified.

Appendix B

Arup CVs

Regulation 13 Personal Information

4 T4: Programme & Risk Register

The key milestones for the project have been incorporated into our proposed programme, which is provided in Table 1.

If our proposal is successful, we will work with the LBS to review and finalise our programme assumptions as appropriate for delivering the project effectively, whilst maintaining compliance with any related Client programme constraints.

4.1 Programme

Our proposed project plan (Figure 3) is shown on the following pages. If our proposal is successful, we will work with London Borough of Sutton to review and finalise our programme assumptions as appropriate for delivering the project effectively, whilst maintaining compliance with any time constraints.

We have shown in the project plan the main tasks and a progression of the project over a planned four month period, compressed from the tender document which suggests six months. We believe our experienced team is capable of conducting this work quickly and efficiently, subject to cooperation of key stakeholders.

Many of the stages are overlapping in nature, as the data is collected and the basic technical scheme is designed and optimised in relation to the economic performance analysis. Discussions on risk and commercial structuring of options can drive a need to refine the techno-economic model.

will coordinate all these activities, ensuring the right resource is available to link overlapping tasks.

Table 1 Key Dates and Engagement

Engagement/Milestones	Date
Project Inception meeting	Mid December
Update emails/phone calls	Fortnightly
Inception minutes issue	Inception meeting + 1 week
Site visit and individual stakeholder engagements	Early Jan
Deadline for data collection	Second week in Jan
Update meeting	End of Feb
Commercial options workshop	Mid March
Draft report	End of March
Comments received back from LBS	2 weeks after report submission
Final Presentation to LBS	End of April 2018
Final submission	2 weeks after comments received

In total, our budget allows for one workshop with LBS and one day of stakeholder meetings. These meetings may be distributed as the team sees fit for information gathering and engagement with developers to influence the project going forward.

The workshop with the LBS can either be held at the LBS offices, or hosted in Arup's London offices, we have not allowed for venue hire.

In finalising the reports, we will take on board comments from the client team on the draft report and presentation. We request one set of consolidated comments to be received promptly to avoid any potential for programme slippage.

Table 2 Resource schedule

	Data collection	Energy modelling	Energy sales	Energy ditribution	Carbon calculation	Economic appraisal	Planning policy	Project plan and risks	PM	**Total Days**
Project Director	0.2	0.3	0.0	0.0	0.2	0.0	0.2	1.6	0.4	2.8
Project Manager	1.2	2.3	0.5	1.2	0.9	1.3	0.4	2.3	2.7	12.8
Technical	2.7	3.8	0.7	2.3	0.5	0.7	0.0	0.0	0.0	10.6
Commercial/ financial	0.8	2.5	1.5	1.8	0.4	2.0	0.0	2.0	0.0	11.1
Analyist	2.8	6.0	1.8	2.6	2.0	4.5	0.0	5.5	1.2	26.3
Town planning	0.2	0.6	0.4	0.0	0.8	0.0	2.2	0.9	0.0	5.1
Total days	7.9	15.5	4.9	7.9	4.8	8.5	2.7	12.3	4.2	68.7

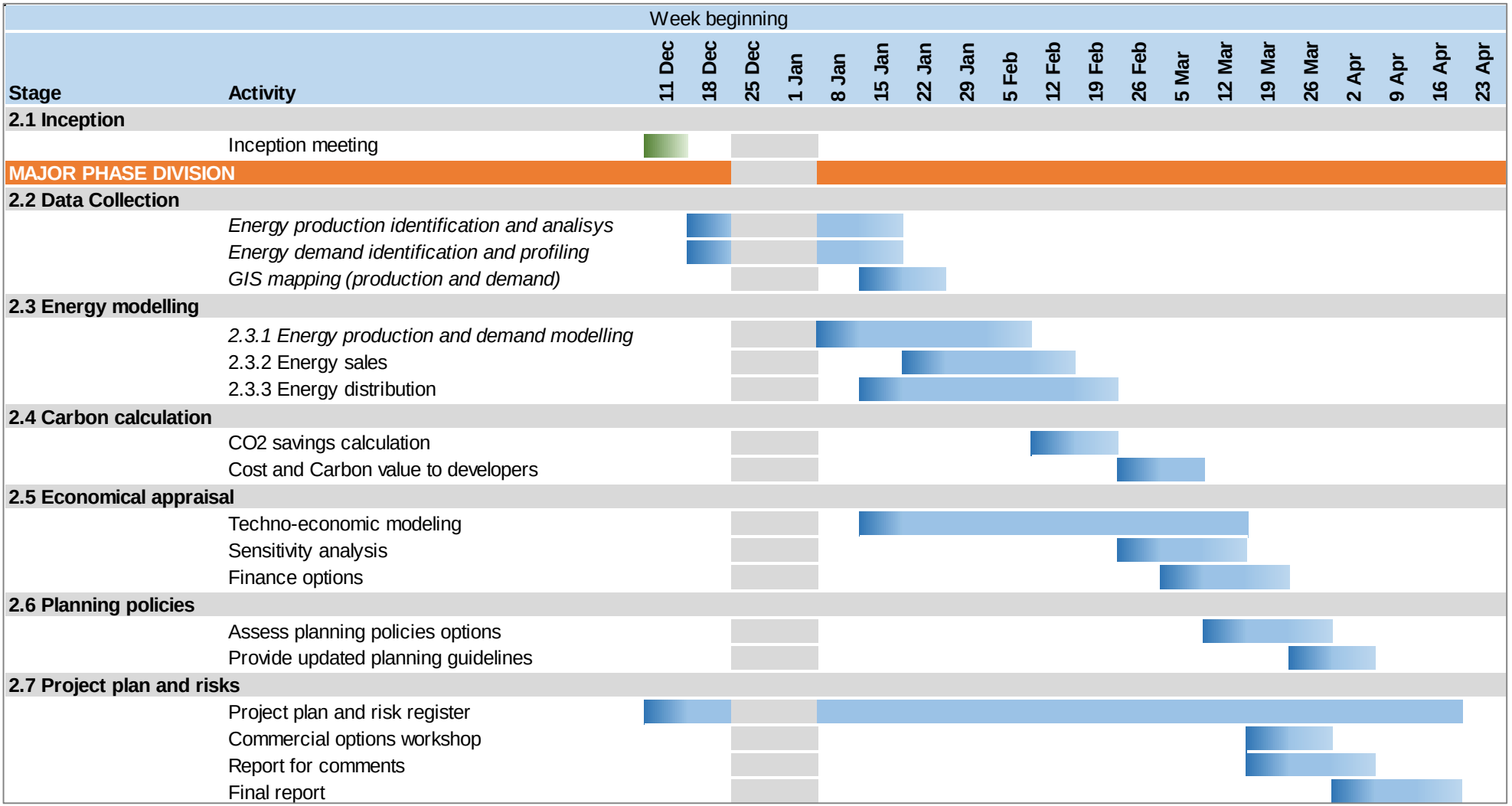


Figure 3 Programme Plan

4.2 Risk assessment

We are aware from previous experience that programmes can be affected in particular by third party response times and draft document review cycles. We are able to work flexibly with LBS to drive the programme forward or to allow for additional time for responses, bearing in mind that a driven programme approach will require firm decisions and cut-off points for data / assumptions. Changing such fixed points later on can lead to abortive work, with cost impacts to reiterate completed analysis. Our programme includes regular weekly forms of communication to allow all parties to be aware of the programme and so early warnings can be provided where programme risks arise. In relation to stakeholder engagement, we would look to LBS to use its influence to obtain timely cooperation and information returns. As noted previously (see section 2.9) we will maintain a risk register throughout the study, and risks and uncertainties will be reviewed with you as part of our emerging results. A preliminary list of project risks is provided in the table below.

Table 3 Sample of project risks

No.	Risk Description	Impact	Mitigation Action
1	Crossing features and roads	Cost and feasibility	Include cost allowance for abnormals and consult landowners
2	Poor quality data	Cost and feasibility	Determine early on the quantity and quality of data. Benchmarking used where appropriate
3	Uncertain future development phasing	Cost	Test sensitivity of delayed connections, identify interim supply solutions and temporary energy centre locations
4	Uncertainty in future building regulations	Feasibility	Clearly outline assumptions on expected energy performance of new developments. Apply cautious assumptions
5	Retrofit measures required to connect existing buildings	Cost	Include cost allowance for retrofit measures and test impact on commercial viability
6	Uncertainty in operating performance of energy network and systems	Cost	Allow for performance gaps and clarify all assumptions with Council
7	Air quality impact from energy centre options (for CHP options)	Cost and design	Include cost allowance for emissions control equipment and higher stack height
8	Uncertainty in carbon benefits as grid is decarbonised	Performance	Highlight the uncertainty and impact of grid decarbonisation on carbon performance of energy systems.
9	Optimism bias in network costing	Cost	Apply Green Book guidance adjustments for optimism bias
10	Building owners refuse to connect	Cost, performance and feasibility	Provide guidance on planning policy, quantify potential benefits to developers.
11	Impact on the local grid of the proposed energy option	Performance and feasibility	Provide guidance on grid impact, quantify potential benefits and drawbacks to the DNO.
12	Higher cost due to island location	Cost	Determine suitable uplift for standard pricing model based on local evidence and experience.

5 T5: Conflict of interest statement

As with any large consultancy, we operate for a wide variety of clients and we are currently working with a number of energy companies and developers who may have an interest in the very significant developments in Sutton Town Centre and London Cancer Hub.

We are experienced in managing these potential conflicts through the creation of separate project teams with separate, isolated filing systems, physical team locations and management protocols.

The team proposed for this commission do not have any known conflicts of interest at the time of writing. Any conflicts that arise will be notified to London Borough of Sutton immediately and appropriate conflict mitigation put in place.

6 Quality Assurance

The core of our approach is the Project Plan which defines the procedures and work to be undertaken, based on managing that, we deliver what the client wants, in content, accuracy, time and budget. This is a vital element in the management and briefing process for the project team.

[redacted] will enable our team to follow the defined Project Plan. She will use our common quality procedures, the Arup Management System (AMS). This is independently certificated (certificate no LRQ4003789) as meeting the requirements of ISO 9001 Quality), ISO 14001 (Environment) and ISO 18001 (Health & Safety) by Lloyd's Register Quality Assurance Ltd (UKAS Management Systems accredited).

We have structured our approach and project plan with best practice project management techniques in mind, which include:

- Project Scheduling - use of Microsoft Project and Microsoft Excel to plan and manage activities, associated interdependencies, milestones and to determine and monitor required staff resources.
- Client Project Inception Meeting – to introduce the team, confirm roles and responsibilities and agree project scope, program, key assumptions, deliverables and communication protocols.
- Internal Project Inception Meeting – to relay the outcomes of the Client project inception meeting, agree internal document and communication protocols.
- Progress Reporting – fortnightly, or as required, teleconferences to discuss progress of the project and any issues or concerns. Minutes taken and circulated, including actions, responsible persons and target dates and risks to programme, budget or project objectives. Information provided to feed into the DBEIS template for monthly project highlight reporting.
- Internal meetings – weekly, using the project program and scope management tool as a basis and with a focus on workstream interdependencies.
- Document Registers – to track revisions and issue of documents; and to track incoming documents from external parties.

- Mail Management – using Oasys Mail Manager (developed by Arup), all internal and external mail is automatically filed for ease of future reference.
- Deliverable Reviews – all documents will be independently checked by a professionally qualified person and approved by [redacted] as Project Director to provide technical and commercial review of all draft and final deliverables.
- Deliverable Presentation – to summarise deliverables issued and conduct a client Q&A session.
- Client feedback review meeting – conducted by an independent Arup staff member to obtain impartial feedback on our performance to inform future improvements.
- Project Close-out Record – to internally critique our performance and record lessons learned to improve future work.

Arup's management systems include a clear project leadership structure as demonstrated in our proposed project team organisation chart. Where issues arise – whether initiated by the client or by Arup – responsibility for resolving them rests initially with the Project Manager ([redacted] keeping the Project Director ([redacted] informed of such issues.

We would commit to addressing any escalated issue within a week of notification. Where such a timescale cannot be met, within that week we will propose to LBS steps to resolve the issue as soon as possible. We would expect to agree those steps and their timings within a week of notification to LBS.

PRICE SCHEDULE [Regulation 12 (5)(e)]

Energy Strategy for Sutton Town Centre and The London Cancer Hub

[Regulation 12 (5)(e)]

GLA 80814 – Task 3 - London Borough of Sutton Decentralised Energy Network – Feasibility Study
Pricing Schedule

PRICE SCHEDULE

Energy Strategy for Sutton Town Centre and The London Cancer Hub

Please provide a full response below and ensure you upload the price schedule onto the portal.

Prices should be:

a. in UK pounds sterling (£), decimal fractions of a pound to 2 decimal places.
b. inclusive of all costs associated with the provision of goods/services but exclusive of vat.

PART 1:

Position	No. of days	Sub-total
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

PART 2: VAT 20%

VAT @ 20% = [redacted]

Total Inc VAT = [redacted]

Sutton Town Centre Study

Project inception meeting

Energy demand
Data gathering

Obtain energy data for Council owned communually heated buildings
Identify other relevant existing buildings and obtain energy data
Identify new developments and obtain / estimate energy data
Examine phasing plans of new developments
Conduct energy sensitivity analysis
Prepare GIS-based heat demand map
Issue GIS-based heat demand map

DE network connection potential
Identify suitable clusters of load for forming DE networks within study area
Examine potential for phased development of networks
Determine motivations, commercial drivers and costs for loads to connect to DE network
Identify and agree key buildings to conduct site visits to establish network connection potential
Conduct site visits
Outline retrofitting measures required to connect existing buildings to DE network
Identify possible funding sources for each site

Network demand development
Calculate - where actual data is not available - hourly demand profiles and peak data for network loads
Calculate overall hourly demand profile and peak demand for each network

Energy production
Existing sources
Identify potential secondary sources of heat (e.g. waste heat recovery, water sources)
Quantify amount of heat available and feasibility of supply
Identify existing DE systems
Prepare GIS-based energy supply map

New installations
Identify all suitable low and zero carbon energy sources
Determine technology supply characteristics and performance
Provide asssessment of each technology against criteria determined by Sutton
Identify suitability of sources for supplying networks
Identify energy centre spatial and location requirements
Identify potenital sites for energy centre location

Identify utilities infrastructure and any constraints at preferred locations
Meet with stakeholders to agree energy centre locations

Demand and supply assessment
Agree a short-list of supply technologies, taking into account supply characteristics and available space

Analyse potential for incorporating solar PV into network schemes
Analyse potential for STC tram extension to be powered by renewable energy

Energy Distribution
Routing and energy centres
Commission utilities surveys for study areas

Carry out initial identification of DE routes from energy centre to loads

Engage with any third parties through whose land network passes
Assess options for phased network delivery
Consider requirements for temporary energy centres
Identify any measures that could be taken to avoid new development site-specific energy centres
Identify suitable private wire routes, where applicable
Make recommendations on enabling actions required

Modelling - network
Carry out hydraulic modelling to design and cost network
Calculate pumping requirements
Estimate capital and operating costs for maintenance and energy supply

Provide drawings of the dsitribution network and points of connection

Modelling - energy centre
Select optimum heat supply system to supply each network

Design and sizing of plant at energy centre, including thermal storage
Account for any phasing
Consideration of futureproofing of energy centre and network future zero arbon
Production of plant layouts and high-level flow SLDs

Energy sales
Investigate options to maximise electricity revenue
Make recommendations on cost effectiveness, supply security, logistics, licensing
Determine heat price for each customer type

Financial appraisal
Carry out full financial appraisal, determining:
Capex and replacement costs
Opex
Fuel costs
Energy sales income
Pay back period, IRR, NPV
Carry out sensitivity analysis
Consider finance options and application to delivery routes

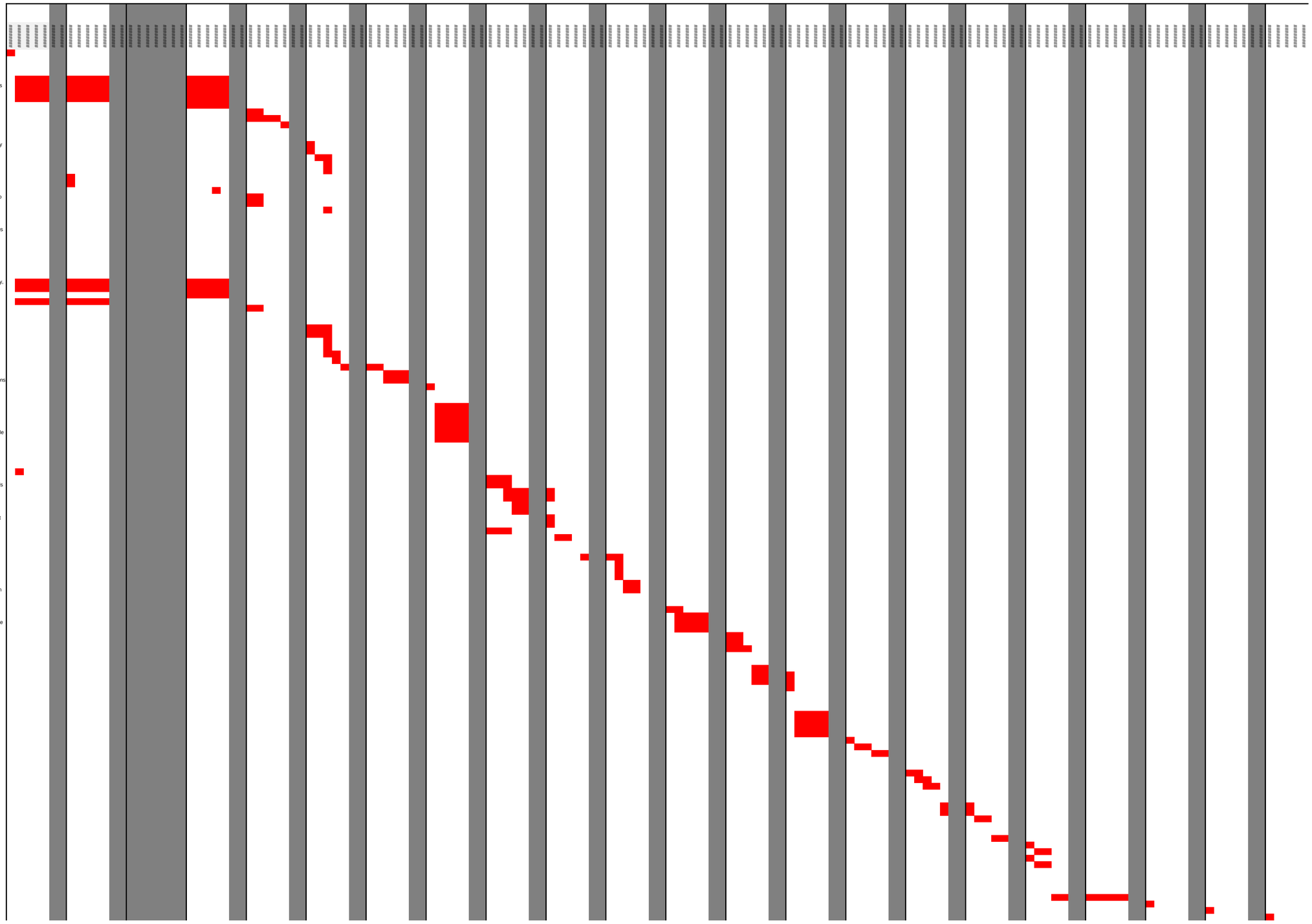
Carbon appraisal
Determine carbon savings over BAU
Quantify costs and carbon value of network to developers
Relate savings to London Plan carbon reduction targets

Planning policy

Assess deliverability of carbon targets and planning policy options
Provide updated planning guidelines

Project plan and risks
Provide a project plan for both sites
Workshop with LBS to discuss commercial options
Preferred commercial model for delivering the scheme
Workshop with LBS to identify key risks
Develop risk register and mitigations
Undertake preliminary emissions review alongside Council/ GLA Air Quality officers

Report and presentation
Write up report
issue draft report for review
Workshop to staff on report findings
Issue final version of report



London Borough of Sutton - Risk Register

Project: Town Centre and London Cancer Hub Energy Masterplan

Risk Level - Key
(1-5 = Low) (6-15 = Medium) (16-25 = High)

Ref. No	Identified Risk	Likelihood (1-5) 1 = Low 5 = High	Severity (1-5) 1 = Low, 5 = High	Risk Level (1-25) (Likelihood * Severity)	Rationale and Mitigating Actions	Risk Level (1-25) post mitigation	Risk actionee	Risk owner	Current status
MP1	Staff members unavailable to deliver project	1	3	3	All staff members have confirmed their availability for the duration of the project. In the unforeseen event that a staff member is unavailable, we will resource an alternative staff member to the project, and agree this with the Council.				
MP2	Delay in the delivery of the project	1	4	4	At the project outset, we will agree timescales and dates for outputs with the Council. We do not envisage any delays in the project at this stage. Should delay occur for any other reason, we will agree a revised project timeline with the Council.				
MP3	Inability to obtain required data	2	4	8	Obtaining energy data is key to effective masterplanning; however, it can sometimes be difficult to obtain the required information, either at all, or within the project timescales. We have set data collection at the earliest stage of the project, and see close interaction with stakeholders as key to the project's success. We will also agree a cut-off date with the Council for data collection, beyond which estimates or other data shall be used so as not to delay the project. The willingness of stakeholders to provide data can also indicate their enthusiasm to be involved in the project.				
MP4	Gaining required engagement from key stakeholders	3	3	9	Engagement with key project stakeholders is a key driver in the successful progression of district heating projects. We are fully aware of the difficulties in managing all stakeholder requirements and have Jono Adams - Associate Director at Sustain-Anthesis to manage this process effectivrely				
MP5	Credibility of study findings to progress to next stage of project development	1	5	5	Our expert project team has significant experience of taking district heating projects from design right through to installation and operation and so have a deep understanding of the practical issues of operational heat networks. We will apply this knowledge throughout this project to provide the best chance of this project progressing to the next development stage.				
MP6	Further project risks identified in the project kick off meeting and throughout the project will be documented in this risk register and appropriate mitigating actions will be put in place								
MP7	TBC								
MP8	TBC								
MP9	TBC								
MP10	TBC								
MP11	TBC								
MP12	TBC								
MP13	TBC								
MP14	TBC								
MP15	TBC								

Town Centre and London Cancer Hub Energy Masterplan

London Borough of Sutton

Contract Reference: GLA 80814

Proposal Issued: 15/11/17

Private & Confidential

Thursday, November 16, 2017

Distribution

XXXXX	**London Borough of Sutton**

Version Control

Version	Date	Author	Description of change	Approval
v1	061117	[redacted]	1st Draft	[redacted]
v2	141117	[redacted]	Final Draft	[redacted]

1 Executive Summary

Sustain is pleased to submit this tender response to the London Borough of Sutton for energy masterplanning services.

Sustain

Sustain is a multi-disciplinary consultancy based in London and Bristol that employs engineers, accountants and commercial specialists to identify, develop and install energy projects. We have worked in the UK district heating market for over ten years.

Our recent acquisition by the Anthesis Group has led to significant strengthening of, and additional recruitment into, our decentralised energy team over the last year. Most importantly this has given us access to Economics and Engineering expertise from [redacted]

We believe that a significant market failing for many district heating projects is that consultants with little or no operational experience have been advising clients through project development. In recognising this our team development has been routed in operational experience, which supports our clients in managing risk earlier and increasing the prospect of successful delivery.

3d-technical design

3D-TD are specialist practitioners in network proving, working from concept to delivery. The team are focussed on early assessment, prior to construction tendering, of network route risks to reduce capital costs and improve market engagement

Our best practice process recognises and expands on CIBSE's Heat Network Code of Practice, to practically demonstrate risk identification/avoidance benefits. As former heat network practitioners at ENGIE and VITAL the team have an unrivalled insight into route optimisation and design.

Together, we intend to incorporate best practice in the following key areas:

- Provide a multi-disciplinary approach that includes input from financial, commercial and technical experts from the outset
- We have a unique understanding of the complexities of progressing district heating projects within the local authority environment. Three members of the team, including the project manager [redacted], have experience of working within local authorities on this agenda.
- Utilise technical input from industry leading expertise in Sweden, where the district heating accounts for up to 90% of supplied heat in many major cities.
- We utilise a dedicated district heating communications programme developed by the Anthesis Strategy and Comms team. This supports

engagement, reduces demand risk and improves the volume and detail of data collection. Critically, we recognise the need for an experienced stakeholder engagement expert to lead this activity

- We use industry approved proprietary modelling developed and refined through in-operation use for pipe sizing and operational strategy.
- Set appropriate best practice design standards. [redacted]
- Provide design detail that reduces construction costs. Typically, all in rates for; Feasibility, GPR/EML and the production of Sectional Drawings/ HAZID schedules are between 3-5% of CAPEX. Our approach not only significantly reduces contract costs (by up to 33%), it delivers significant control and justifies lower contingency costs, when compared to an un-proved network route.
- [redacted].
- Take early stage commercial advice on commercial structuring from a UK GAAP qualified accountant with 15 years' experience of operating some of the UK's largest flagship DHN schemes
- Provide outputs that can be adopted by local authorities, particularly those in development management and planning.

This executive summary is an introduction to our technical submission but should not be considered as part of the 25 page limit

2 T1 – Understanding of the Brief

We recognise that the development of district heating projects is complex and multi-faceted. The scope of the brief is reflective of the challenges faced by local authorities in meeting the needs of multiple key stakeholders together with specific local circumstances.

There is shared experience from working on energy masterplanning and feasibility projects for local authorities including Islington, Brent, Haringey, Lambeth, Manchester and Birmingham. Our approach looks to take best practice from previous commissions and practitioner experience, whilst meeting the unique set of circumstances in the study areas outlined.

We believe that there are a number of crucial challenges to be addressed and our proposal is tailored to meet these. For brevity, we have broken these down into a broader range of summary themes.

2.1 Planning

Based on our previous experience with the economic regeneration team in Brent, and within other local authority organisations we will work with the Sutton planning team, and their partners to determine how the two proposed schemes deliver on the wider planning policy goals. In particular we understand from the brief; how to protect environmental performance (reducing CO_2) AND improve local air quality, how to manage the performance gap between system aspirations and build out, which metrics are appropriate for monitoring these goals with strong guidance that may be referenced in council documentation.

2.2 Heritage

We note that Sutton town centre benefits from being recognised as Historic Action Zone. One of the benefits District Heating enables in such areas is the ability to supply Low Carbon heat to historic structures, without requiring extensive adaption of facades to improve thermal efficiency. As a result conservation and operation of these assets becomes environmentally viable in a future low carbon world. We will detail this benefit, and any associated costs efficiencies to all relevant parties.

2.3 Direct engagement

A key aspect of the brief is direct engagement with both people and assets. We will dedicate senior staff to the review of existing buildings and heating systems, as well as with the engagement of council officers, health authority facilities management team members and public and private developers. In particular we will use our dedicated routing specialist to minimise legal complications associated with differing land ownership and address remaining requirements through appropriate commercial and legal mechanisms.

2.4 Practitioner experience

[redacted]

2.5 Routing

The Sutton brief implies certain challenges associated with network installation, including the crossing of two heavy rail lines, existing and future town centre infrastructure (including potential tramways), operation with critical facilities (medical) and fragmented land ownership. Our proposal includes the utilisation of dedicated routing specialists at a very early stage of planning. These will quickly determine what other risks to network installation may be present, in particular the 'difficult to predict' risks that may lie in the ground, and provide sensible routing advice from the project outset. This will inform the selection of final location for the energy centres, again minimising the risk these infrastructure assets will need to be re- located significantly re-designed at later project stages.

2.6 Customer engagement

Within Sutton town centre there is a broad spectrum of parties with a potential stake in the scheme. This includes other large public sector organisations (NHS, Network rail and TfL) down to individual property landlords or leaseholders in the retail district. Sustain are currently engaged working in other key regional rail hubs, including Birmingham and Manchester. These, like Sutton are also centres of retail commerce with direct relationships to Network Rail which require careful customer engagement and management. To facilitate this engagement we will ensure our electronic and document output address the needs (including any ICT constraints) and interests of this wide range of parties.

2.7 New opportunities

The Sutton masterplan presents opportunities from both private sector and public partners to rejuvenate these areas of the borough. In particular there is the opportunity for the council to provide and support long term energy infrastructure for the economic redevelopment of the town centre. We will help support this by investigating how private assets are proposed to be 'future proofed' for connection to this structure, and providing technical guidelines as to how this may be achieved and defended by the council in their engagement with other partners. This will include determining how financial support such as the HNIP programme may contribute to both schemes.

3 T2 – Methodology

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4 T3 – Quality of Resource

Sustain are pleased to field an expert district energy team of senior engineers, stakeholder specialists, commercial and financial experts who have worked together in previous projects. Our team has:

- A delivery focussed approached to project development, evidenced through a track record of taking projects from concept to installation. Notable examples include Birmingham New Street, Sheffield DHN and Southampton.
- Five team members that have practitioner experience of operational heat networks.
- Market leading technical expertise in all aspects of designing and delivering district heating.
- A deep working knowledge of local authority culture through multiple district heating LA project management roles
- A detailed knowledge of stakeholder motivations and barriers to realising successful project delivery, with esoteric understanding of market attitudes to project risk
- Demonstrable track record of developing financial models and commercial structures for investment from LAs, third party ESCOs and joint ventures.

The following organogram shows the management structure of the core project team. PRINCE2 principles will be used to plan and monitor the work tasks.

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4.1 Key Staff details

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4.2 Project Management

We work to PRINCE2 standards, employing usual best-practice documents and tools such as project initiation documents, Gantt chart, risk register, Change management, meeting minutes (including action/decision logs), secure remote access to documentation, and project directors for performance monitoring and escalation. We also track our resource allocation online by the hour.

[redacted]

4.3 Quality Assurance (QA).

The delivery team operate under independently audited ISO9001 Quality Management System certification.

[redacted].

4.4 Stakeholder Engagement

[redacted]

- [redacted]

4.5 CVs

Please see Appendix for staff CVs

4.6 Confirmation of consultants' availability

We confirm that all the above named consultants will be available for the duration of the project.

Sustain employ weekly resource scheduling meetings, which plan consultant time over the following three months. We only bid for work when there is recognised availability across the team to service contracts with some contingency.

In following our project and quality management processes, we also ensure that there are arrangements in place should key staff members be unavailable in unforeseen circumstances.

5 T4 – Programme & Risk Register

5.1 Project plan

Please see Appendix for the project plan

5.2 Resource Schedule

Please see Appendix for the project plan [Exempt - Regulation 12(5)(e)]

5.3 Risk Register

Please see Appendix for the risks identified with the delivery of the project and potential mitigations:

6 T5 – Conflicts of Interest

There are no actual or potential conflicts of interest that would arise were Sustain to be appointed.

We will ensure that we work closely with the team at Sutton through regular meetings and calls. We will hold a bi-weekly update call to keep the team abreast of progress.

7 Example case studies

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T1 UNDERSTANDING

Supporting the One Planet Vision

The London Borough of Sutton (LBS) takes its obligations under the London Plan seriously and is committed to making its contribution to achieving the Mayor's 2025 target of delivering 25% of London's energy from decentralised sources. The Council is right to identify its key development sites - Sutton Town Centre and the London Cancer Hub - as having the greatest potential to deliver this commitment and wishes to commission energy masterplans for these areas. In addition to confirming and quantifying the potential carbon reductions, the energy masterplans will also need to: be investable (particularly for the Council's ESCo - Sutton Decentralised Energy Network Limited), reduce energy costs, improve local energy supply resilience and support jobs in the green economy.

The level of detail for the technical assessment will be defined by the planning and pre-planning stage of the designs for the development sites. A masterplanning level design of a decentralised energy network is required to inform techno-economic modelling on which an outline business case can be established.

Where DEN development is dependent on new-build, successful delivery will be wholly dependent on achieving 'buy-in' from the developers. That buy-in is dependent on the presentation of a robust commercial case for them to engage with, and certainty that reliance on this network will not impact their programme of completions. This can only be achieved through robust technical assessment, commercial analysis and professional presentation of the case.

Sutton Town Centre

The starting point for the techno-economic assessment of decentralised energy opportunities for the town centre will be the Sutton Town Centre (STC) masterplan. This will provide information on the scale and phasing of new development to support energy demand projections, and identify opportunities to use planned infrastructure investment to support the development of a decentralised energy network (i.e. buildings that could house energy centres and public realm and transportation infrastructure proposals that could facilitate installation of heat and power distribution assets). The energy masterplan should also evaluate the most effective way to incorporate existing 'DH-ready' buildings and developments in the town centre into an area-wide network.

London Cancer Hub

The development of a world-leading cancer care and research campus - forming the London Cancer Hub (LCH) - offers an excellent opportunity to exploit the benefits of decentralised energy. The magnitude of the development and the different building uses makes the site ideal for networked energy solutions (heat, cooling and power) which are able to exploit energy demand diversity.

WSP are well placed to assess this potential as we were part of the team that developed the Development Framework for the LCH (Summer 2016), where our contribution included defining the utilities strategy. Through our involvement we have an excellent knowledge of all the stakeholders and the development proposals.

Ensuring robust outcomes

We have brought together an experienced team of heat network development engineers and analysts, with specialist GIS and town planning support, to ensure that we deliver energy masterplans that fully meet or exceed the Council's required outcomes.

T2 METHODOLOGY

HEAT MAPPING UPDATE

Defining the study area

Our first action will be to work with London Borough of Sutton (LBS) to confirm the boundaries of the two study areas; in particular considering heat customer/supplier opportunities beyond the red line boundaries.

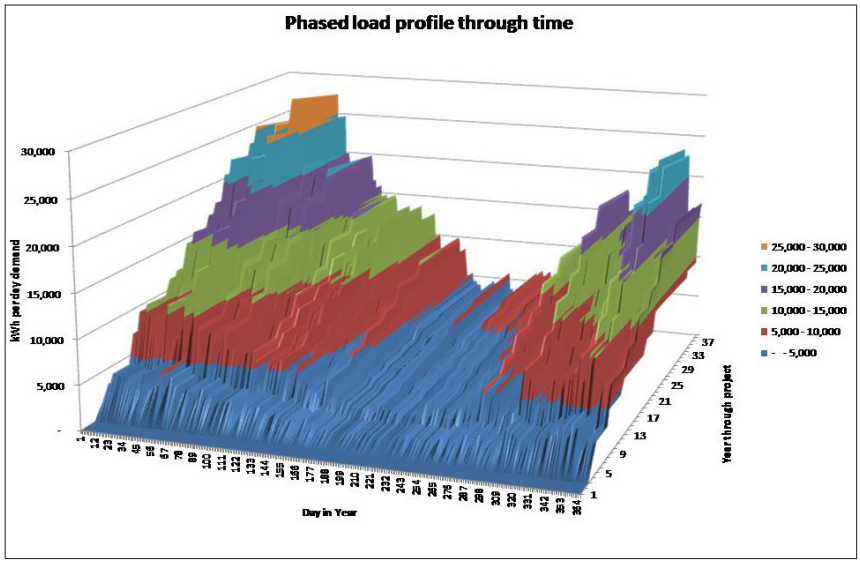
Data collection

As an experienced district energy consultant (see responses below) we have developed a proven approach to collecting the data required to produce high quality, GIS-based energy maps. The approach, which is compatible with section 2.1 of the ADE/CIBSE Heat Network Development CoP, is based on:

- Reviewing and updating any previous heat mapping data. This will include reviewing the previous heat mapping report.
- Collating data from publically available data sets (e.g. London Heat Map, NHM, DECC sub-national statistics at Middle Layer Super Output Areas (MLSOA) and Lower Layer Super Output Areas (LLSOA) levels (https://www.gov.uk/government/collections/mlsoa-and-llsoa-electricity-and-gas-estimates).
- To produce as complete a dataset as possible we propose to supplement data gathered from published sources and stakeholders using the following approach:
  - Identify significant buildings / potential customers in the study area
  - Use Google Streetview to determine the name and usage type for each building identified along with the number of storeys
  - Mark the location of each building and export the location to GIS
  - Measure the footprint of each building using GIS, this should be multiplied by the number of storeys recorded using Streetview
  - Calculate the energy demand using appropriate energy demand benchmarks (e.g. derived from CIBSE Technical Memorandum 46) multiplied by the calculated floor area (adjusted to the appropriate metric such as GIA/NIA), or by applying data obtained from energy modelling of similar buildings.
- We will consult with LBS Planners to obtain the most up-to-date information on new developments in the Town Centre.
- We will also use our contacts with Sutton for Life (to whom we are providing strategy consultancy) to obtain the most up-to-date information in relation to the London Cancer Hub.

Demand profiling

Hourly heat and electricity load profiling will be undertaken for each building / development based on annual consumption data developed from the mapping exercise above to enable detailed energy modelling for supply technologies. Annual demand will be distributed across each hour of the year (8760 hours) according to daily and seasonal demand profiles for different building usage types. This type of model is essential for analysis of new developments that will grow over a period of years. An example of the typical outputs is shown below.



Example of phased load growth and energy efficiency improvements over time

In modelling network heating demand, WSP will also take into account diversity. Our approach is to construct notional hourly heat demand profiles for each user type within each cluster site. When these different profiles are combined, a diversity of peak demands results, as the peak demands of the individual users do not coincide. Residential peak demands are, for example, typically earlier in the day than the demands for retail heating. This is important in relation optimising the dimensions of the heat distribution network.

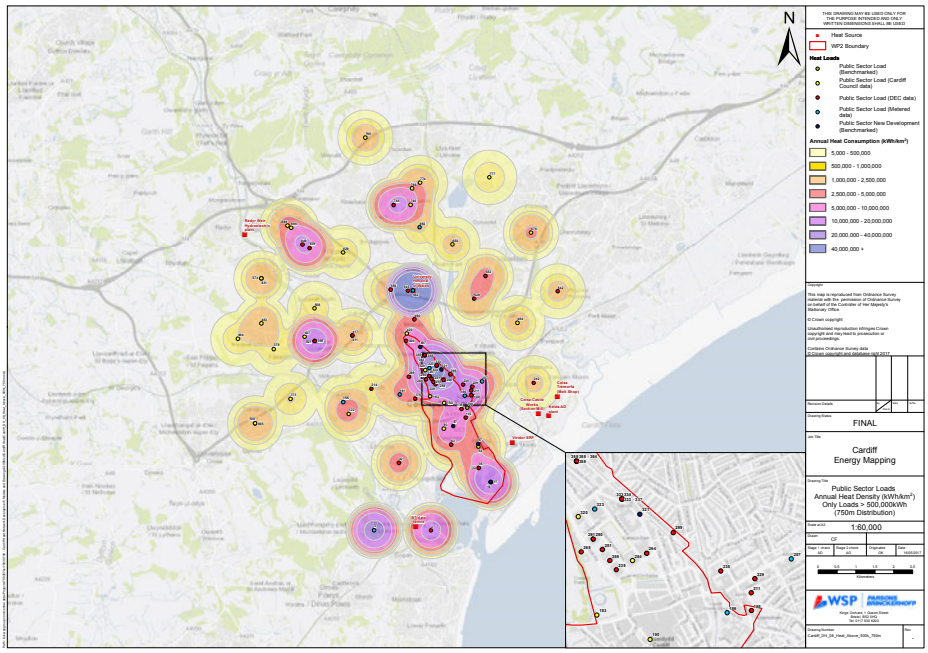
Heat supply opportunities

The mapping will include identification of existing and potential heat sources as a separate layer in the GIS mapping; as a minimum this will include the following:

- Existing heat networks and energy centre/CHP installations
- Existing biomass boiler installations
- Water sources for heat pumps: sewers, waterways (including reference to DECC Water Source Heat Map)
- Sources of waste or rejected heat (e.g. industrial processes, data centres, electricity sub-stations etc.)
- Waste processing facilities

Energy mapping

Heat load data will be uploaded to an OS map of the area using the ArcView GIS platform; this data will be provided to LBS in the form of a GIS file and accompanying MS Excel spreadsheet.



Example of output from heat load mapping

Stakeholder engagement

We will meet with stakeholders (key landowners and developers) in each area during the data gathering stage (see T4 for our programme); the purpose of the meeting will be to introduce the study and ourselves, and to facilitate collection of energy demand data.

We will hold a second meeting with the stakeholders before the cluster analysis work commences to identify potential energy centre locations; this will include temporary plant locations as dictated by development phasing.

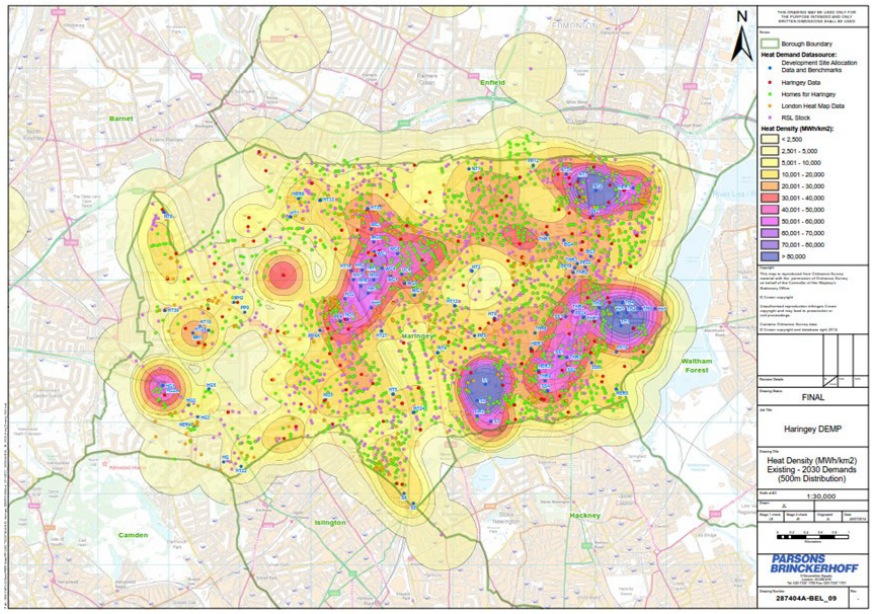
ENERGY MASTERPLANNING

Technical assessment

Identifying heat clusters

The GIS model will feed into our cluster analysis tool to assess the clustering of loads and the growth of heat load over time (development phasing). Visualisations of the heat demands through time will allow us to identify suitable locations for an energy centre or centres, potential kick-start schemes that could expand through time and possible routes for interconnecting heat mains. An example of the output from the cluster analysis is shown below.

We will use our cluster analysis tool (which is based on a 'nearest neighbour' evaluation) to identify priority heat cluster areas. We will produce a visualisation of the clusters and generate a summary of the schemes which will be used to identify schemes for techno-economic modelling.



Heat load density map for London Borough of Haringey from which 7 significant heat clusters were identified

Priority sites will be selected by applying the following criteria:

- Heat load density
- Nearest neighbour assessment (to identify clustering)
- Availability and proximity to heat supply source
- Assessment of physical constraints
- Strategic growth opportunities e.g. inter-linkage of existing 'DH-ready' developments.

District heating infrastructure constraints mapping

Once the energy demand assessment work is underway and it is possible to identify different schemes, we will map potential heat mains routes and consider optimising routes to avoid constraints.

Geographic constraints (rivers, canals, changes in topography), and physical infrastructure constraints (tram lines, major roads etc.) will be identified on OS backgrounds (assumed to be provided and licensed for use by LBS).

The location of existing utilities will be ascertained using published information (we have allowed for obtaining buried utilities information from Groundwise). Information relating to the location of existing decentralised energy system components (existing CHPs, within site heat distribution infrastructure, PV arrays, etc.) and identified constraints will be added to separate layers on the GIS map. The map will be used to identify potential issues associated with temporary and permanent energy centre locations and heat network pipe routes.

We would also validate routes identified by carrying out desk-based surveys using Google Earth, and site surveys to walk the proposed heat mains routes.

A significant proportion of the capital expenditure for a decentralised energy scheme is contained within the energy distribution networks. We have direct and recent experience in optimising district heating pipe and private wire electricity network designs for ESCOs delivering decentralised energy systems on new-build urban extensions, taking existing and future loads into account. Our approach to energy centre location and infrastructure routing attempts to minimise capital cost by identifying the least constrained heat mains routes, the availability of soft-dig corridors, integration with masterplan proposals and any land ownership issues.

An example of a constraints mapping exercise taken from the North Tottenham DEN feasibility study

Local heat distribution systems

We will analyse potential local heat distribution networks based on the heat clusters identified above with our bespoke 'Decentralised Energy Pipeline Model'. This Excel-based software has been developed specifically for the analysis of decentralised energy schemes and their heat supply systems at a strategic level. It provides an efficient, feasibility level analysis of anticipated total capital costs, operating benefit over existing systems, and of whole life cost. WSP has successfully employed this model for its work on developing heat networks for Haringey, Greenwich, Exeter, Bristol, Gateshead and Newcastle.

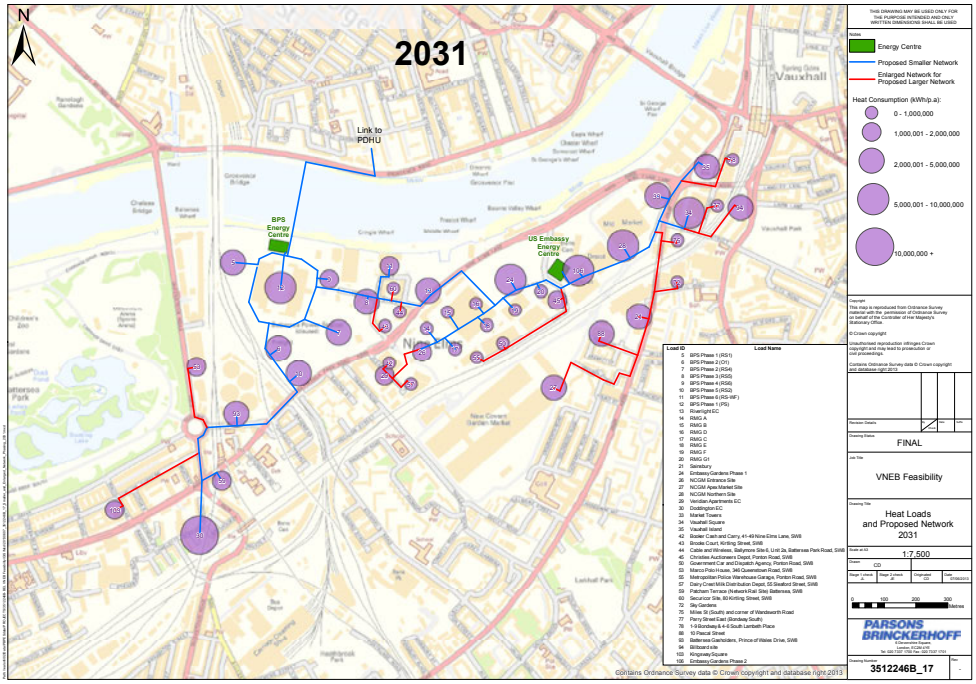
The inputs into this model are the spatial distribution of loads (i.e. the lengths of networks joining loads), their magnitudes, whether the buildings contributing heat demands are existing or new build, estimated load factors of heat demand, and base-case fuel types and efficiencies of heat production.

The model utilises information for each heat customer to be connected, as the operating temperature of the network will be set by the temperatures required by the connected customers, and calculates the required diameter of each element of a network based on appropriate temperature differentials. This then informs cost estimation of the network based on per metre of trench cost indices for pre-insulated pipework of varying diameters.

Pipe sizing will be calculated and a budgetary cost estimate prepared based on current live procurements, for two options:

- standard operating temperatures
- 4th generation network conditions (i.e. a low temperature network, below 60 degree C flow).

An example of a district heating design, undertaken for the Vauxhall Nine Elms Battersea Opportunity Area – a major area of regeneration for which WSP produced the energy master plan - is provided below. This shows the location of the key loads and the network required to supply them, taking the location of constraints into account.



Private wire networks

Our electrical team will review their knowledge of UKPN's grid in the vicinity of the two study areas, and engage with existing contacts at the DNO to discuss the constraints (supply and distributed generation), potential for innovative connections, potential benefits this offers UKPN, and the incentives (including reduced cost of connection) these might provide.

Generation profile forecasts will be established for the CHP supply options at each location and used alongside the demand profiles to assess the operation of a PWN utilising utility-scale battery storage to maximise revenues from power generation.

For each study area we will provide concept designs for the connection of onsite generating plant to the UKPN network in the form of an outline single line diagram. We will also provide a budgetary cost estimate for the installation of the network, to be input to the techno-economic modelling.

Energy centre locations and capacities

Potential locations for DEN energy centres will be assessed against the following factors:

- Engineering and construction suitability – space available for plant and, where applicable, fuel deliveries and storage
- Proximity to and capacity of utility connections
- Planning, statutory and regulatory requirements/constraints
- Environmental factors including noise, vibration, air quality, visual impact, vehicle movements.

During our site surveys (mentioned in the DH route constraints mapping section above) we will also review possible energy centre locations established through discussion with LBS planning officers.

WSP will use our proven in-house low and zero carbon technology model to calculate the capacity of the energy centre plant. The energy demand data collated during the energy mapping phase (see above) will be used to simulate how a range of plant capacities will operate over a typical year when supplying the DEN. WSP will use their extensive experience of designing energy centres to identify the plant capacity for each technology option that has the greatest potential to produce the greatest CO2 reduction at the lowest cost. A schedule of plant capacities will be produced for each technology option for the potential energy centre locations.

The plant capacities produced from the technical model will be used to produce an outline layout for each option. The layout will allow the energy centre footprint (land take) to be estimated. The energy centre footprint will be used to develop a cost for the energy centre building (where a suitable existing building cannot be identified). Allowance will be made for future expansion of the energy supply plant; the capacity of this plant will be determined in the context of the wider area strategy.

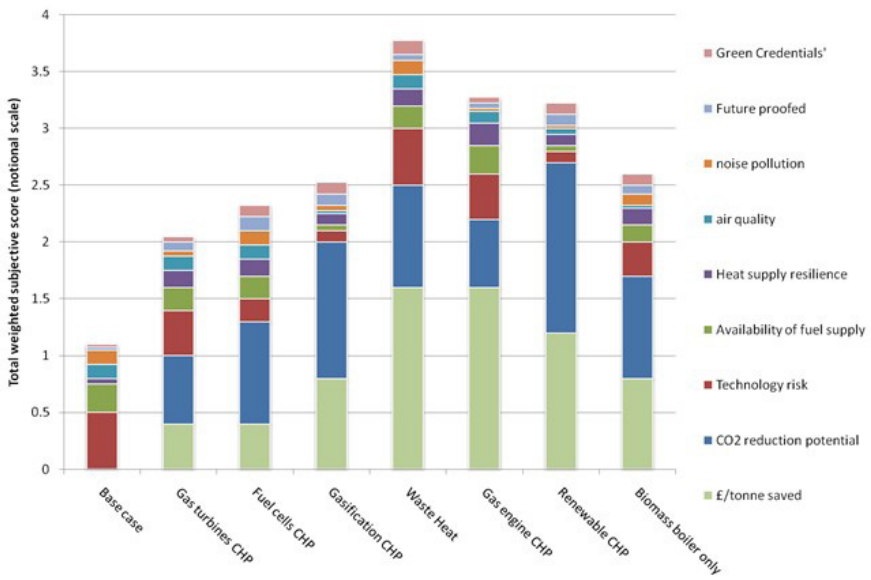
Low carbon technology heat supply options

We will use a quantitative scoring exercise to screen the potential technologies to identify those that will be included in the techno-economic modelling.

Each technology will be scored according to its specific performance against a set of selection criteria agreed with LBS; these would include, inter alia:

- CO2 reduction potential – Measured according to the outputs from the technical modelling undertaken by WSP. The base case scores 0 because it is not able to realise a CO2 reduction.
- £/tonne CO2 saved – The initial capital cost and the whole life CO2 saving over a 25 year period will be used to calculate the £/CO2 saved over the project lifespan. The base case (or business-as-usual position) scores 0 because there isn't an initial capex or a CO2 saving.
- Technology risk – The technical and commercial viability of a technology is determined in part by the risk posed. The operational track record of each technology will be used as a proxy for technology risk. High risk options are less likely to be acceptable to ESCOs. Options with a lower technology risk will score higher than those without a proven track record.
- Availability of fuel supply – The ability to procure sufficient fuel for the technology is determined by the fuel supply chain. Natural gas is considered to be the most available with liquid biofuels being the least available.
- Heat supply resilience – Options that utilise more than one technology or multiple units are considered to offer a greater degree of heat supply resilience.
- Air quality – The burning of fuel creates airborne pollutants. This problem can be exacerbated if biomass and bio-oil are the primary fuel source as there are concerns over very fine particulates that cannot easily be removed. The production of NOx is also an issue associated with the operation of any of the combustion technologies, with the exception of the use of waste heat.
- Noise pollution – The operation of low and zero carbon technology can lead to increased noise pollution from the operation of CHP engines, fans and heat rejection equipment. Options that use spark or compression ignition technology are considered to be more polluting than biomass boilers, heat pumps or waste heat.
- Future proofed – Technologies that do not rely on natural gas and are able to deliver significant CO2 reductions are more likely to be 'fit-for-purpose' in the future than conventional boilers or gas engine CHP.
- 'Green credentials' – The public perception of the district heating scheme depends somewhat on how 'green' it is perceived to be. Renewable technology is considered to be more 'green' than technology that uses natural gas, additionally the use of waste heat is considered more sustainable than the other options.

A weighting factor will be applied to the scores for each technology in order to reflect the perceived importance of the assessment criteria. The factors will be discussed and agreed with the LBS Project Manager.

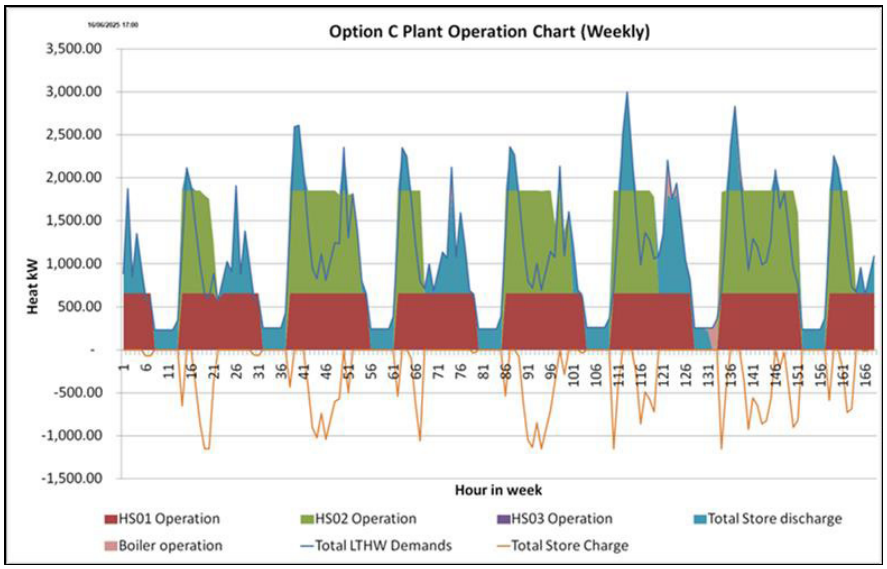


Results of the technology selection assessment for the Gateshead Town Centre District Energy scheme (construction completed December 2016)

Thermal storage

Depending on the diurnal demand patterns of the combined loads forecast on the network and the level of low carbon thermal output available, the use of thermal storage can significantly increase the proportion of low carbon heat that can usefully be used by a heat network. The use of a thermal store also allows the operation of a CHP to be decoupled from the heat demand profile, therefore allowing the CHP to maximise revenue from electrical generation.

WSP has demonstrated the vital importance of correctly designed thermal storage in the many CHP and district heating projects that we have successfully delivered. WSP will comment on the applicability of thermal storage for the various schemes identified as part of this project, particularly the demand clusters identified as building blocks in the phased delivery of a wider-area network.



Typical graphical output from WSP's modelling showing the impact of thermal storage in minimising boiler operation to meet heating demand

Pathway to a zero carbon solution

The assessment of renewable technologies will form part of a wider analysis considering how heat supplies to the heat networks can be de-carbonised over time. The analysis will consider fuel switching and the associated replacement of the central plant. For example, spark ignition engines fueled by natural gas, which are the prime mover of choice for DH schemes of the size anticipated for schemes in the study area, have a life of 15 years at which time they could be replaced with a different technology running on a lower carbon fuel.

Our study deliverables will include energy centre layouts illustrating how low carbon fuel supplies and combustion plant could be accommodated in future phases of development (e.g. by safeguarding space for storage of biofuels).

We will also consider how energy centre designs can be safeguarded for retrofitting heat pumps as replacements for CHPs.

Commercial workshop

Prior to undertaking the techno-economic modelling work we will facilitate a commercial issues workshop with Council stakeholders. The purpose will be to:

- Confirm the assumptions to be used in the modelling (discount rates, assessment periods, grant funding percentages)
- Understand the Council's preferred delivery model and the role of Sutton Decentralised Energy Network Limited in the development of heat networks in each study area
- Identify funding routes.

Techno- economic assessment

Our Lead Modeller, James Eland, will manage the techno-economic modelling which will be carried out using a whole life cost approach as recommend by HM Treasury. The net present value of each of the schemes identified for each development area (STC and LCH) will be calculated using a discount rate appropriate to the preferred delivery model i.e. 6% for a local authority ESCO model, 12% for a public-private partnership and 15% for a private sector ESCO approach. These rates are informed by our experience working on both sides of negotiations to procure ESCO's to deliver district energy schemes. Net Present Values (NPVs) will be calculated for assessment periods consistent with typical ESCO concessions i.e. a minimum of 25 years.

The economic assessment will be based on projected gas and electricity prices as per BEIS projections (Reference Scenario).

Assessment of capital costs will be based on:

- Budget prices for primary plant supply and installation from equipment suppliers
- Estimated civil construction costs for a new building / energy centre, and appropriate demarcation of costs with site developers
- Pre-insulated buried network costs based around recently received tender prices for installation in a similar location, applied to lengths and diameters calculated from modelling of the required network linkages between plots and the installation route developed from site surveys
- Estimated utility connection costs will be based on data from previous projects.

Assessment of operational costs based around:

- Primary plant efficiencies obtained from equipment suppliers
- Hourly annual profiles (8760 hours) developed for each building on the network based on typical usage for its given typology
- Hourly modelling of the operation of primary plant against the heat demands modelled, including the potential for thermal storage

- Calculation of carbon savings and a value assigned to this. It is proposed that a linear increasing value for CO2 is adopted in central case modelling, where 1tCO2 is valued at £17per tCO2 in 2017, rising annually by £1 to a maximum value of £30 in 2030, remaining static thereafter, in line with the dates of the BEIS central utility price projections.
- Assessment of potential developer avoided costs as a result of the scheme. This will be based around potential avoided costs related to the achievement of equivalent levels of carbon savings.

The key outputs of the techno-economic assessment will be:

- Economic results i.e. overall net present values, IRRs, simple payback periods, capital costs, operating costs and revenues, estimated replacement schedule. Results will be presented in real terms using discount factors appropriate to the preferred delivery model (see commercial workshop).
- Results will also be presented in the form of developer connection charges with a comparison of these with alternative compliance costs

Carbon benefit calculation

Environmental benefits of each scheme will be assessed by reference to:

- emissions savings over the business-as-usual case
- their potential input to achieving the borough's contribution to the London Plan targets
- their contribution to the GLA's DEEP objectives.

Scheme prioritisation workshop

We propose to select and prioritise schemes for further development (i.e. detailed technical and financial modelling) through a workshop exercise. The workshop will review scheme performance against a set of selection criteria - discussed and agreed with the Council's project manager – which would be expected to include:

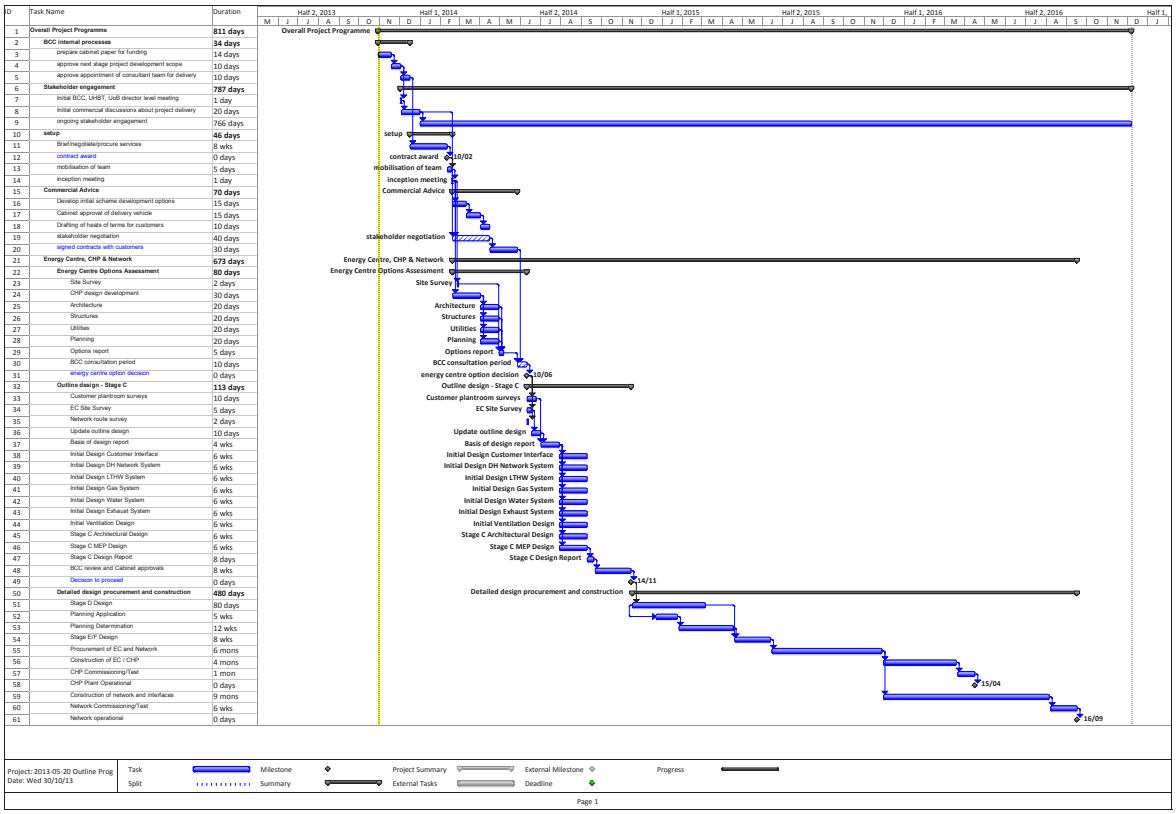
- Economic viability - as measured by the scheme's headline NPV (@ 6% over 25 years)
- Ability to deliver the Council's policy objectives, particularly the aspirations for regeneration and development of the Town Centre, improving local energy resilience, climate change mitigation and air quality
- Contribution to achieving the Mayor's target of delivering 25% of the capital's energy from decentralised sources by 2025 (i.e. magnitude of carbon savings)
- Potential impacts on local air quality
- Attractiveness to potential customers/developers (e.g. contribution to achieving planning conditions, energy cost savings potential etc.)
- Ability to attract funding and/or revenue support (e.g. HNIP grant).

Planning policy support

Principal Town Planner, Marcus Wood will provide draft guidance for inclusion in a future SPD, based on his experience of working with other LPA's which have developed decentralised energy networks.

Project plan and risks

An implementation plan will be developed for the priority scheme in each development area. This will set out the actions (and their durations) necessary to implement the energy networks (i.e. detailed feasibility, business case development, commercialization, and construction).



ID	Task Name	Duration
1	**Overall Project Programme**	**811 days**
2	**BCC internal processes**	**34 days**
3	prepare cabinet paper for funding	14 days
4	approve next stage project development scope	10 days
5	approve appointment of consultant team for delivery	10 days
6	**Stakeholder engagement**	**787 days**
7	Initial BCC, UHBT, UoB director level meeting	1 day
8	Initial commercial discussions about project delivery	20 days
9	ongoing stakeholder engagement	766 days
10	**setup**	**46 days**
11	Brief/negotiate/procure services	8 wks
12	contract award	0 days
13	mobilisation of team	5 days
14	inception meeting	1 day
15	**Commercial Advice**	**70 days**
16	Develop initial scheme development options	15 days
17	Cabinet approval of delivery vehicle	15 days
18	Drafting of heats of terms for customers	10 days
19	stakeholder negotiation	40 days
20	signed contracts with customers	30 days
21	**Energy Centre, CHP & Network**	**673 days**
22	**Energy Centre Options Assessment**	**80 days**
23	Site Survey	2 days
24	CHP design development	30 days
25	Architecture	20 days
26	Structures	20 days
27	Utilities	20 days
28	Planning	20 days
29	Options report	5 days
30	BCC consultation period	10 days
31	energy centre option decision	0 days
32	**Outline design - Stage C**	**113 days**
33	Customer plantroom surveys	10 days
34	EC Site Survey	5 days
35	Network route survey	2 days
36	Update outline design	10 days
37	Basis of design report	4 wks
38	Initial Design Customer Interface	6 wks
39	Initial Design DH Network System	6 wks
40	Initial Design LTHW System	6 wks
41	Initial Design Gas System	6 wks
42	Initial Design Water System	6 wks
43	Initial Design Exhaust System	6 wks
44	Initial Ventilation Design	6 wks
45	Stage C Architectural Design	6 wks
46	Stage C MEP Design	6 wks
47	Stage C Design Report	8 days
48	BCC review and Cabinet approvals	8 wks
49	Decision to proceed	0 days
50	**Detailed design procurement and construction**	**480 days**
51	Stage D Design	80 days
52	Planning Application	5 wks
53	Planning Determination	12 wks
54	Stage E/F Design	8 wks
55	Procurement of EC and Network	6 mons
56	Construction of EC / CHP	4 mons
57	CHP Commissioning/Test	1 mon
58	CHP Plant Operational	0 days
59	Construction of network and interfaces	9 mons
60	Network Commissioning/Test	6 wks
61	Network operational	0 days

Project risk registers will be updated to include the site-specific risks associated with the priority scheme in each development area.

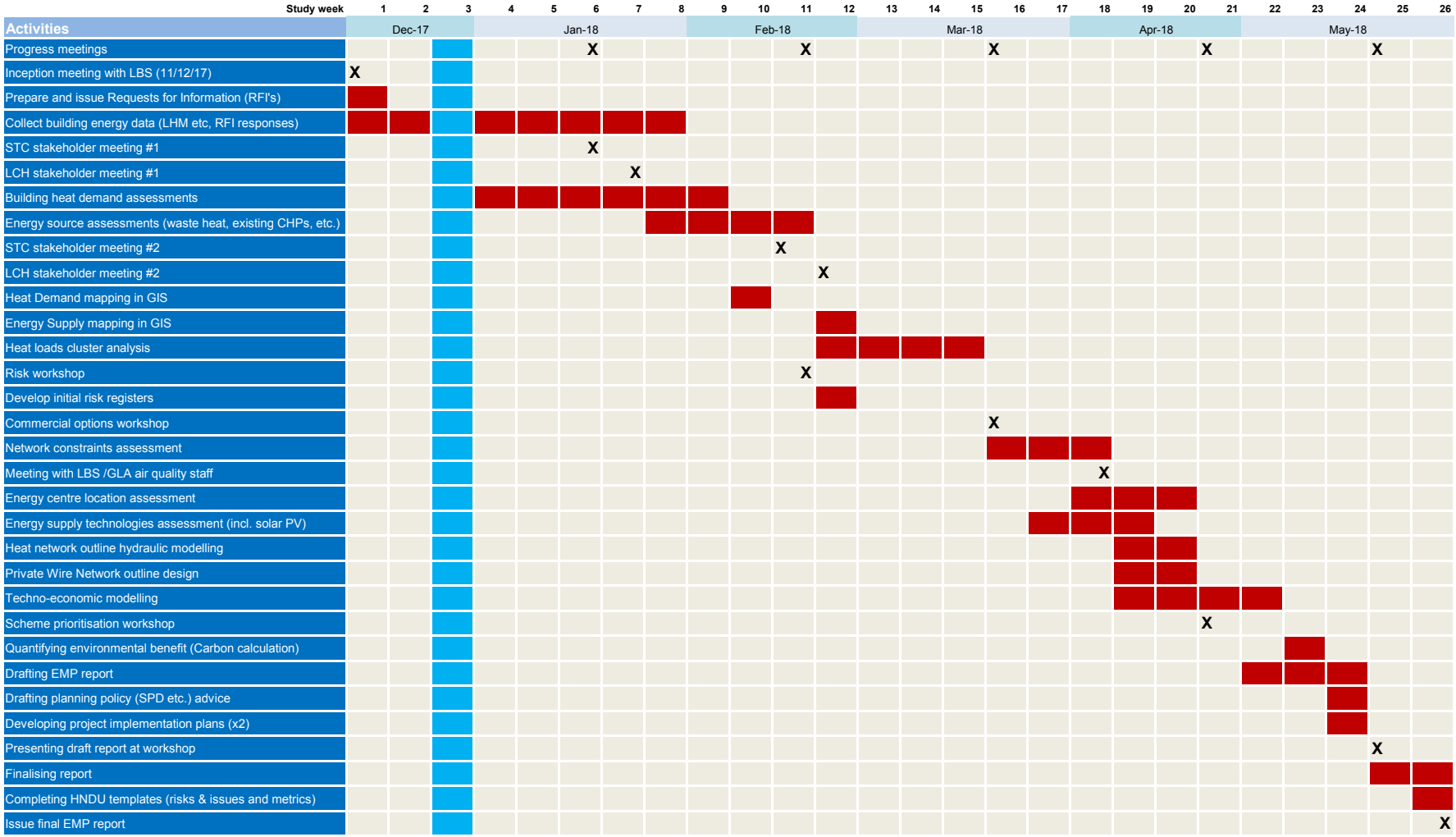
EMP deliverables

- A dedicated energy master plan report covering both development areas
- Mapping in GIS of identified schemes showing constraints, heat mains routes, energy centre locations and constraints
- Recommendations for scheme prioritisation (based on outcomes from the workshop)
- An outline delivery programme for the priority scheme for STC and the London Cancer Hub, and accompanying narrative
- Development of a risks and issues register (HNDU format) for each priority scheme in each study area
- Recommendations for integration into planning policy documents
- Presentation of draft report to a workshop of relevant Council officers

T4 PROGRAMME & RISK REGISTER

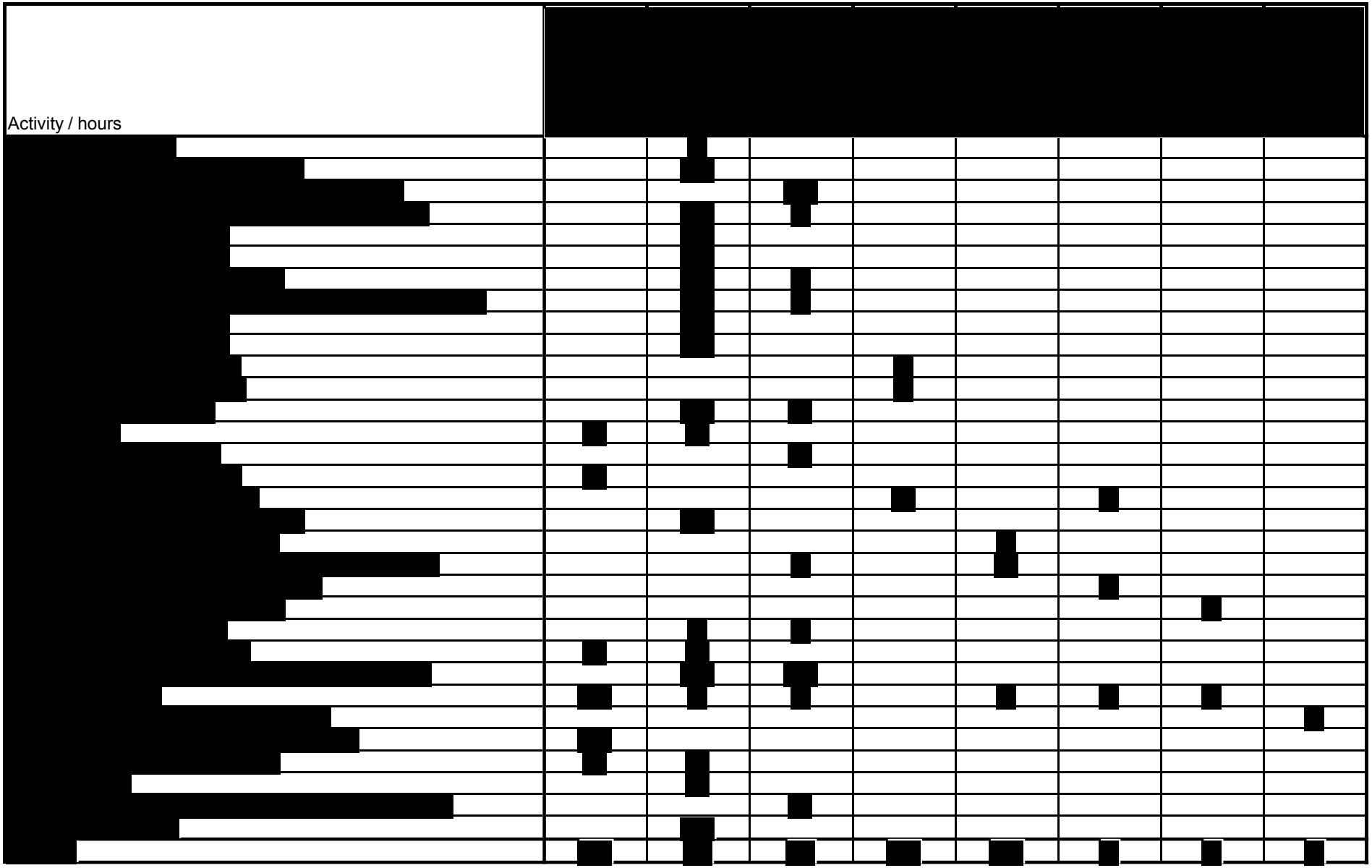
Project programme

We have provided an outline programme of activities to deliver the services in accordance with the methodology presented in our response to T2. Our programme assumes that we work on the STC and LHC areas in parallel, and shows that we will deliver the final EMP report at the end of May 2018.



Resource schedule

The resource schedule is based on the activities identified in the programme above.



Risks to delivery of the project

We have identified some specific risks to delivery of the energy masterplans which we have described below.

Engaging developers

If the energy masterplan is to be regarded as a success and to have a realistic possibility of being delivered it will have to have the active backing of the developer community.

WSP will apply the experience we have gained both working alongside local authorities developing decentralised energy networks (in Camden, Gateshead, Haringey and Exeter), and with developers or their appointed ESCO partners (Nova Victoria, Westfield Stratford, Westfield Shepherds Bush and the Queen Elizabeth Olympic Park) to our developer engagement activities. We believe the positive story we can convey, illustrated by examples, will help persuade developers that it is in their interest to engage with the masterplanning process.

Development phasing

For both areas (STC and LCH) the phasing and timescales for full development build-out poses a challenge to delivering a networked energy solution. Area-wide energy solutions require significant early capital investment, beyond that required for a Building Regulations and London Plan compliant approach. This early capital spend needs to be recouped through a combination of connection, use-of-system and consumption charges over the life of the system in order to provide a return on the investment. Where development phasing is protracted the period during which revenues are not recovering the cost of capital, let alone repaying the capital itself, is also protracted, having a significant negative impact on the business case.

We have worked with a number of clients faced with similar challenges to identify the optimum point at which to install the major infrastructure assets, in order to achieve a viable business case. This invariably involves some temporary plant but also acceptance that early phases may need a transitional approach to the ultimate solution envisaged. This is where our practical experience of delivery will be critical to identifying a viable solution which meets the ambitions of the council whilst also avoiding undue financial burden on the developer.

We will also bring our experience of supporting innovation (e.g. projects supported through DBEIS' Small Business Research Initiative) and successful HNIP funding applications to maximise the use of grant funding for the early phases, moving to a sustainable business model as the site development progresses.

Project risk register

Our approach to identifying and managing project risks such as those above is to set up and maintain a detailed risk and opportunity register. The register is set up in Excel to facilitate updates and is a live document. We use a dedicated risk workshop to set up the register initially.

The purpose of the register is to provide a tool that facilitates capturing project risks, allows the stakeholder group to quantify their likelihood of occurrence and severity of impacts, and consequently to develop mitigation strategies. The register is also an excellent way of summarising project risks in a single document and of communicating risks to a stakeholder group with varying technical knowledge.

Our spreadsheet automatically grades the severity of each risk, based on its impact and probability, and colour codes them for ease of prioritisation. Once the known risks have been identified and their unmitigated severity quantified the workshop will consider the mitigation strategies for each risk. The intention is that the mitigation strategies feed back into the design development process, specification, procurement approach or operational strategy, as necessary, to result in a project that is essentially de-risked as far as is feasible and practicable before it goes to market. We would expect LBS staff to take over maintenance of the risk register on completion of the masterplanning work.

An excerpt from the risk register which we developed for the Vauxhall Nine Elms Battersea EMP is included as an example.

				Pre mitigation score				Post mitigation score		
				Potential impact (A)	Likelihood of occurrence	Gross risk severity (unmitigated)		Potential impact (A)	Likelihood of occurrence	Net risk severity (post mitigation)
	Risk category	Project Stage	Risk description	1 = minor impact, 5 = show stopper	1 = very unlikely, 5 = extremely likely	Grid 1 matrix	Potential mitigation	1 = minor impact, 5 = show stopper	1 = very unlikely, 5 = extremely likely	Grid 1 matrix
1	Technical / infrastructure	Feasibility	Tendered DH network costs are higher than were allowed for in feasibility study	3	3	Significant	Ensure that recent tender prices are used in feasibility and outline business case work - test prices with suppliers	3	1	Minor
2	Technical / infrastructure	Feasibility	Customers who have expressed interest in network connection do not sign up for delivery of heat	2	2	Minor	Ensure that commercial / carbon terms incentivise connection of all customers	2	1	Minor
3	Technical / infrastructure	Feasibility	Project sponsors do not have funds to implement scheme	5	2	Significant	Ensure that all funding soures are explored (DEPDU)	5	1	Significant
4	Technical / infrastructure	Feasibility	Cost of capital too high to make project viable	5	2	Significant	Ensure that potential access to low-cost funding is explored	5	1	Significant
5	Technical / infrastructure	Feasibility	ESCo / 3rd party goes bankrupt after before or during operation	3	1	Minor	If scheme is viable then other operators will have interest in operating scheme	3	1	Minor
6	Technical / infrastructure	Feasibility	The capex used in concept stages is not sufficient to deliver schemes	4	2	Significant	Ensure that capex estimates are realistic. At implementation phase, mitigation options might include reduce scope of scheme / find other funding sources / increase customer base	4	1	Significant
7	Technical / infrastructure	Feasibility	Redevelopment of existing building stock will reduce heat demand	1	2	Minor	Structure heat sales tariffs to mitigate loss of income to DEN?	1	1	Insignificant
8	Technical / infrastructure	Feasibility	Future proofing networks results in too high an upfront capex for network which renders project unviable	4	1	Significant	Plan phased expansion such that viability is maintained	4	1	Significant
9	Technical / infrastructure	Feasibility	Government incentives favour alternative renewable technologies- i.e. RHI promotes biomass, heat pumps (from natural source) and solar thermal, making scheme less competitive with alternatives	5	3	Severe	Scheme is likely to be dependent on subsidies to a greater or lesser extent, hence mitigation measure is to convince funding bodies of wider benefits of scheme that may not be reflected in financial modelling. High level support critical	5	1	Significant
10	Technical / infrastructure	Feasibility	DE does not represent the least cost means of reducing CO_2	2	4	Significant	Mitigation measures may include optimising system size and costs to increase carbon saved per £ spent.	2	3	Significant
11	Technical / infrastructure	Feasibility	DH mains are very expensive to install because of high density of existing burried services/other barriers	2	2	Minor	Obtain as much information as possible on existing services at detailed design stage and use realistic cost throughout process	2	1	Minor
12	Technical / infrastructure	Feasibility	Life cycle costs are greater than expected, for example replacement and maintenance	2	1	Minor	Use realistic costs in design works	1	1	Insignificant
13	Technical / infrastructure	Feasibility	Indexation/ cost changes over project lifespan	1	1	Insignificant	Use appropriate risk evaluation tools during project design to evaluation risks of utility / indexation changes	1	1	Insignificant
14	Technical / infrastructure	Feasibility	Unexpected increase in wholesale electricity prices increases heat generation cost at incinerator and erodes viability	2	1	Minor	Allow for margin in design, and be prepared to change scope of scheme if strategic expansion is no longer viable with increased electricity prices - a technology mix of heat sources would mitigate this risk	2	1	Minor
15	Technical / infrastructure	Feasibility	Fuel price variability	1	2	Minor	Tradional' fuel prices should be largely decoupled from overall heat generation costs, due to low level of top-up boiler use required.	1	1	Insignificant
16	Technical / infrastructure	Feasibility	Market driven heat sales price may not be sufficient to cover costs	3	2	Significant	Ensure carbon savings and other benefits are reflected in the heat sales price. Value engineer cost reductions in installation. Increase customer base.	2	2	Minor
17	Technical / infrastructure	Feasibility	Overspend on capital during delivery stage	3	2	Significant	Ensure that competent project management and design review processes are implemented	3	1	Minor
18	Technical / infrastructure	Feasibility	National debt levels result in removal of funding, ability of SPV to obtain borrowing is restricted	4	2	Significant	Ensure that the project has demonstrable 'bankability' if possible	4	1	Significant
19	Technical / infrastructure	Feasibility	Availability of council or private partner to commit to longer term financial inputs	4	2	Significant	Ensure maximum commercial performance of the scheme to encourage investment.	3	1	Minor
20	Technical / infrastructure	Feasibility	Failure of ESCO leaves Wandsworth / Lambeth the supplier of last resort	4	2	Significant	Seek legal and financial advise on structuring of contracts to safeguard against losses in the even of ESCo failure	2	1	Minor
21	Technical / infrastructure	Feasibility	Poor level of service from DE operator	3	2	Significant	Ensure minimum service levels are cleatly defined in the contractual arrangement with the DE operator	2	1	Minor
22	Technical / infrastructure	Feasibility	Lack of sufficient demarcation of responsibilities leads to disruption to service?	3	2	Significant	Ensure clear demarcation of responsibilities is included in contractual arrangements with all parties	2	1	Minor
23	Technical / infrastructure	Feasibility	Disruption to public services/transport during construction phase leads to public protest	2	3	Significant	Where possible avoid routing the network through busy routes. In new developments, coordinate installation of network with other utilities. Ensure timely and wide-reaching public information campaign prior to construction. Where possible, limit works in busy areas to less busy times. Provide suitable traffic diversions.	2	1	Minor

T5 CONFLICTS OF INTEREST

WSP are not aware of any potential conflicts of interest that would arise if we were appointed.

PRICE SCHEDULE

Energy Strategy for Sutton Town Centre and The London Cancer Hub

Please provide a full response below and ensure you upload the price schedule onto

Energy Masterplan -Scoring Spreadsheet

Scoring Key	
5	Excellent; full and accurate understanding of the requirement with some added value
4	Very Good; demonstrates good understanding of the requirement, above minimum requirement
3	Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement
2	Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response
1	Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement
0	No Response Submitted

TENDERER	T1: Understanding (5%) Outline in brief of your understanding of the purpose of this project.		T2: Methodology (25%) Proposed approach to this work, describing the key activities and methodology. The information provided should be specifically applicable to this scheme (Scope - Attachment 2). • Outline of proposed methodology for undertaking the 'outline scope of study' including detailed description of the deliverables that will be provided and any additional data required from OPDC/GLA or other third parties.		T3: Quality of Resource (30%) For each proposed consultant, supply: • Details of key staff to be involved in this work. This should include synopsis of their role and the expertise they would bring to the project and their level of involvement across the stages the commission • CV (max 2 pages per person with relevant experience) • Confirmation of the consultant's availability for the duration of the contract.		T4: Programme & Risk Register (10%) Provide a programme to deliver the services to include: • A full project plan with clear milestones. • A full resource schedule (in person days and broken down by role) for the full programme. • Any risks associated with the delivery of the project, along with rationale.		Quality Score (70%)	PRICE	PRICE SCORE	Final Score
Aecom	-Clear outputs	4	-Indicates on-site surveys will be undertaken -Have their own in-house technical tool -Taking a holistic -strategic approach -Brief read well, approach is v. clear -Information relates back to Sutton	4	-Quality Assurance by Senior Member of staff	4	-Risk Register felt thin -Project Plan is very clear	4	56	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]											

[redacted]

DEEP Project Manager
24/11/17

[redacted]

Sutton Town Centre Programme Officer
24 11 17

[redacted]

SENIOR PLANNER, LBS
24.11.17

Aecom	[redacted]		
T1:	3	4	4
T2	4	5	4
T3	3	4	4
T4	3	4	4

[redacted]			
T1:	3	4	4
T2	3	3	3
T3	2	2	3
T4	3	4	4

[redacted]			
T1:	3	4	4
T2	3	4	3
T3	3	3	3
T4	3	4	4

[redacted]			
T1:	3	3	2
T2	3	3	3
T3	3	3	3
T4	3	3	3

[redacted]

Sutton Town Centre Programme Officer 24.11.17

[redacted]

SENIOR PLANNER LBS 24 11 17

[redacted]

DEEP Project Mgr

[redacted]

24/11/17

Tender report

A mini-competition was undertaken on the GLA's Decentralised Energy framework (80814) which was set up and established specifically for the Decentralised Energy Enabling Project (DEEP).

A mini-competition was run from sub-lot 4.1: Energy strategies and masterplanning. The following consultancies are those on the sub-lot and notified of the opportunity.

Buro Happold
Atkins
Arup
London Borough of Islington
CSE
Ramboll
Sustain
Sweco
AECOM
Greenfield Nordic
WSP
Element Energy

4 suppliers submitted tender responses which were:

- Sustain Limited
- Ove Arup and Partners
- WSP
- Aecom

The evaluation was undertaken by [redacted] (Sutton), [redacted] (Sutton) and [redacted] (GLA). Individual scoring was undertaken followed by consensus scoring. The evaluation had the following weightings; 70% quality / 30% price. Following the evaluation Aecom were the highest scoring bidder and appointed. The contract value was for £74,886. An inception meeting was undertaken with Aecom on the 12/12/17 at Sutton's offices.

Milestone	**Date**
ITT on Sutton procurement portal	19/10/2017
Deadline for suppliers to confirm interest in bidding for services	16/11/2017 at noon
Evaluation of bids	13th – 24th Nov 2017
Notification of bid outcome:	30/11/2017
Inception meeting:	12/12/2017
Contract award (including signature of all parties):	09/01/2018

London Borough of Sutton
24 Denmark Road
Carshalton
Surrey
SM5 2JG

30th November 2017

Via Procontract

Dear AECOM

QUOTATION FOR:

The provision of services to deliver an energy masterplan for Sutton Town Centre and The London Cancer Hub

Contract Award

We have the pleasure in informing you that you have been successful in your bid to the London Borough of Sutton dated 13 November 2017 for the abovementioned Quotation Opportunity.

As identified in the Quotation documentation, the award of contract is subject to receipt of your insurance indemnity certificates.

Contract Documents

It is confirmed that this letter, the correspondence referred to therein, your Quotation response shall form a binding contract between us.

The Contract Documents are as follows:

1. Call-off Contract
2. Online method statements (quality)
3. Price Schedule
4. DEEP Framework Agreement

Please sign the Call-off Contract and return to the Council contact in hard copy format for counter-signature by the Authority.

Contract Price

The Contract Price(s) will be as stated in your Quotation dated 13th November 2017 at £74,886.76.

Contract Duration

6 Months

Council Contact

The contact shall be:

[redacted]

Yours sincerely

[redacted], Sutton Town Centre Masterplan

London Borough of Sutton
24 Denmark Road
Carshalton
Surrey
SM5 2JG

30th November 2017

Via Procontract

Dear Ove Arup and Partners LTD

The provision of services to complete an energy masterplan for Sutton Town Centre and The London Cancer Hub

Further to submission of your quotation in respect of the above, I regret to inform you that your proposal has not been successful on this occasion. After extensive comparative evaluation of your quotation using the published selection criteria, the Evaluation Panel has concluded that an alternative organisation be recommended for appointment.

The results are as follows:

Award Criteria: most economically advantageous tender (MEAT).
[redacted]
Ranking: [redacted]
Name of successful Organisation/s: AECOM

We thank you for participating in the quotation process and whilst you were unsuccessful on this occasion we look forward to your participation in any future requirements that may arise.

Should you require a telephone debrief regarding your quotation submission, please contact the Council using the **messaging facility** on the portal, to arrange a convenient date and time.

Yours sincerely

[redacted], Sutton Town Centre Masterplan Delivery

London Borough of Sutton
24 Denmark Road
Carshalton
Surrey
SM5 2JG

30th November 2017

Via Procontract

Dear Sustain

The provision of services to complete an energy masterplan for Sutton Town Centre and The London Cancer Hub

Further to submission of your quotation in respect of the above, I regret to inform you that your proposal has not been successful on this occasion. After extensive comparative evaluation of your quotation using the published selection criteria, the Evaluation Panel has concluded that an alternative organisation be recommended for appointment.

The results are as follows:

Award Criteria: most economically advantageous tender (MEAT).
Sub Criteria: [redacted]
Ranking: [redacted]
Name of successful Organisation/s: AECOM

We thank you for participating in the quotation process and whilst you were unsuccessful on this occasion we look forward to your participation in any future requirements that may arise.

Should you require a telephone debrief regarding your quotation submission, please contact the Council using the **messaging facility** on the portal, to arrange a convenient date and time.

Yours sincerely

[redacted], Sutton Town Centre Masterplan Delivery

London Borough of Sutton
24 Denmark Road
Carshalton
Surrey
SM5 2JG

30th November 2017

Via Procontract

Dear WSP

The provision of services to complete an energy masterplan for Sutton Town Centre and The London Cancer Hub

Further to submission of your quotation in respect of the above, I regret to inform you that your proposal has not been successful on this occasion. After extensive comparative evaluation of your quotation using the published selection criteria, the Evaluation Panel has concluded that an alternative organisation be recommended for appointment.

The results are as follows:

Award Criteria: most economically advantageous tender (MEAT).
Sub Criteria: [redacted]
Ranking: [redacted]
Name of successful Organisation/s: AECOM

We thank you for participating in the quotation process and whilst you were unsuccessful on this occasion we look forward to your participation in any future requirements that may arise.

Should you require a telephone debrief regarding your quotation submission, please contact the Council using the **messaging facility** on the portal, to arrange a convenient date and time.

Yours sincerely

[redacted], Sutton Town Centre Masterplan Delivery

SCHEDULE 6B - CALL-OFF CONTRACT TEMPLATE

[NOTE TO USERS: TO BE USED WHEN THE GLA IS FUNDING THE SERVICES]

[NOTE TO USERS: It is IMPORTANT to ensure the call-off contract includes any specific Support Agreement / ERDF requirements if applicable]

Framework Number: GLA 80814
Call-Off Contract Number:

THIS CALL-OFF CONTRACT is made the 9 **of** January 2018

BETWEEN:

(1) [The Mayor and Burgesses of The London Borough of Sutton] (**"the Authority"**);

(2) [AECOM Ltd], a company registered in England and Wales (Company Registration Number 01846493) whose registered office is at AECOM House,63-77 Victoria St, AL 1 3ER St Albans(**"the Service Provider"**); and

(3) **THE GREATER LONDON AUTHORITY** whose principal offices are at City Hall, The Queen's Walk, London, SE1 2AA (**"the Contracting Authority"**).

RECITALS:

A. The Contracting Authority and the Service Provider entered into an agreement dated [illegible] within which sets out the framework for the Service Provider to provide certain Services to the Contracting Authority or the Authority (**"the Agreement"**).

B. The Authority wishes the Service Provider to provide the specific Services described in this Call-Off Contract pursuant to the terms of the Agreement and this Call-Off Contract and the Service Provider has agreed to provide such Services on those terms and conditions set out in the Call-Off Contract.

C. The Contracting Authority has agreed to fund or part fund the Services being provided to the Authority and shall make some or all the payments on the behalf of the Authority as set out in this Call-Off Contract.

THE PARTIES AGREE THAT:

1. CALL-OFF CONTRACT

1.1 The terms and conditions of the Agreement shall be incorporated into this Call-Off Contract.

[redacted] CALL-OFF CO-ORDINATOR AND KEY PERSONNEL

The Authority's Call-Off Co-ordinator in respect of this Call-Off Contract is named in Attachment 1 and the Service Provider's Key Personnel in respect of this Call-Off Contract are named in Attachment 2.

This Call-Off Contract [redacted] epresentatives of each of the Parties.

SIGNED
For and on behalf of the [*Authority*]

Signatur[redacted]

Name: [redacted]

Title: South Tyne Centre Masterplan Delivery Programme Manager

Date: 15/12/2017

SIGNED
For and on behalf of [*the Service Provider*]

Signature: [redacted]

Name: [redacted]

Title: DIRECTOR

Date: 18/12/17

SIGNED
For and on behalf of the Contracting Authority [redacted]

Signature: [redacted]

Name: N. Feeley

Title: AD Environment

Date: 04/01/2018

Attachment 1

[To be completed by the Authority]

9. Services to be provided

10. Timetable

Commencement date [complete only if different from the date of the Call-Off Contract]:

Call-Off Term:

Attach Project Plan (if any) (including Milestones if applicable)

11. Expenses

Expenses (if any) that the Service Provider may claim:

12. Authority Account Details

Relevant account code and cost centre:

13. Address for Invoices

Address where invoices shall be sent: *[Authority]*
Accounts Payable
[PO Box]
[London]
[Postcode]

Electronic format required (if any) for submission of orders by the Authority and of invoices by the Service Provider:

Set out information required in each Invoice.
[Note to Users: GLA to provide details GLA require to set up payments]

Date/Period for submission of Invoices: *[Insert time or period for the submission of invoices by the Service Provider in accordance with Clause 7.1 of the Agreement]*

Address where invoices shall be sent: *Greater London Authority*
Accounts Payable
PO Box 45276
14 Pier Walk
London
SE10 1AJ

Electronic format required (if any) for submission of orders by the Authority and of invoices by the Service Provider:

Set out information required in each Invoice.

14. Authority Call-Off Co-ordinator

Name:
Address:
Phone:
Fax:
Email:

15. Availability of Key Personnel

The Service Provider's Key Personnel shall be available at the following period of notice:

16. Other information or conditions

Specify any other information or special conditions relevant to provision of Services under this Call-Off Contract

Attachment 2

[To be completed by the Service Provider]

5. **Charges**

Fixed fee: £74,886.76

6. **Key Personnel**

The Service Provider's Key Personnel (include grades and areas of responsibility):
Project Director: [redacted]
Project Manager: [redacted]eher
Technical Lead: [redacted]

7. **Proposed sub-contractors (If any)**

None

8. **Proposed completion date**

[COMPLETE ONLY IF DIFFERENT FROM DURATION/EXPIRY DATE STATED IN ATTACHMENT 1]

Decision to Award Contract

Aecom was appointed to provide the London Borough of Sutton with the services to produce a Sutton Town Centre Energy Master Plan with a total contract value of £74,886. Costs are borne by the GLA.

Reason for Decision:
Through a mini-competition undertaken on the GLA's DEEP Framework, the tender was directed to all 12 providers listed in sub-lot 4.1 on the framework and was based on 70% quality and 30% price. From the tenders submitted the winning bid was from Aecom that received the highest score and fully met the tender specification.

B_Sutton_SDEN_PM

INVITATION TO TENDER

(ITT) For

REF: GLA 80814 – LOT 2.3

London Borough of Sutton

SDEN Project Management and Commercialisation Services

Monday 15 January 2018

Mini-Competition Request Form

Framework Agreement Name and Reference Number: **GLA 80814 – Decentralised Energy Framework**

Subcategory: 2.3 Project Management and Commercialisation Services

Mini-competition Reference: **GLA 80814 - Project Management and Commercialisation Services**

Date: 15 January 2018

This is a Request Form for the provision of Services in accordance with the Agreement referenced above. This is an enquiry document only, constituting an invitation to treat and it does not constitute an offer capable of acceptance. Your Proposal must be submitted as an offer capable of acceptance by the Authority; however such acceptance will not occur unless and until the Authority posts notice of acceptance to you.

Attachment 1 of this Request Form sets out the Services required by the Authority and other relevant information.

In your Proposal, you must respond to the information requested in Attachment 1 by completing Attachment 2.

Attached to this Request Form is a draft Call-Off Contract. The Authority is under no obligation to award any Call-Off Contract as a result of this Request Form.

Your Proposal will be assessed against those submitted by other service providers as part of a Mini-Competition process. The Authority will award the relevant Call-Off Contract to the Service Provider with the Proposal that is the most economically advantageous with reference to the assessment criteria set out in Attachment 1.

Any clarifications regarding this Mini-Competition should be directed per the instructions in this ITT.

This procurement is being managed by **London Borough of Sutton (LBS)**. The process is being carried out electronically via the LBS's eTendering portal: Pro-Contract from ProActis Link: https://procontract.due-north.com

From: London Borough of Sutton (LBS)
Name: [redacted], Regeneration Project Manager, Major Schemes

Sutton

1. INSTRUCTIONS TO CONSULTANTS

1.1 Please read the following instructions carefully before submitting a tender.

1.2 A submission in response to this invitation shall be referred to hereafter as the "Tender" and the organisation making such as submission shall be referred to as the "Consultant".

1.3 All references to "Schedules" in this document refer to Schedules within this document.

1.4 Consultants are asked to confirm their intention to bid by 18 January 2018

1.5 Consultants are required to submit a separate Technical Proposal and a separate Commercial Proposal.

1.6 The technical submission should be no longer than 25 A4 pages (Single Sided) with the font size comparable to Arial 12 points (excluding synopsis and CVs – no more than two pages per CV) must include the following as a minimum:

1.7 The Tender Submission must comprise of 1. **'Technical Proposal' 2. 'Commercial Proposal'** as follows:

1) **Technical Proposal** (response to the Technical Proposal T1, T2, T3, T4 and T5 addressing Attachment 2)

2) **Commercial Proposal**

Please note:
The Technical Proposal and the Commercial Proposal must be separate documents. **Prices must not be included in the Technical Proposal**. The documents must be clearly titled **'Technical Proposal**' and **'Commercial Proposal'**. Submissions must be (**Technical Proposal** in Microsoft Office applications or Adobe Portable Document Format **(pdf)** documents) and (**Commercial Proposal** in Microsoft Office applications or Adobe Portable Document Format **(pdf)** documents).

1.8 Consultants are welcome to partner with other organisations if they feel that they can provide the expertise required to complete the project. Full details of how the partnership would work (governance etc.) should be provided in the Tender Submission.

Sutton

1.9 LBS will not pay any costs associated with producing a Tender or incurred in any subsequent discussions or clarifications, regardless of whether that Tender is successful or not.

1.10 Tender returns must have all pages numbered and returns must be submitted in English.

1.11 All communications will be sent via the portal to the main contact who registered on the LBS's eTendering portal: https://procontract.due-north.com

1.12 Consultants that require additional online help to use the eTendering portal must contact the portal's Supplier Help Desk which is available by email to: ProContractSuppliers@ProActis.com as soon as possible.

1.7 LBS reserves the right to award the Call-Off Contract for which tenders are being invited in whole, in part, or not at all.

1.8 LBS reserves the right not to award this Call-Off Contract to the lowest or any Tenderer and LBS will have no liability (contractual, tortious or otherwise) for failure to consider any tender. Following receipt of tender documents, LBS reserves the right to arrive at a shortlist of prospective organisations without any reference to, or communication with any of the Consultants.

1.9 The Call – Off Contract will be awarded post evaluation to the most economically advantageous tender (MEAT) submitted, using the specified evaluation criteria.

1.10 This tender shall remain open for the acceptance by LBS (or its nominee) and will not be withdrawn by us for a period of three calendar months from the date fixed for return.

2. CLARIFICATION QUESTIONS

2.1 Any technical questions or requests for clarification regarding this ITT should be submitted via the LBS e Tendering portal https://procontract.due-north.com . If LBS considers any question or request for clarification to be of material significance, both the question and the response will be communicated, in a suitably anonymous form to all Consultants who have responded. The deadline for any clarification questions is Wednesday **31 January 2018.**

2.2 Please **do not** contact LBS staff directly as it is imperative that the process remains fair and transparent to all Consultants.

Sutton

3. CONFIDENTIALITY, PUBLICITY AND MARKETING

3.1 The contents of this Mini-Competition are confidential and must be used only for the purpose of submitting a Proposal. The Consultant must not make any such communication or enter into any collusive arrangement with any third party save for the purpose of sub-consulting.

3.2 Consultants must maintain strictest confidence and not disclose to any third party without prior written consent of LBS, the information supplied by LBS in this invitation to tender document and other confidential information supplied by LBS to the Consultant.

3.3 Consultants must not communicate to any person other than LBS, the amount or approximate amount of the charges and such charges must not be determined or adjusted by arrangement or in collusion with any third party. The Consultant must not make any such communication or enter into any collusive arrangement with any third party whether in relation to this tender or a tender submitted or to be submitted by such third party.

3.4 The technical specification made available to the Consultant during the course of this invitation to tender is strictly confidential. Such information should not be disclosed to any third party including subcontractors without the prior consent of LBS.

3.5 Consultants are not permitted to:

- Make any public statement or communicate in any form with the media in connection with this Tender Process.
- Use any trademarks, logos or any other Intellectual Property Rights associated with LBS.
- Represent that the Consultant is directly or indirectly associated in any way with LBS or this Tender Process.
- Engage in any form of marketing which creates, implies or refers to an association between the Consultant and LBS and/or the Tender Process.
- Do anything or refrain from doing anything in relation to the Tender Process that would have an adverse effect on LBS.
- Consultants must direct any queries from the media to Opportunity Sutton opportunitysutton@sutton.gov.uk.

4. TRANSPARENCY AND PUBLIC ACCOUNTABILITY

4.1 Consultants are reminded that LBS has the highest standards of procurement and intends to maintain a fair and open selection process. It will select a firm best

suited to the brief and is not obliged to select the lowest or indeed any of the returns. Late tenders will be returned unopened and any attempt to influence the outcome through hospitality or other inducements will result in the disqualification of the tender.

5. RETURN OF TENDER DOCUMENTS

5.1 Please complete and return your tender document on or before Monday 5th February 2018, 12 noon via the LBS eTendering portal. https://procontract.due-north.com

5.2 The tender document submitted must be in electronic format such as (Technical Word or PDF) and (Commercial excel). Please note that no other form of document transmission, e.g. hard copy by Courier, will be accepted.

5.3 Tenders submitted after the deadline time will not be accepted.

5.4 The LBS e-Tendering portal will reject any tender submission if it is published after the deadline stated in this document. The Consultant is strongly advised not to leave submission of the tender to the last minute.

5.5 Consultant must note that all files uploaded cannot be amended by anyone once published and that original files published by Consultants will be maintained in an unaltered state on the system right through the procurement process.

6. VALIDITY

6.1 Proposals must remain open for acceptance for 6 (six) months from the return of proposal date.

7. PROPOSAL SUBMISSION CLARIFICATIONS

7.1 During the course of the evaluation of submissions, the Consultant may be asked to answer questions about his submission and other matters related to the Services. The Consultant must respond to such questions as quickly as possible but, in any event, within 2 (two) working days or, if a deadline is specified, responses must be submitted by that deadline. Failure to respond may result in us rejecting the Proposal submission. Any amendments to the Proposal submission arising from these discussions with the Consultant will be taken into account in the final evaluation.

8. PROPOSAL CLARIFICATION MEETING

8.1 To enable moderation of the Proposal evaluation process, we may request a meeting from all, some or one of the Consultants. Failure to attend may result in us rejecting the Proposal submission.

9. PROPOSAL SUBMISSION EVALUATION

9.1 Evaluation of submissions will be on the basis of most economically advantageous proposal as per the assessment criteria set out in the tables contained in this ITT.

10. COMPLIANCE

10.1 All Proposals returned should comply in every respect with the requirements of this Mini-Competition. However, we reserve the right to consider non-compliant submissions where permitted.

10.2 Failure to disclose all material information (facts that we regard as likely to affect the evaluation process), or disclosure of false information at any stage of this procurement process may result in ineligibility for award. The Consultant must provide all information requested and not assume that we has prior knowledge of any of the Consultant's information.

10.3 Proposals that contain Specialist Consultants at above Framework Maximum Charge Out Rates will be deemed non-compliant. If you wish us to consider the approval of Specialist Consultants (at above Framework Maximum Charge Out Rates), this must be requested within the Mini-Competition clarification process prior to submitting your Proposal.

10.4 We shall not be liable for any costs, charges or expenses borne by the Consultant whether or not he is awarded a Call Off Contract, which for the avoidance of doubt includes any costs, charges and expenses arising from or associated with an abortive or cancelled procurement process.

11. ACKNOWLEDGEMENT OF RECEIPT OF THIS MINI-COMPETITION

11.1 The Consultant should acknowledge in the e-tendering portal receipt of this Mini Competition and confirm whether they intend to submit a Proposal. Failure to do so may lead to the Consultant not receiving any amendments, addendums and clarifications to Mini-Competition documentation.

12. CONTACT

12. 1 The procurement lead allocated to this Mini-Competition is [redacted]

Sutton

12.2 All contact must be via the e-tendering portal. Only technical issues relating to the e-tendering portal allow for direct contact of the procurement lead. In the first instance, the Consultant should contact the e-tendering portal help desk. If unresolved, contact the procurement lead by email preferably:

[redacted]@sutton.gov.uk

13. EVALUATION CRITERIA

13.1 Evaluation of submissions will be on the basis of most economically advantageous tender.

13.2 Consultants will be scored against the following Scoring Key as detailed in the Table below:

	Scoring Key
5	Excellent; full and accurate understanding of the requirement with some added value
4	Very Good; demonstrates good understanding of the requirement, above minimum requirement
3	Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement
2	Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response
1	Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement
0	No submission/question not answered

Sutton

Grade Definitions

Partner/Director

General	For a partnership, a Partner in the practice; for a limited company, any employee who is a "Company Director" as defined in the Companies Act 2006. Responsible for all grades of personnel.
Typical Education /Qualifications and Experience	Hold appropriate professional qualifications applicable to the discipline commissioned to perform and/or corporate membership of a major institution. Must have relevant work experience spanning several major programmes. The ability to demonstrate key involvement in delivering projects of high value and complexity. Overall responsibility for project(s) and for supervision, control and development of subordinate personnel Significant management responsibility and direction within the consultancy including client liaison, specialist skills or experience.

Principal Consultant

General	Reporting to Partner / Director. Member of a company who is able to deputise for the Director. The person will have the ability to manage and control teams and ensure that there are sufficient teams of personnel assigned to commissions. Responsible for all grades of consultants and support staff.

Sutton

Typical Education /Qualifications and Experience	Hold appropriate professional qualifications applicable to the discipline commissioned to perform and/or corporate membership of a major institution. Must have relevant work experience spanning several programmes. The ability to demonstrate key involvement in delivering projects of high value and complexity. Must have substantial transport experience and technical skills appropriate to the discipline. Responsibility for project(s) and for supervision, control and development of junior personnel. Significant management responsibility and direction within the Consultancy including client liaison, specialist skills or experience.

Senior Consultant

General	Reporting to Partner / Director or Principal Consultant. Person holding corporate membership of a professional body recognised by TfL and has the ability to demonstrate key involvement in delivering projects of high value and complexity. Responsible for all grades of consultants and support staff on behalf of the Director/Partner.
Typical Education /Qualifications and Experience	Must have relevant work experience spanning several programmes / projects The ability to demonstrate key involvement in delivering projects of high value and complexity. Must have substantial transport experience and technical skills appropriate to the discipline. Responsibility for project(s) and for supervision, control and development of junior personnel.

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	Significant management responsibility and direction within the organisation including client liaison, specialist skills or experience.

Consultant

General	Reporting to Principal Consultant / Senior Consultant. A person with the ability to assist in the management and control of a project team to ensure delivery of the required projects. Responsible for Junior Consultant / administration staff
Typical Education /Qualifications and Experience	Hold appropriate professional qualifications applicable to the discipline commissioned to perform and/or corporate membership of a major institution. Must have relevant work experience spanning several projects Must have some transport experience and technical skills appropriate to the discipline. Responsibility for project(s) and for supervision, control and development of junior personnel.

Junior consultant

General	Reporting to Senior Consultant/Consultant. A person with the relevant experience capable of working on some aspects of the delivery of the required project. Responsible for support staff.
Typical Education /Qualifications and Experience	Must have relevant work experience in at least one completed project.

Sutton

1st Stage (Technical Evaluation)

The technical submissions received will be evaluated by the relevant technical personnel and the commercial submissions will be evaluated by Commercial Services personnel. The technical submissions will account for **70%** of the total scoring assessment and the commercial considerations will account for **30%** of the total scoring assessment as detailed below:

The minimum Technical threshold of 50 out of the available 70 points must be achieved for the tender to pass on to the second stage of evaluation which is the commercial stage.

2nd Stage (Commercial Evaluation)

Commercial, bidder's proposed **Fixed Fee** will be evaluated with the lowest total priced bid receiving the maximum score available. Each subsequent submission will be scored a percentage score of the total marks available, based on the percentage variation from the lowest priced bid.

Submissions & Evaluation Criteria

Technical		
Evaluation**: 70%** and discretionary pass/fail		
The technical submission must not exceed 25 A4 pages (approx. 450 words to a side of A4) excluding CVs.		
The *Authority* will not appoint a *Consultant* that scores less than **50** out of the available **70** marks		
Evaluation Criteria		**Weighting**
T1	Understanding Outline in brief of your understanding of the purpose of this project.	5%
T2	Methodology Proposed approach to this work, describing the key activities and methodology. The information provided should be specifically applicable to this scheme. (Scope - Attachment 2). • Outline of proposed methodology for undertaking the 'outline scope of study' including detailed description of the deliverables that will be provided and any additional data required from OPDC/GLA or other third parties.	25%

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T3	<u>Quality of Resource</u> For each proposed consultant, supply: ▪ CV's (max 2 pages per person) of key staff to be involved in this work. This should include synopsis of their role and the expertise they would bring to the project and their level of involvement across the stages the commission ▪ Confirmation of the consultant's availability for the duration of the contract.	30%
T4	<u>Programme & Risk Register</u> Provide a programme to deliver the services to include: ▪ A full project plan with clear milestones. ▪ A full resource schedule (in person days and broken down by role) for the full programme. ▪ Any risks associated with the delivery of the project, along with rationale.	10%
T5	Conflicts of Interest: Provide details of actual or potential conflicts of Interests that would arise were you to be appointed, and details of how these conflicts would be mitigated.	Discretionary Pass/Fail

Commercial		
Evaluation**: 30%**		
	Evaluation Criteria	**Weighting**
	▪ Price – Fixed Rate for the scope of services ▪ Schedule of resource (resource name, f/w grade, effort days and day rate) Day rates are within the framework agreement, and allowable discounts applied.	30%
	Acceptance to GLA 80814 – Call-Off terms and conditions including limitations of liability.	Discretionary Pass/Fail
	Full contact details of the *Consultant's* bid manager	For info

Sutton

Important Notes

- Consultants are required to provide full contact details of the Account Manager within the Commercial submission only for the purposes of clarification.
- Please be aware that failure to accept GLA 80814 – Call-Off Terms and Conditions will equate to a failure, unless in the opinion of LBS, any issues raised are genuine and done so in a timely manner, i.e. at clarification stage.
- All Consultants are reminded of the maximum framework rates upon which the framework operates. Proposals containing rates for personnel who exceed these predefined amounts may lead to your proposal being rejected, if not previously authorized during the clarification process.
- Following the evaluation of the tenders received, LBS may, in its sole discretion, invite Tenderers (by application of the evaluation criteria set out in the ITT) to prepare and submit further opportunities to adjust the price element of their submission. At LBS's discretion there may be up to three such opportunities for adjustment. This is an optional stage.
- Tender price will be evaluated in the first instance by number of days offered by senior graded staff.
- LBS reserve the right to accept all or any part of an offer and, if necessary, establish trading arrangements with more than one supplier.

4. Indicative Procurement Timetable

Activities	Dates
ITT issue date	15/01/2018
Supplier Clarification Questions Received	31/01/2018
Deadline for receipt of tender	06/02/2018 - 12:00noon
Tender Evaluation	05/02/2018 - 23/02/2018
Clarifications/presentations/interviews (If Required)	w/c 26/02/2018
Award subject to contract	w/c 05/03/2018
Inception meeting	w/c 05/03/2018
Estimated start date	March 2018
Estimated completion date	August 2019

Please note that LBS/OPDC reserves the right to change the above dates and timings

5. Duration

The estimated completion date for this commission will be August 2019

Sutton

[redacted]

From: [redacted]@sutton.gov.uk>
Sent: 21 May 2018 12:30
To: [redacted]
Subject: Fwd: Screenshots of Providers invited for SDEN Project Management

[redacted]

As per my earlier email, see below the screenshots from our procurement system that shows who viewed the tender.

Kind Regards

[redacted]
Major Schemes Programme Manager

London Borough of Sutton
Environment, Housing, and Regeneration
24 Denmark Road, Carshalton, Surrey, SM5 2JG
[redacted] sutton.gov.uk

OPPORTUNITY SUTTON

www.sutton.gov.uk

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Like us on **facebook.com/SuttonCouncil**

Fwd: IMPORTANT: GDPR | EXAMPLE LETTERS - Goo | GDPR Contract/Off-Contr | RFx Summary

Due North Limited [GB] | https://procontract.due-north.com/RFx/ViewRFxSummary?rfxlo

Apps | Inbox (1,470) - sharc | DIGITAL AMBASSAD | MY GOOGLE DRIVE | PROCONTRACT | CON

SDEN Project Manager

Information

Selected suppliers

There are currently 21 selected suppliers

Company	Workgroup
Buro Happold	Happold Consulting
Capita	Business Development
Capita	Software Delivery
Capita	Sales
Capita	IT Enterprise Services
Capita	SOFTWARE DEVELOPMENT
Capita	ASD
Grant Thornton UK LLP	Specialist Bid Team

Cancel

Fwd: IMPORTANT: GDPR | EXAMPLE LETTERS - Goo | GDPR Contract/Off-Contr | RFx Summary

Due North Limited [GB] | https://procontract.due-north.com/RFx/ViewRFxSummary?rfxlo

Apps | Inbox (1,470) - sharc | DIGITAL AMBASSAD | MY GOOGLE DRIVE | PROCONTRACT | CON

SDEN Project Manager

Information

Selected suppliers

There are currently 21 selected suppliers

Grant Thornton UK LLP	Specialist Bid Team
London Borough of Islington	Environmental Services
London Borough of Islington	Environment and Regeneration
Ove Arup & Partners Ltd	Planning Midlands
Ove Arup & Partners Ltd	Planning Plus
Ove Arup & Partners Ltd	Energy, Cities and Climate Change Consulting
Ove Arup & Partners Ltd	HCA Economics Panel
Ove Arup & Partners Ltd	Building London Environmental Phsyics
Ove Arup & Partners Ltd	Environmental

Cancel

Fwd: IMPORTANT: GDPR | EXAMPLE LETTERS - Goo | GDPR Contract/Off-Contr | RFx Summary

Due North Limited [GB] | https://procontract.due-north.com/RFx/ViewRFxSummary?rfxlo

Apps | Inbox (1,470) - sharc | DIGITAL AMBASSAD | MY GOOGLE DRIVE | PROCONTRACT | CON

SDEN Project Manager

Information

Selected suppliers

There are currently 21 selected suppliers

Ove Arup & Partners Ltd	Energy, Cities and Climate Change Consulting
Ove Arup & Partners Ltd	HCA Economics Panel
Ove Arup & Partners Ltd	Building London Environmental Phsyics
Ove Arup & Partners Ltd	Environmental
Ove Arup & Partners Ltd	Water
Ove Arup & Partners Ltd	Arup West
Ove Arup & Partners Ltd	HCA Multi Disciplinary Panel
Ove Arup & Partners Ltd	TFL Arup
woodward energy consulting lmited	Energy Consulting

Cancel

[redacted]

Secure | https://procontract.due-north.com/Procurer/RfxVerification?rfxId=5fe54878-0efa-e711-80ea-005056b64545

[redacted]

LONDON >> TENDERS PORTAL

ProContract

Notifications

Home | Projects | Contracts | Suppliers | Help | Admin | Sharon King-Holmes | Your account | Logout

Home › Projects › View projects › SDEN Project Management and Commercialisation Services › RFx response details

All data | Search | Go

SDEN Project Management and Commercialisation Services - SDEN Project Management and Commercialisation Services

RFx response details

View ITT summary

Narrow your results

Published

Start date: dd/mm/yyyy
End date: dd/mm/yyyy

Reset | Update

Batch Download Responses

- Send E-Mail on completion
- Include late responses

Prepare Download

On time 1 | Late 0 | Opt out 1 | No response 19

Company name	Workgroup	Version	Published	Verified
woodward energy consulting limited	Energy Consulting	1	04/02/18 13:51:32	Yes - Accepted

Services Short For....doc | SPECIFICATION -....docx | Goods and Servic....doc | Show all

Woodward Energy Consulting Limited (WEC) Commercial Proposal – GLA 80814 Project Management and Commercialisation Services

Commercial	
	Requirement ▪ Price – Fixed Rate for the scope of services ▪ Schedule of resource (resource name, f/w grade, effort days and day rate) Day rates are within the framework agreement, and allowable discounts applied.
	WEC Response

PRICE SCHEDULE

SDEN Limited Project Management and Commercialisation Services

Please provide a full response below and ensure you upload the price schedule onto the portal. Prices should be:

a. in UK pounds sterling (£), decimal fractions of a pound to 2 decimal places.
b. inclusive of all costs associated with the provision of goods/services but exclusive of vat.

PART 1:

Position	No. of days	Sub-total
[redacted]		
[redacted]	[redacted]	[redacted]
[redacted]		
[redacted]		
[redacted]		
[redacted]	[redacted]	[redacted]

WEC Comments – the rate shown above is in accordance with the GLA Framework contract signed between WEC and the GLA.

We understand from the Indicative Procurement timetable provided that the estimated start date for these works is the 1st March 2019 and the end date is 31st August 2019 and from the documents that it is expected that "*the consultant shall allow an average of 2 days per week (FTE)*". There we have priced on this basis. This is a total of 78 weeks and therefore 156 days. This fixed rate for the scope of services is shown above.

However, please see comments on this sum overleaf.

WEC believes this allowance is broadly reasonable for the works required.

However, WEC believes that taking into account the additional time which may be required to negotiate the key agreements which SDEN is seeking to expand its network over this period, that it would be prudent to make a provision for a small number of additional days which could be awarded at SDEN/the GLA's discretion.

For the avoidance of doubt this provision would only be called upon as a result of SDEN's key potential clients adding considerably greater complexities to these negotiations than could reasonably be expected by WEC.

WEC suggest this provision could be an extra day per month floating across this period, i.e. a further 18 days. However, that is only a suggestion based on WEC's experience of the complexities some key customers can introduce and WEC will work as far as practically possible based on the knowledge it has of the schemes and the market to achieve the outputs within the two days allowed.

PART 2: VAT 20%

	Requirement Acceptance to GLA 80814 – Call-Off terms and conditions including limitations of liability.
	WEC Response

WEC confirms its acceptance to the call off terms and conditions.

In relation to the liability and PI please see e-mail below from the GLA which was received when WEC was in the process of agreeing the final framework contract with the GLA.

From [redacted]@tfl.gov.uk]
Sent: 27 July 2017 14:27
To: [redacted]@wec.solutions>
Subject: RE: GLA80814 Decentralised Energy Framework and requirements

Dea[redacted]

Many thanks for your email to this.

There would be no Inflation fixed on the Contract so your rate of £800 will apply.

Regarding the two issues in your letter:

1. Liability at framework is unlimited we cannot have it fixed. However at Call off level we will have this capped pertaining to what the services requirement is.
2. We agree that per Call off sensible levels of PI will be set.

I hope this does answer your queries?

Kind Regards

[redacted] Commercial Manager - Professional Services Team
Commercial, Corporate Services - GLA Collaborative Procurement Team (CPT)
Transport for London
16th Floor Windsor House
42-50 Victoria Street
London SW1H 0TL
[redacted]

We could not see a limit of liability specific to this item of work in the documents provided. It is assumed, that both liability and PI will be limited as set out in the mail above.

We suggest that 3 x the contract value for this piece of work is a fair level to set a cap on liability and in terms of PI we believe that £2M is a fair value for the services being provided.

If WEC is successful we would be pleased to discuss these points further to reach an outcome which aligns with the concepts set out in the email above from the GLA.

	Requirement Full contact details of the Consultant's bid manager
	WEC Response

WEC's bid manager is:

[redacted]

Woodward Energy Consulting

[redacted]

[redacted]

Woodward Energy Consulting Limited (WEC) Technical Proposal – GLA 80814
Project Management and Commercialisation Services

Technical	
T1	Understanding Outline in brief of your understanding of the purpose of this project.
T1	**WEC Response**

WEC understands that the London Borough of Sutton are committed to the concept of One Planet Sutton whereby energy resources that are available within the borough are utilised wherever possible. Therefore the SDEN projects fits perfectly with this approach by taking heat from two sources that are within the borough (existing Landfill Gas Engines and an ERF currently being constructed) and using these to provide very low carbon heat to residents and businesses to displace the use of fossil fuels.

We also understand that the agreements to deliver Phase 1 of the project, which is in effect a “proof of concept” for the much larger Phase 2 scheme, have now all been signed and the construction of Phase 1 is underway. These agreements include a “heat franchise” with Viridor to procure heat under a long term basis from these two sources and a long term heat supply agreement with Barratt Homes.

Therefore we understand that the purpose of this project in Phase 2, and the need for the resource being procured under this process, is in essence to secure as many heat offtake contracts as possible to drive forward wholesale decarbonisation of heat supplies in the Hackbridge area of Sutton, which we understand is the initial “target area” for these heat supplies. Together with, we suggest, more widely potentially “shipping heat” to denser areas in the centre of Sutton as well as East to Croydon, which are areas where significant proportion of this very low carbon heat could be utilised.

T2	Methodology Proposed approach to this work, describing the key activities and methodology. The information provided should be specifically applicable to this scheme. (Scope - Attachment 2). • Outline of proposed methodology for undertaking the 'outline scope of study' including detailed description of the deliverables that will be provided and any additional data required from OPDC/GLA or other third parties.
T2	**WEC Response**

Our proposed approach and methodology to this work package being tendered by the GLA/SDEN is set out below. We have split this into eight key Workstreams which are then reflected in the project program shown in response to T4:

Workstream 1 (WS1) – Establish Project Baseline

A key first workstream will be to establish a project baseline. This will involve gathering information on the Phase 1 scheme to allow an understanding of what is possible in Phase 2. This will include:

1. Nature of the energy sources available, timing of their availability, outputs, price levels, guarantees of supply etc…
2. The technical design of the scheme to date in terms of how Phase 1 has been configured and what allowances or considerations have been given as to how expansions to serve customers in Phase 2 could be made and how these would interface with what is currently being built
3. The approach SDEN has already taken to securing a heat supply agreement with its first customer will have set a base line of pricing, commercial arrangements for future heat sale contracts. Therefore is it key to understand these to ensure future customer arrangements are aligned with these to prevent a disconnect and hence discontent between customers of a similar nature
4. The governance framework under which the project is operating to understand what approvals are required to develop Phase 2
5. What "promises" have already been made such as published pricing policies or standards of services
6. The business case and financial model for Phase 1 onto which the Phase 2 scheme will be overlaid

Once these documents have been collated, reviewed and understood then it will be possible to develop a document which sets out the core elements of the Phase 1 scheme and issues that need to be considered/taken into account when developing the Phase 2 expansion plan.

Workstream 2 (WS2) – Collating Information for the Phase 2 Business Plan

The next workstream which will start in parallel with WS1 will be to gather accurate data on the potential buildings which could potentially connect to the existing Phase 1 network to create Phase 2. This will be split into what we recommend are two defined zones. These being:

- Zone 1 - the Hackbridge Area
- Zone 2 – wider expansion of the Network into Merton, Croydon, potentially West into the Centre of Sutton. Zone 2 would contain a number of sub zones to reflect each of these areas, i.e. Zone 2a, 2b etc….

For Zone 1 it will be essential to gather as much detailed data as possible on the specific buildings, to enable a granular analysis of the Phase 2 opportunity to be developed for this area. For Zone 2 this will focus on the largest opportunities which will be required to extend the network across these greater distances.

Under Item 3(i) of the Services WEC would focus on gathering floor area, energy consumption data, age and size of boilers, together with high level network routing etc.. i.e. sufficient to enable a quantification of the opportunity to be undertaken.

Note - It is identified under Section 3 of the Services in the documents provided that the consultant procured under this process is taking the lead role, and additional consultants may be utilised in the development of the project (item x). WEC suggests that as this data set out above is subsequently refined additional consultancy resources are likely to be required during this commission to undertake the much more detailed site survey work, to establish exact locations of boiler rooms, methods for interconnection, detailed network routing proving etc.. which are not called up in The Services. It is assumed that these will be funded separately.

This data will then be scheduled in detail to provide the basis for the “SDEN Opportunity Pipeline” across the various Zones and sub zones in Phase 2.

Work Stream 3 (WS3) – The Model and Conceptual Design

In this next workstream WEC will work with whatever model exists for the Phase 1 scheme, both Techno Economic and Financial to develop and expand this to encompass the “SDEN Opportunity Pipeline” developed under Step 2 above. This model will need to be sufficiently flexible to be able to show the outcomes under various connection scenarios across each of the Zones, together with the projected high level capital costs for both network expansions and any additional top up and back up boiler plant required and modifications to existing plant and systems. It will comply with the requirements as set out in Section 3 (iii) of The Services using hourly heat demands where available.

Sitting alongside this model will be the conceptual designs for the expansion of the Phase 1 Scheme as required under 3(ii) of The Services.

Workstream 4 (WS4) – The Business Plan

The next workstream will involve pulling together the results from the data gathering exercise modelling and the conceptual designs into a formal Business Plan to develop Phase 2. This Business Plan will be drafted at two levels:

1. a high level document which summarises the opportunity for an audience such as the shareholders of the company
2. a much more detailed plan which contains sufficient granularity for the directors of the business to full understand the opportunity and to make informed decisions as to the next steps

The Business Plan will set out what is proposed for each Zone. This will include but not be limited to:

- what works are required
- what resources are required
- how these would be procured
- what contracts would need to be secured (and where not existing, heads of terms for the proposed heat supply contracts)
- land agreements, planning permissions etc..
- risks (in a detailed risk matrix)
- budgets for these works and services
- development timeline

All the time bringing this data and these recommendations back to ensuring that the IRR hurdle rates set for the company by its shareholders that have to be achieved (or other similar financial metrics) are met with these expansion plans.

Workstream 5 (WS5) – Communicating and Agreeing the Business Plan

A key next workstream will be to communicate to and then agree the Business Plan with both the SDEN Directors, it’s Holding Company and the Shareholders.

It is expected that the high level document set out above will be in the form of a briefing paper to ensure that all stakeholders fully understand the nature of what is planned, the opportunity, the costs and the risks.

Workstream 6 (WS6) – Implementing the Business Plan

This key workstream will then be for WEC to lead and project manage the implementation of the agreed Business Plan. There will be a large number of elements to this workstream, many of which will be undertaken by other specialist consultants working under the direction of the WEC carrying out tasks such as route proving, procurement, planning permissions, detailed designs, legal advice on contract terms etc.. Each of these will be identified in the Business Plan.

The key roles for WEC during this WS will be to project manage the overall implementation of the Business Plan and these sub consultants including:

- directly leading on the negotiation of proposed heat sale agreements, ensuring these are agreed and executed including where necessary developing bespoke commercial structures to enable connections to be secured
- regularly updating the financial model to reflect the status of the potential and actual expansions secured
- managing securing planning permissions, land agreements etc.. for these expansions
- managing the procurement of any construction works required and the variations to existing Phase 1 contract required to deliver these expansions
- annually updating the business plan

Workstream 7 (WS7) – Reporting and Feedback

A critical step which will work in parallel with WS6 is the requirement to provide briefings, reports and feedback on the implementation of the Business Plan (WS7B). This will be way of monthly project reports showing progress against the Business Plan including:

- risks
- key issues
- engagement with stakeholders and consumers
- actions undertaken in previous period
- actions to be undertaken this next period
- progress against the plan
- report on costs against budget

It is also planned that monthly update reports will be provided during the Business Plan Development process to provide updates on WS1 to 4 and these are also shown on the project program (WS7A).

Workstream 8 (WS8) – Interaction with Phase 1 and Lessons Learned

This workstream which will be undertaken concurrently with all of the other workstreams is to engage with the Phase 1 project on a continuous basis to understand how this is progressing and specifically:

- what impacts the delivery of Phase 1 may have on Phase 2, i.e. delays, changes in contracting or connection arrangements etc..
- lessons learned in terms of contracting structure used, delivery and commercial mechanisms, planning applications etc..

It is critically important that Phase 2 is not developed in isolation from Phase 1, but learns lessons from Phase 1 and these are applied wherever possible to Phase 2. This will ensure that risks are minimised, and opportunities both to expand the network and deliver a financial viable scheme to SDEN are maximised.

T3	Quality of Resource For each proposed consultant, supply: CV's (max 2 pages per person) of key staff to be involved in this work. This should include synopsis of their role and the expertise they would bring to the project and their level of involvement across the stages the commission Confirmation of the consultant's availability for the duration of the contract.
T3	**WEC Response**

Please see overleaf a two page CV which sets out the extensive skills and experience in the development of district energy schemes of WEC's [redacted] who will undertake the works required by SDEN under this commission.

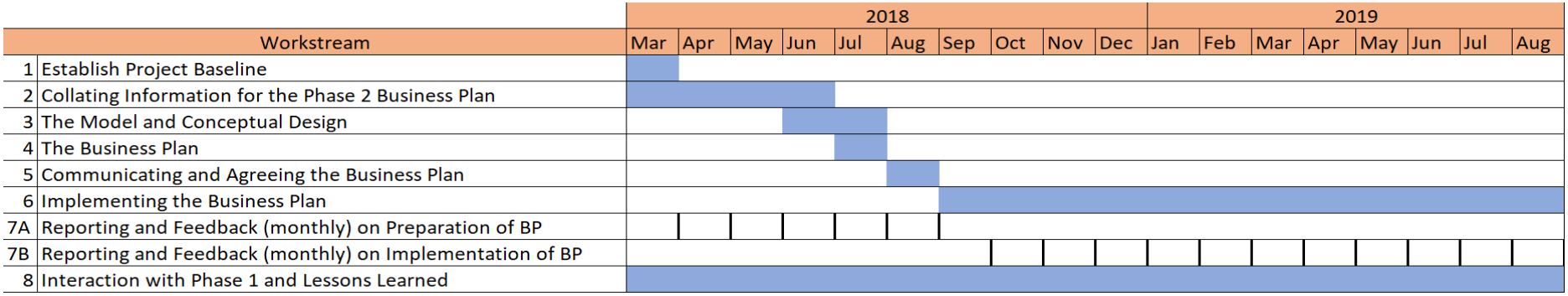
[Personal information - Regulation 13]

T4	Programme & Risk Register - Provide a programme to deliver the services to include: • A full project plan with clear milestones. • A full resource schedule (in person days and broken down by role) for the full programme. • Any risks associated with the delivery of the project, along with rationale.
T4	**WEC Response**

Program

The draft program set out below reflects the key workstreams set out in response to Question T3 and the milestones which result from these. It should be kept in mind that in the event that, for example, WS2 takes longer due to difficulties in collating information of sufficient quality to prepare the Business Plan then the program will be updated accordingly. However WEC believes that this program is achievable based on its knowledge of others schemes. For the avoidance of doubt it will be pointless trying to rigidly stick to a program when the data for the previous workstream has not been fully gathered and analysed, for example due to delays from third parties, because this will result, particularly in respect of WS4, a Business Plan based on data which is not of sufficient quality on which to make investments decisions. Where possible WEC will ensure this is not the case.

It is also important to note that this is a program for the works being requested under this mini competition. In parallel to this program will be the other subsidiary workstreams such as route proving, procurement processes, planning permissions, designs, legal advice on contract terms etc.. which are required as a result of these WEC workstreams shown below. These will be led and project managed by WEC but undertaken by other specialist consultants.



Resourcing

In terms of a resource schedule we have assumed that the time expended by WEC's [redacted] who will undertake this commission will be spread equally across the entire program period at 2 days per week as set out in the documents provided, i.e. "*the consultant shall allow an average of 2 days per week (FTE)*" . Particularly as each of the tasks are as intensive as each other. Therefore WEC will be invoicing on this basis across this commission, i.e. 2 days per week, whilst undertaking the workstreams and delivering the outputs as set out above. Demonstrating progress against this invoicing schedule by way of the monthly progress reports on the various WS's as shown by lines 7A and 7B above.

Risks

Whilst the project has been significantly de-risked by the development of Phase 1, the expansion of the scheme into Phase 2 is not risk free and WEC has set out overleaf some of the key risks and mitigations that it sees arising in the development of Phase 2 and the WS's shown above.

SDEN Phase 2 Outline Risk Matrix

No	Issue	Description	Mitigation
1	**Data Quality**	A major risk for any Business Plan is the quality of data upon which is it based. In this case for example energy consumptions of prospective consumers. It is therefore critically important that this is of sufficient quality to prepare a BP from which investment decisions can be made	Wherever possible the data will be based on actual site data and not rules of thumb or estimates. A key part of this process will be a comprehensive information schedule which will need to be populated for each potential consumer during the customer engagement process in WS2
2	**Engagement of Key Consumers**	There will be key consumers that it is important for SDEN to secure which will become clear as the WS's progress. It is critically important that these customers are engaged with and their commitment secured. If this is not secured then this is a key risk to the development of Phase 2	Identify these key consumers and ensure that they are engaged with from an early stage and that any issues which may prevent them from linking to the scheme are known and if possible addressed at an early stage
3	**Phase 1 Contracting Structures**	Phase 1 will have been delivering under a certain contracting structure in terms of construction and operation and it will be important to understand whether these structures prevent any risks or barriers to the expansion of Phase 2	Review existing contracting structures as part of WS1 and WS8 to ensure that the plans for Phase 2 can be overlaid onto these structures
4	**Integration of Phase 2 with 1**	Large scale district energy schemes as proposed by SDEN will have relatively complex hydraulic issues which have to be considered as future phases are added. These arise from the need to ensure that the maximum amount of heat from the LFG and ERF sources are utilised	Ensure that a high level hydraulic conceptual integration of the future phases is developed and run in parallel with the preparation of the Business Plan
5	**Timing and output of heat sources - LFG and ERF**	These heat sources will have both an amount of heat that is available and timing over which it is available (start and end dates) and availability across the year. The risk is that these may impact on what heat contracts SDEN can enter into and what the plan is when these sources end	Ensure that this base data is collated under WS1 and a strategy developed to ensure that the contracting structure proposed under the Business Plan takes this into account in terms of period, pricing, future strategies etc... , to avoid issues when the plan is implemented.
6	**Availability of funding to SDEN for Phase 2**	It is assumed that without further detailed knowledge that both the required development and capital funds will be available to SDEN to enable the development and construction of Phase 2. If this is not the case then this is a major risk	Establish at an early stage SDEN's appetite and ability to fund both the development and construction of Phase 2. If this identifies issues then consider with SDEN what support may be available from third parties, e.g. GLA, BEIS etc...
7	**Funding gaps for Phase 2**	Even if funding is available to SDEN for all aspects of Phase 2, if proposed extensions do not meet the IRR Hurdle rate set for SDEN then these extensions are unlikely to be approved	Use a risk based approach to analyse multiple connections to increase IRR's and maximise the use of the BEIS £300M HNIP fund which is formally launched in November 2018 for a period of 2 years
8	**Land Agreements**	At this time it is not known what land agreements may be required for the implementation of Phase 2 therefore this must be a risk	Where possible avoid third party land, but if this is not possible then identify these parcels of land at an early stage and ensure these are clearly shown on the project risk register. Engage with these stakeholders is undertaken at an early stage to ensure that issues do not arise which may prevent the network being routed across this third party land
9	**Planning Permissions**	It is understood that unlike other London Boroughs, SDEN and its stakeholders took the decision to obtain planning permission for it's Phase 1 buried heat network. Unless this approach can be removed under Phase then obtaining planning permissions for network extensions must form a part of any Phase 2 risk register	Establish if a mechanism can be put in place to avoid this requirement and if not possible then engage at an early stage with the LB Sutton planning department to ensure that their requirements are taken into account on a pragmatic basis
10	**Timing of consumer developments or replacement of boilers**	A key risk for any district energy network developer is that the consumer they wish to connect has just completed their development with their own on site LZC plant or that an existing buildings boiler plant has just been renewed. In both cases this will reduce both the interest of the consumer to connect and damage the financial business case to SDEN as any connection charge may then have to be significantly reduced or not charged	During WS2 identify those developments where this may the case and develop strategies to address this, such as communicating with existing buildings SDEN's plans to delay reboilering pending connection, or for new sites interim heat sources or omitting LZC plant.
11	**Routing and route proving**	Until the proposed outline route for the Phase 2 network has been fully developed this cannot be known but it is important to highlight importance of route proving and the risks of installing networks in congested highways	Ensure that route proving is undertaken at sufficient level of enable the preparation of the business plan, and that this is followed through during implementation of the plan
12	**Back up and top up heat supplies**	There will be a certain quantity of back up and top up heat sources that SDEN has in Phase1. A critical issue for Phase 2 will be how much spare capacity there is in these sources and whether they can be used at all to support Phase 2 consumers. In any event further back up and top up boiler plant will be required at some stage and until the location, costing etc.. for this is known then this represents a risk for the Phase 2 plan	Identify at an early stage the potential standby and top up boiler plant requirements for Phase 2 and establish possible locations, costs, feasibility etc...
13	**Scale and location of heat loads**	A recurring problem with the development of any district energy scheme is often that the keenest potential consumers are either the smallest or those at the greatest distance. Whilst every potential consumers is important, risks in trying to connect such consumers in terms of financial viability to the business and wasting valuable time analysing such connections must be taken into account	Developed a clear triage of what it is viable to consider in terms of distance and size of load at an early stage to ensure time is not wasted engaging with and analysing consumers who cannot realistically connect in the short to medium term or at all.

T5	Conflicts of Interest: Provide details of actual or potential conflicts of Interests that would arise were you to be appointed, and details of how these conflicts would be mitigated.
T5	**WEC Response**
WEC can confirm that there are no actual or potential conflicts of interest that would arise were WEC to be appointed	

SDEN Project Management and Commercialisation

TECHNICAL 70%			Woodward Energy Consulting Limited (WEC)	
Criterion	Weight		Score out of 5	Weighted Score
T1 - Understanding	**5**		4	
Please outline your understanding of the purpose of this project		**Scoring Rationale**	**Comments**	
		0 - No submission/question not answered **1 – Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement** **2 – Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response** **3 – Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement** **4 – Very Good; demonstrates good understanding of the requirement, above minimum requirement** **5 - Excellent; full and accurate understanding of the requirement with some added value**	Demonstrates an excellent understanding of the SDEN Project to-date and the ambitions of SDEN to extend the network beyond phase 1. Also demonstrates good knowledge of the background to the project, one planet ambitions etc. Response could have been strengthened with more detail on potential phase 2 customers.	
Criterion	Weight		Score out of 5	Weighted Score
T2 - Methodology	**25**		5	
• Proposed approach to this work, describing the key activities and		**Scoring Rationale**	**Comments**	

methodology. The information provided should be specifically applicable to this scheme. (Scope - Attachment 2). **• Outline of proposed methodology for undertaking the 'outline scope of study' including detailed description of the deliverables that will be provided and any additional data required from OPDC/GLA or other third parties.**		**0 - No submission/question not answered** **1 – Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement** **2 – Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response** **3 – Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement** **4 – Very Good; demonstrates good understanding of the requirement, above minimum requirement** **5 - Excellent; full and accurate understanding of the requirement with some added value**	Excellent methodology and an extremely thorough response to each key activity.		
Criterion	Weight		Score out of 5	Weighted Score	
T3 - Quality of Resources	**30**		4		
For each proposed consultant, supply:		**Scoring Rationale**	**Comments**		
▪ CV's (max 2 pages per person) of key staff to be involved in this work. This should include synopsis of their role and the expertise they would bring to the project and their level of involvement across the stages the commission **▪ Confirmation of the consultant's availability for the duration of the contract.**		**0 - Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement** **1 – Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response** **2 – Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement** **3 – Very Good; demonstrates good understanding of the requirement, above minimum requirement.** **4 – Excellent; full and accurate understanding of the requirement with some added value**	Principal consultant has excellent experience of working with LAs on district heating schemes. However only one consultant which could cause an issue with resilience.		
Criterion	Weight		Score out of 5	Weighted Score	
T4 - Programme and Risk Register	**10**		4		
Provide a programme to deliver the services to include:		**Scoring Rationale**	**Comments**		

▪ A full project plan with clear milestones. ▪ A full resource schedule (in person days and broken down by role) for the full programme. ▪ Any risks associated with the delivery of the project, along with rationale		0 - No submission/question not answered 1 – Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement 2 – Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response 3 – Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement 4 – Very Good; demonstrates good understanding of the requirement, above minimum requirement 5 - Excellent; full and accurate understanding of the requirement with some added value	Excellent programme and thorough RR that highlights a wide range of risks. Programme plan could have provided more detail, however this is included within response to T2.	
Criterion				
T5 - Conflicts of Interest	**Pass / Fail**		Pass	
Provide details of actual or potential conflicts of interests that would arise were you to be appointed, and details of how these conflicts would be mitigated.			**Comments**	
Technical Total out of 70%			**0.00**	
Criterion	Weight		Score out of 5	Weighted Score
C1 - Price and Schedule	**30**		5	
			Comments	

• Price – Fixed Rate for the scope of services • Schedule of resource (resource name, f/w grade, effort days and day rate) Day rates are within the framework agreement, and allowable discounts applied.				
Criterion				
C2 - Acceptance to GLA 80814	**Pass/Fail**		Pass	
Call-Off terms and conditions including limitations of liability.			**Comments**	
Commercial Total out of 30%			**0.00**	

[redacted]

Date: 21/02/2018

SDEN Project Management and Commercialisation

TECHNICAL 70%			Woodward Energy Consulting Limited (WEC)	
Criterion	Weight		Score out of 5	Weighted Score
T1 - Understanding	**5**		4	
Please outline your understanding of the purpose of this project		**Scoring Rationale**	**Comments**	
		0 - No submission/question not answered **1 – Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement** **2 – Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response** **3 – Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement** **4 – Very Good; demonstrates good understanding of the requirement, above minimum requirement** **5 - Excellent; full and accurate understanding of the requirement with some added value**	Response demonstrates a very good understanding of what the project objectives are, works undertaken and requirements for developing phase 2.	
Criterion	Weight		Score out of 5	Weighted Score
T2 - Methodology	**25**		4	
• Proposed approach to this work, describing the key activities and methodology. The information provided should be specifically applicable to this scheme. (Scope - Attachment 2). **• Outline of proposed methodology for undertaking the 'outline scope of study' including detailed description of the deliverables that will be provided and any additional data required from OPDC/GLA or other third parties.**		**Scoring Rationale**	**Comments**	
		0 - No submission/question not answered **1 – Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement** **2 – Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response** **3 – Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement** **4 – Very Good; demonstrates good understanding of the requirement, above minimum requirement** **5 - Excellent; full and accurate understanding of the requirement with some added value**	Response demonstrates a robust and clear methodology for delivering the brief.	
Criterion	Weight		Score out of 5	Weighted Score

T3 - Quality of Resources	**30**		5	
For each proposed consultant, supply: **▪ CV's (max 2 pages per person) of key staff to be involved in this work. This should include synopsis of their role and the expertise they would bring to the project and their level of involvement across the stages the commission** **▪ Confirmation of the consultant's availability for the duration of the contract.**		**Scoring Rationale** **0 - No submission/question not answered** **1 – Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement** **2 – Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response** **3 – Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement** **4 – Very Good; demonstrates good understanding of the requirement, above minimum requirement** **5 - Excellent; full and accurate understanding of the requirement with some added value**	**Comments** Response demonstrates excellent background in district heating and application of that background to relevant projects across the UK.	
Criterion	Weight		Score out of 5	Weighted Score
T4 - Programme and Risk Register	**10**		4	
Provide a programme to deliver the services to include: **▪ A full project plan with clear milestones.** **▪ A full resource schedule (in person days and broken down by role) for the full programme.** **▪ Any risks associated with the delivery of the project, along with rationale**		**Scoring Rationale** **0 - Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement** **1 – Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response** **2 – Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement** **3 – Very Good; demonstrates good understanding of the requirement, above minimum requirement**. **4 – Excellent; full and accurate understanding of the requirement with some added value** **5 - Excellent; full and accurate understanding of the requirement with some added value**	**Comments** Very good response that covers all key points.	
Criterion				
T5 - Conflicts of Interest	**Pass / Fail**		Pass	
Provide details of actual or potential conflicts of interests that would arise were you to be appointed, and details of how these conflicts would			**Comments**	

arise were you to be appointed, and details of how these conflicts would be mitigated.				
Technical Total out of 70%			**0.00**	
Criterion	Weight		Score out of 5	Weighted Score
C1 - Price and Schedule	**30**		5	
• Price – Fixed Rate for the scope of services			**Comments**	
Criterion				
C2 - Acceptance to GLA 80814	**Pass/Fail**		Pass	
Call-Off terms and conditions including limitations of liability.			**Comments**	
Commercial Total out of 30%			**0.00**	
[redacted]				
Date: 21/02/2018				

SDEN Project Management and Commercialisation

TECHNICAL 70%			Woodward Energy Consulting Limited (WEC)	
Criterion	Weight		Score out of 5	Weighted Score
T1 - Understanding	**5**		3	
Please outline your understanding of the purpose of this project		**Scoring Rationale**	**Comments**	
		0 - No submission/question not answered **1 – Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement** **2 – Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response** **3 – Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement** **4 – Very Good; demonstrates good understanding of the requirement, above minimum requirement** **5 - Excellent; full and accurate understanding of the requirement with some added value**	The consultant demonstrates a very good understanding of what the project objectives are, previous work to date (Phase 1) and requirements for the following steps (Phase 2). There is no mention of DEEP and of how the Consultant are envisaged to work with the project sponsors (GLA/ERDF) and beneficiary (Sutton) but this is a minor point.	
Criterion	Weight		Score out of 5	Weighted Score
T2 - Methodology	**25**		3	
• Proposed approach to this work, describing the key activities and methodology. The information provided should be specifically applicable		**Scoring Rationale**	**Comments**	

methodology. The information provided should be specifically applicable to this scheme. (Scope - Attachment 2). **• Outline of proposed methodology for undertaking the 'outline scope of study' including detailed description of the deliverables that will be provided and any additional data required from OPDC/GLA or other third parties.**		**0 - No submission/question not answered** **1 – Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement** **2 – Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response** **3 – Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement** **4 – Very Good; demonstrates good understanding of the requirement, above minimum requirement** **5 - Excellent; full and accurate understanding of the requirement with some added value**	Consultant demonstrates a very good understanding of the methodology and actions that need to be undertaken to bring this project to a final business plan. The eight proposed workstream WS1-WS8 fully cover all the subsequent steps required. Clarification required about the note in Italic in WS2, where additional resources may be required - can the consultant confirm they will carry out the work as per project specification and detailed in WS1-WS8 without additional budget required?	
Criterion	Weight		Score out of 5	Weighted Score
T3 - Quality of Resources	**30**		4	
For each proposed consultant, supply: **▪ CV's (max 2 pages per person) of key staff to be involved in this work. This should include synopsis of their role and the expertise they would bring to the project and their level of involvement across the stages the commission** **▪ Confirmation of the consultant's availability for the duration of the contract.**		**Scoring Rationale** **0 - No submission/question not answered** **1 – Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement** **2 – Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response** **3 – Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement** **4 – Very Good; demonstrates good understanding of the requirement, above minimum requirement** **5 - Excellent; full and accurate understanding of the requirement with some added value**	**Comments** Consultant CV demonstrates excellent experience, relevant qualifications, understanding and skills to carry out the required work. Clarification: submission confirms (independent) Consultants availability for the duration of the contract at 2 FTE days per week; this links to Clarification above re additional resources required to carry out WS2	
Criterion	Weight		Score out of 5	Weighted Score
T4 - Programme and Risk Register	**10**		3	
Provide a programme to deliver the services to include:		**Scoring Rationale**	**Comments**	

▪ A full project plan with clear milestones. ▪ A full resource schedule (in person days and broken down by role) for the full programme. ▪ Any risks associated with the delivery of the project, along with rationale		0 - No submission/question not answered 1 – Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement 2 – Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response 3 – Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement 4 – Very Good; demonstrates good understanding of the requirement, above minimum requirement 5 - Excellent; full and accurate understanding of the requirement with some added value	Project Plan and Risk Register submitted are clear and demonstrate a very good understanding of the subsequent steps to be taken and associated risks. One additional risk to consider is the fact that the Consultant is an independent professional and therefore non replaceable in case he find himself unable to carry out the work	
Criterion				
T5 - Conflicts of Interest	**Pass / Fail**		Pass	
Provide details of actual or potential conflicts of interests that would arise were you to be appointed, and details of how these conflicts would be mitigated			**Comments**	
			N/A	
Technical Total out of 70%			**0.00**	
Criterion	Weight		Score out of 5	Weighted Score
C1 - Price and Schedule	**30**		5	
• Price – Fixed Rate for the scope of services			**Comments**	
Criterion				
C2 - Acceptance to GLA 80814	**Pass/Fail**			
Call-Off terms and conditions including limitations of liability.			**Comments**	
Commercial Total out of 30%			**0.00**	
[redacted]				

SDEN Project Management and Commercialisation

TECHNICAL 70%			Woodward Energy Consulting Limited (WEC)	
Criterion	Weight		**AVERAGED Score**	Weighted Score
T1 - Understanding	**5**		3.67	
Please outline your understanding of the purpose of this project		**Scoring Rationale**	**Comments**	
		0 - No submission/question not answered **1 – Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement** **2 – Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response** **3 – Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement** **4 – Very Good; demonstrates good understanding of the requirement, above minimum requirement** **5 - Excellent; full and accurate understanding of the requirement with some added value**	Demonstrates an excellent understanding of the SDEN Project to-date and the ambitions of SDEN to extend the network beyond phase 1. Also demonstrates good knowledge of the background to the project, one planet ambitions etc. Response could have been strengthened with more detail on potential phase 2 customers.	
Criterion	Weight		Score out of 5	Weighted Score
T2 - Methodology	**25**		4	
• Proposed approach to this work, describing the key activities and methodology. The information provided should be specifically applicable to this scheme. (Scope - Attachment 2). **• Outline of proposed methodology for undertaking the 'outline scope of study' including detailed description of the deliverables that will be provided and any additional data required from OPDC/GLA or other third parties.**		**Scoring Rationale**	**Comments**	
		0 - No submission/question not answered **1 – Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement** **2 – Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response** **3 – Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement** **4 – Very Good; demonstrates good understanding of the requirement, above minimum requirement** **5 - Excellent; full and accurate understanding of the requirement with some added value**	Excellent methodology and an extremely thorough response to each key activity.	
Criterion	Weight		Score out of 5	Weighted Score
T3 - Quality of Resources	**30**		4.33	

For each proposed consultant, supply: **▪ CV's (max 2 pages per person) of key staff to be involved in this work. This should include synopsis of their role and the expertise they would bring to the project and their level of involvement across the stages the commission** **▪ Confirmation of the consultant's availability for the duration of the contract.**		**Scoring Rationale** **0 - Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement** **1 – Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response** **2 – Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement** **3 – Very Good; demonstrates good understanding of the requirement, above minimum requirement.** **4 – Excellent; full and accurate understanding of the requirement with some added value**	**Comments** Principal consultant has excellent experience of working with LAs on district heating schemes. However only one consultant which could cause an issue with resilience.	
Criterion	Weight		Score out of 5	Weighted Score
T4 - Programme and Risk Register	**10**		3.67	
Provide a programme to deliver the services to include: **▪ A full project plan with clear milestones.** **▪ A full resource schedule (in person days and broken down by role) for the full programme.** **▪ Any risks associated with the delivery of the project, along with rationale**		**Scoring Rationale** **0 - No submission/question not answered** **1 – Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement** **2 – Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response** **3 – Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement** **4 – Very Good; demonstrates good understanding of the requirement, above minimum requirement** **5 - Excellent; full and accurate understanding of the requirement with some added value**	**Comments** Excellent programme and thorough RR that highlights a wide range of risks. Programme plan could have provided more detail, however this is included within response to T2.	
Criterion				
T5 - Conflicts of Interest	**Pass / Fail**		Pass	
Provide details of actual or potential conflicts of interests that would arise were you to be appointed, and details of how these conflicts would be mitigated.			**Comments**	
Technical Total out of 70%			**0.00**	

Criterion	Weight		Score out of 5	Weighted Score
C1 - Price and Schedule	**30**		5	
• Price – Fixed Rate for the scope of services **• Schedule of resource (resource name, f/w grade, effort days and day rate) Day rates are within the framework agreement, and allowable discounts applied.**			**Comments**	
Criterion				
C2 - Acceptance to GLA 80814	**Pass/Fail**		Pass	
Call-Off terms and conditions including limitations of liability.			**Comments**	
Commercial Total out of 30%			**0.00**	

Tender report

A mini-competition was undertaken on the GLA's Decentralised Energy framework (80814) which was set up and established specifically for the Decentralised Energy Enabling Project (DEEP).

The mini-competition was ran from sub-lot 2.3. The suppliers from the sub-lot were notified of the opportunity to bid for services. These companies were:

- London Borough of Islington
- Buro Happold
- Capita
- Woodward Energy Consulting
- Ove Arup
- Grant Thornton

The scoring criteria was based on 70% quality and 30% price. Woodward Energy Consulting (WEC) were the only providers who submitted a bid. Their tender submission was scored and fully met the tender specification.

The evaluation was undertaken by [redacted] (London Borough of Sutton), [redacted] (London Borough of Sutton) and [redacted] (GLA). Individual scoring was undertaken followed by consensus scoring. The contract award is for £124,800.

Milestone	**Date**
ITT on Sutton procurement portal	15/01/2018
Deadline for suppliers to confirm interest in bidding for services	06/02/2018
Evaluation of bids	07/02/2018 – 08/03/2018
Notification of bid outcome:	12/03/2018
Inception meeting:	18/06/2018
Contract award (including signature of all parties):	13/06/2018

London Borough of Sutton
24 Denmark Road
Carshalton
Surrey
SM5 2JG

12 March 2018

Via Procontract

Woodward energy consulting limited
[redacted]

Dear Sir/Madam

Re: SDEN Project Management and Commercialisation Services

Contract Award

We have pleasure in informing you that you have been successful in your bid to the London Borough of Sutton dated 6 February 2018 for the abovementioned opportunity.

The award of contract is subject to receipt of your insurance indemnity certificates.

Contract Documents

It is confirmed that this letter, the correspondence referred to therein, and your response shall form a binding contract between us.

The Contract Documents are as follows:

1. Call-off Contract
2. Online method statements (quality)
3. Price Schedule
4. Professional Indemnity Insurance documents (**to be provided by Woodward energy consulting limited**)

Please sign the Call-Off Contract and return it along with your insurance documents via Procontract as soon as possible.

Contract Requirements

The Contract requirements will be as stated in our specification and your method statements and price schedule as stated on 6 February 2018 and clarified in the documentation referred to above.

Contract Duration

The contract is estimated to last until August 2019.

Council Contact

[redacted] - Major Schemes
London Borough of Sutton
Environment, Housing, and Regeneration
24 Denmark Road
Carshalton
Surrey SM5 2JG

Email: [redacted]@sutton.gov.uk
[redacted]

I look forward to hearing from you

Yours sincerely

[redacted]
Commissioning Officer
London Borough of Sutton

Schedule 6B

Framework Number: GLA 80814
Call-Off Contract Number: DN317867 – LOT 2.3
THIS CALL-OFF CONTRACT is made the day of:

BETWEEN:

(1) The Mayor and Burgesses of The London Borough of Sutton of Civic Offices, St. Nicholas Way, Surrey. SM1 1EA ("the Authority");

(2) Woodward Energy Consulting Limited, a company registered in England and Wales whose registered office is at [redacted] ("the Service Provider") and ("WEC")

(3) THE GREATER LONDON AUTHORITY whose principal offices are at City Hall, The Queen's Walk, London, SE1 2AA ("the Contracting Authority").

RECITALS:

A. The Contracting Authority and the Service Provider entered into an agreement dated 21st August 2017 which sets out the framework for the Service Provider to provide certain Services to the Contracting Authority or the Authority ("the Agreement").

B. The Authority wishes the Service Provider to provide the specific Services described in this Call-Off Contract pursuant to the terms of the Agreement and this Call-Off Contract and the Service Provider has agreed to provide such Services on those terms and conditions set out in the Call-Off Contract.

C. The Contracting Authority has agreed to fund or part fund the Services being provided to the Authority and shall make some or all the payments on the behalf of the Authority as set out in this Call-Off Contract.

THE PARTIES AGREE THAT:

1. CALL-OFF CONTRACT

1.1 The terms and conditions of the Agreement shall be incorporated into this Call-Off Contract.

1.2 In this Call-Off Contract the words and expressions defined in the Agreement shall, except where the context requires otherwise, have the meanings given in the Agreement. In this Call- Off Contract references to Attachments are, unless otherwise provided, references to attachments of this Call-Off Contract.

2. SERVICES

2.1 The Services to be performed by the Service Provider pursuant to this Call-Off Contract are set out in Attachment 1.

2.2 The Service Provider acknowledges that it has been supplied with sufficient information about the Agreement and the Services to be provided and that it has made all appropriate and necessary enquiries to enable it to perform the Services under this Call-Off Contract. The Service Provider shall neither be entitled to any additional payment nor excused from any obligation or liability under this Call-Off Contract or the Agreement due to any misinterpretation or misunderstanding by the Service Provider of any fact relating to the Services to be provided. The Service Provider shall promptly bring to the attention of the Call-Off Co-ordinator any matter that is not adequately specified or defined in the Call-Off Contract or any other relevant document.

2.3 The timetable for any Services to be provided by the Service Provider and the corresponding Milestones (if any) and Project Plan (if any) are set out in Attachment 1. The Service Provider must provide the Services in respect of this Call-Off Contract in accordance with such timing and the Service Provider must pay liquidated damages in accordance with the Agreement of such an amount as may be specified in Attachment 1. The Service Provider shall be liable for the ongoing costs of providing Services in order to meet a Milestone.

2.4 The Service Provider acknowledges and agrees that as at the commencement date of this Call- Off Contract it does not have an interest in any matter where there is or is reasonably likely to be a conflict of interest with the Services provided to the Authority under this Call-Off Contract.

2.5 The Service Provider shall maintain £2M (two million pounds) of Professional Indemnity insurance in respect of the provision of the Services. Such sum shall supersede any amounts or statements professional indemnity insurance called up or required by Clause 21 of the Agreement

3. CALL-OFF TERM

This Call-Off Contract commences on the date of this Call-Off Contract or such other date as may be specified in Attachment 1 and subject to Clause 4.2 of the Agreement, shall continue in force for the Call-Off Term stated in Attachment 1 unless terminated earlier in whole or in part in accordance with the Agreement.

4. CHARGES

4.1 Attachment 2 specifies the Charges payable in respect of the Services provided under this Call- Off Contract. The Charges shall not increase during the duration of this Call-Off Contract unless varied in accordance with the Agreement.

4.2 The Service Provider shall invoice the Contracting Authority and provide a copy of the invoice to the Authority in respect of the Charges in accordance with Attachment 2.

4.3 The Service Provider shall submit invoices to the address set out in Attachment 1 or in electronic format as set out in Attachment 1. Each invoice shall contain all information required by the Authority as required in Attachment 1. Invoices shall be clear, concise, accurate, and adequately descriptive to avoid delays in processing subsequent payment.

4.4 In the event of a variation to the Services in accordance with this Call-Off Contract that involves the payment of additional charges to the Service Provider, the Service Provider shall identify these separately on the relevant invoice.

4.5 The Authority shall consider and verify each invoice, which is submitted in accordance with this Clause 4 in a timely manner. If the Authority considers that the Charges claimed by the Service Provider in any invoice have:

4.5.1 been correctly calculated and that such invoice is otherwise correct, the invoice shall be approved and forward to the Contracting Authority together with a completion certificate for payment which shall be made by bank transfer (Bank Automated Clearance System (BACS) or such other method as the Contracting Authority may choose from time to time within 30 days of receipt of such invoice from the Authority;

4.5.2 not been calculated correctly and/or if the invoice contains any other error or inadequacy, the Authority shall notify the Service Provider. The Parties shall work together to resolve the error or inadequacy. Upon resolution, the Service Provider shall submit a revised invoice to the Authority. The Authority shall keep the Contracting Authority updated at all times.

4.6 Except where otherwise provided the Charges shall be inclusive of all costs of staff, facilities, equipment, materials and other expenses whatsoever incurred by the Service Provider in discharging its obligations under the Call-Off Contract.

5. CALL-OFF CO-ORDINATOR AND KEY PERSONNEL

The Authority's Call-Off Co-ordinator in respect of this Call-Off Contract is named in Attachment 1 and the Service Provider's Key Personnel in respect of this Call-Off Contract are named in Attachment 2.

This Call-Off Contract has been signed by duly authorised representatives of each of the Parties.

SIGNED
For and on behalf of the Authority

Signature: [redacted]

Name: [redacted]

Title: Head of Economic Renewal and Regeneration

Date: 1st June 2018

SIGNED
For and on behalf of the Service Provider

Signature: [redacted]

Name: [redacted]

Title: Principal Consultant

Date: 1st June 2018

SIGNED
For and on behalf of the Contracting Authority

Signature: [redacted]

Name: P. Feely

Title: AD Environment.

Date: 13/6/18.

Attachment 1 - The Services

Our proposed approach and methodology to this work package being tendered by the GLA/SDEN is set out below. We have split this into eight key Workstreams which are then reflected in the project program shown in response to T4:

Workstream 1 (WS1) – Establish Project Baseline

A key first workstream will be to establish a project baseline. This will involve gathering information on the Phase 1 scheme to allow an understanding of what is possible in Phase 2. This will include:

1. Nature of the energy sources available, timing of their availability, outputs, price levels, guarantees of supply etc...
2. The technical design of the scheme to date in terms of how Phase 1 has been configured and what allowances or considerations have been given as to how expansions to serve customers in Phase 2 could be made and how these would interface with what is currently being built
3. The approach SDEN has already taken to securing a heat supply agreement with its first customer will have set a base line of pricing, commercial arrangements for future heat sale contracts. Therefore is it key to understand these to ensure future customer arrangements are aligned with these to prevent a disconnect and hence discontent between customers of a similar nature
4. The governance framework under which the project is operating to understand what approvals are required to develop Phase 2
5. What "promises" have already been made such as published pricing policies or standards of services
6. The business case and financial model for Phase 1 onto which the Phase 2 scheme will be overlaid

Once these documents have been collated, reviewed and understood then it will be possible to develop a document which sets out the core elements of the Phase 1 scheme and issues that need to be considered/taken into account when developing the Phase 2 expansion plan.

Workstream 2 (WS2) – Collating Information for the Phase 2 Business Plan

The next workstream which will start in parallel with WS1 will be to gather accurate data on the potential buildings which could potentially connect to the existing Phase 1 network to create Phase 2. This will be split into what we recommend are two defined zones. These being:

- Zone 1 - the Hackbridge Area
- Zone 2 – wider expansion of the Network into Merton, Croydon, potentially West into the Centre of Sutton. Zone 2 would contain a number of sub zones to reflect each of these areas, i.e. Zone 2a, 2b etc....

For Zone 1 it will be essential to gather as much detailed data as possible on the specific buildings, to enable a granular analysis of the Phase 2 opportunity to be developed for this area. For Zone 2 this will focus on the largest opportunities which will be required to extend the network across these greater distances.

Under Item 3(i) of the Services WEC would focus on gathering floor area, energy consumption data, age and size of boilers, together with high level network routing etc.. i.e. sufficient to enable a quantification of the opportunity to be undertaken.

Note - It is identified under Section 3 of the Services in the documents provided that the consultant procured under this process is taking the lead role, and additional consultants may be utilised in the development of the project (item x). WEC suggests that as this data set out above is subsequently refined additional consultancy resources are likely to be required during this commission to undertake the much more detailed site survey work, to establish exact locations of boiler rooms, methods for interconnection, detailed network routing proving etc.. which are not called up in The Services. It is assumed that these will be funded separately.

This data will then be scheduled in detail to provide the basis for the "SDEN Opportunity Pipeline" across the various Zones and sub zones in Phase 2.

Work Stream 3 (WS3) – The Model and Conceptual Design

In this next workstream WEC will work with whatever model exists for the Phase 1 scheme, both Techno Economic and Financial to develop and expand this to encompass the "SDEN Opportunity Pipeline" developed under Step 2 above. This model will need to be sufficiently flexible to be able to show the outcomes under various connection scenarios across each of the Zones, together with the projected high level capital costs for both network expansions and any additional top up and back up boiler plant required and modifications to existing plant and systems. It will comply with the requirements as set out in Section 3 (iii) of The Services using hourly heat demands where available.

Sitting alongside this model will be the conceptual designs for the expansion of the Phase 1 Scheme as required under 3(ii) of The Services.

Workstream 4 (WS4) – The Business Plan

The next workstream will involve pulling together the results from the data gathering exercise modelling and the conceptual designs into a formal Business Plan to develop Phase 2. This Business Plan will be drafted at two levels:

1. a high level document which summarises the opportunity for an audience such as the shareholders of the company
2. a much more detailed plan which contains sufficient granularity for the directors of the business to full understand the opportunity and to make informed decisions as to the next steps

The Business Plan will set out what is proposed for each Zone. This will include but not be limited to:

- what works are required
- what resources are required
- how these would be procured
- what contracts would need to be secured (and where not existing, heads of terms for the proposed heat supply contracts)
- land agreements, planning permissions etc..

- risks (in a detailed risk matrix)
- budgets for these works and services
- development timeline

All the time bringing this data and these recommendations back to ensuring that the IRR hurdle rates set for the company by its shareholders that have to be achieved (or other similar financial metrics) are met with these expansion plans.

Workstream 5 (WS5) – Communicating and Agreeing the Business Plan

A key next workstream will be to communicate to and then agree the Business Plan with both the SDEN Directors, it's Holding Company and the Shareholders.

It is expected that the high level document set out above will be in the form of a briefing paper to ensure that all stakeholders fully understand the nature of what is planned, the opportunity, the costs and the risks.

Workstream 6 (WS6) – Implementing the Business Plan

This key workstream will then be for WEC to lead and project manage the implementation of the agreed Business Plan. There will be a large number of elements to this workstream, many of which will be undertaken by other specialist consultants working under the direction of the WEC carrying out tasks such as route proving, procurement, planning permissions, detailed designs, legal advice on contract terms etc.. Each of these will be identified in the Business Plan.

The key roles for WEC during this WS will be to project manage the overall implementation of the Business Plan and these sub consultants including:

- directly leading on the negotiation of proposed heat sale agreements, ensuring these are agreed and executed including where necessary developing bespoke commercial structures to enable connections to be secured
- regularly updating the financial model to reflect the status of the potential and actual expansions secured
- managing securing planning permissions, land agreements etc.. for these expansions
- managing the procurement of any construction works required and the variations to existing Phase 1 contract required to deliver these expansions
- annually updating the business plan

Workstream 7 (WS7) – Reporting and Feedback

A critical step which will work in parallel with WS6 is the requirement to provide briefings, reports and feedback on the implementation of the Business Plan (WS7B). This will be way of monthly project reports showing progress against the Business Plan including:

- risks
- key issues
- engagement with stakeholders and consumers
- actions undertaken in previous period
- actions to be undertaken this next period

- progress against the plan
- report on costs against budget

It is also planned that monthly update reports will be provided during the Business Plan Development process to provide updates on WS1 to 4 and these are also shown on the project program (WS7A).

Workstream 8 (WS8) – Interaction with Phase 1 and Lessons Learned

This workstream which will be undertaken concurrently with all of the other workstreams is to engage with the Phase 1 project on a continuous basis to understand how this is progressing and specifically:

- what impacts the delivery of Phase 1 may have on Phase 2, i.e. delays, changes in contracting or connection arrangements etc..
- lessons learned in terms of contracting structure used, delivery and commercial mechanisms, planning applications etc..

It is critically important that Phase 2 is not developed in isolation from Phase 1, but learns lessons from Phase 1 and these are applied wherever possible to Phase 2. This will ensure that risks are minimised, and opportunities both to expand the network and deliver a financial viable scheme to SDEN are maximised.

Resourcing

In terms of a resource schedule we have assumed that the time expended by WEC's Principal Consultant (Simon Woodward) who will undertake this commission will be spread equally across the entire program period at 2 days per week as set out in the documents provided, i.e. "*the consultant shall allow an average of 2 days per week (FTE)*" . Particularly as each of the tasks are as intensive as each other. Therefore WEC will be invoicing on this basis across this commission, i.e. 2 days per week, whilst undertaking the workstreams and delivering the outputs as set out above. Demonstrating progress against this invoicing schedule by way of the monthly progress reports on the various WS's as shown by lines 7A and 7B above.

Address for Invoices

Address where invoices shall be sent:
The Payments Team
3rd Floor Civic Offices,
St Nicholas Way,
Surrey,
Sutton,
SM1 1EA

Electronic format required (if any) for submission of orders by the Authority and of invoices by the Service Provider: **Invoices@sutton.gov.uk**

Set out information required in each Invoice – confirmation that the provision of Services generally in accordance with the Work Packages is on going for that monthly payment period.

Date/Period for submission of Invoices: as agreed between beneficiary and consultant

Address where invoices shall be sent:
Greater London Authority

Accounts Payable
PO Box45276
14 Pier Walk
London
SE10 1AJ

Electronic format required (if any) for submission of orders by the Authority and of invoices by the Service Provider: [redacted]@london.gov.uk (Invoices for attention of GLA should only be emailed).

Set out information required in each Invoice.

Invoices should contain the following wording:

'The net amount for Goods Received to be paid by GLA to a sum of £xxx'
'The VAT amount to be paid by London Borough of Sutton to a sum of £xxx'

Authority Call-Off Co-ordinator

Name: [redacted]

Address: 24 Denmark Road, Carshalton, Surrey, SM5 2JG

Phone: [redacted]

Email: [redacted]@sutton.gov.uk

Cap on Liability

The Service Providers aggregated cap on liability to the Authority and the Contacting Authority for the provision of the Services under this Call of Contract shall be £374,400 (three hundred and seventy four thousand and four hundred pounds). Such sum shall supersede the unlimited cap on liability as set out in Clause 20.1 of the Agreement

Call off Contract Commencement

1st June 2018

Call off Contract Term

Until 30th September 2019

Attachment 2 – The Charges

PRICE SCHEDULE

SDEN Limited Project Management and Commercialisation Services

Please provide a full response below and ensure you upload the price schedule onto the portal. Prices should be:

a. in UK pounds sterling (£), decimal fractions of a pound to 2 decimal places.

b. inclusive of all costs associated with the provision of goods/services but exclusive of vat.

PART 1:

[redacted]

WEC Comments – the rate shown above is in accordance with the GLA Framework contract signed between WEC and the GLA.

We understand from the Indicative Procurement timetable provided that the estimated start date for these works is the 1st March 2019 and the end date is 31st August 2019 and from the documents that it is expected that "*the consultant shall allow an average of 2 days per week (FTE)*". There we have priced on this basis. This is a total of 78 weeks and therefore 156 days. This fixed rate for the scope of services is shown above.

Record of decision taken under delegated authority by a Council officer

Title:	SDEN Project Management and Commercialisation Services
Wards Affected:	St Helier, The Wrythe, Wandle Valley and Beddington North
Decision taken under delegated authority by virtue of:	Constitution: Section 4, Part 6, Contract Standing Orders

Summary

The Sutton Decentralised Energy Network (SDEN) has commenced delivery of Phase 1, to the New Mill Quarter in Hackbridge. In order to facilitate the expansion of SDEN, project management and commercialisation services are required. These services will deliver the agreed SDEN Limited Business Plan.

SDEN required specialised consultancy services to deliver its agreed Business Plan. These services have been procured and will be funded via the Greater London Authorities' (GLA) Decentralised Energy Enabling Project (DEEP) Framework.

Decision

That:

1. Woodward Energy Consulting (WEC) are appointed to provide SDEN with project management and commercialisation services, with a total contract value of £124,800. Costs will be borne by the GLA.

<u>Reasons for Decision:</u>

Through a direct call-off from the GLA's DEEP Framework, the tender was directed to all 6 providers listed in Lot 2.3 on the framework and was based on 70% quality and 30% price. Woodward Energy Consulting (WEC) were the only providers who submitted a bid. Their tender submission was scored and fully met the tender specification.

Options, if any, considered and rejected

The alternative option was for the Council to fund these services, this was rejected.

Decision taken by:	[redacted] Mary Morrissey, Strategic Director Environment, Housing and Regeneration
Decision taken on:	8 March 2018
To be implemented on:	8 March 2018

Declarations of conflicts of interest

N/A

Background Documents	Exempt:
SDEN Limited Business Plan	

C_Sutton_SDENPM_Com

INVITATION TO TENDER

(ITT) For

REF: GLA Sutton_SDEN_Project Management & Commercialisation_01

London Borough of Sutton

SDEN Project Management and Commercialisation Services

September 2019

Mini-Competition Request Form

Framework Agreement Name and Reference Number: **GLA 80814 – Decentralised Energy Framework**

Subcategory: 2.3 Project Management and Commercialisation Services

Mini-competition Reference: GLA Sutton_SDEN_Project Management & Commercialisation_01 **- SDEN Ltd Project Management and Commercialisation Services**

Date: September 2019

This is a Request Form for the provision of Services in accordance with the Agreement referenced above. This is an enquiry document only, constituting an invitation to treat and it does not constitute an offer capable of acceptance. Your Proposal must be submitted as an offer capable of acceptance by the Authority; however such acceptance will not occur unless and until the Authority posts notice of acceptance to you.

Attachment 1 of this Request Form sets out the Services required by the Authority and other relevant information.

In your Proposal, you must respond to the information requested in Attachment 1 by completing Attachment 2.

Attached to this Request Form is a draft Call-Off Contract. The Authority is under no obligation to award any Call-Off Contract as a result of this Request Form.

Your Proposal will be assessed against those submitted by other service providers as part of a Mini-Competition process. The Authority will award the relevant Call-Off Contract to the Service Provider with the Proposal that is the most economically advantageous with reference to the assessment criteria set out in Attachment 1.

Any clarifications regarding this Mini-Competition should be directed per the instructions in this ITT.

This procurement is being managed by **London Borough of Sutton (LBS)**. The process is being carried out electronically via the LBS's eTendering portal: Pro-Contract from ProActis Link: https://procontract.due-north.com

1. INSTRUCTIONS TO CONSULTANTS

1.1 Please read the following instructions carefully before submitting a tender.

1.2 A submission in response to this invitation shall be referred to hereafter as the "Tender" and the organisation making such as submission shall be referred to as the "Consultant".

1.3 All references to "Schedules" in this document refer to Schedules within this document.

1.4 Please confirm intention to bid via ProContract on Monday 7th October.

1.5 Consultants are required to submit a separate Technical Proposal and a separate Commercial Proposal.

1.6 The technical submission should be no longer than 25 A4 pages (Single Sided) with the font size comparable to Arial 12 points (excluding synopsis and CVs – no more than two pages per CV) must include the following as a minimum:

1.7 The Tender Submission must comprise of 1. **'Technical Proposal' 2. 'Commercial Proposal'** as follows:

1) **Technical Proposal** (response to the Technical Proposal T1, T2, T3, T4 and T5 addressing Attachment 2)

2) **Commercial Proposal**

Please note:
The Technical Proposal and the Commercial Proposal must be separate documents. **Prices must not be included in the Technical Proposal**. The documents must be clearly titled **'Technical Proposal**' and **'Commercial Proposal'**. Submissions must be (**Technical Proposal** in Microsoft Office applications or Adobe Portable Document Format **(pdf)** documents) and (**Commercial Proposal** in Microsoft Office applications or Adobe Portable Document Format **(pdf)** documents).

1.8 Consultants are welcome to partner with other organisations if they feel that they can provide the expertise required to complete the project. Full details of how the partnership would work (governance etc.) should be provided in the Tender Submission.

1.9 LBS will not pay any costs associated with producing a Tender or incurred in any subsequent discussions or clarifications, regardless of whether that Tender is successful or not.

1.10 Tender returns must have all pages numbered and returns must be submitted in English.

1.11 All communications will be sent via the portal to the main contact who registered on the LBS's eTendering portal: https://procontract.due-north.com

1.12 Consultants that require additional online help to use the eTendering portal must contact the portal's Supplier Help Desk which is available by email to: ProContractSuppliers@ProActis.com as soon as possible.

1.13 LBS reserves the right to award the Call-Off Contract for which tenders are being invited in whole, in part, or not at all.

1.14 LBS reserves the right not to award this Call-Off Contract to the lowest or any Tenderer and LBS will have no liability (contractual, tortious or otherwise) for failure to consider any tender. Following receipt of tender documents, LBS reserves the right to arrive at a shortlist of prospective organisations without any reference to, or communication with any of the Consultants.

1.15 The Call – Off Contract will be awarded post evaluation to the most economically advantageous tender (MEAT) submitted, using the specified evaluation criteria.

1.16 This tender shall remain open for the acceptance by LBS (or its nominee) and will not be withdrawn by us for a period of three calendar months from the date fixed for return.

2. CLARIFICATION QUESTIONS

2.1 Any technical questions or requests for clarification regarding this ITT should be submitted via the LBS e Tendering portal https://procontract.due-north.com . If LBS considers any question or request for clarification to be of material significance, both the question and the response will be communicated, in a suitably anonymous form to all Consultants who have responded. The deadline for any clarification questions is set out

2.2 Please **do not** contact LBS staff directly as it is imperative that the process remains fair and transparent to all Consultants. All contact must be via the ProContract messaging portal.

3. CONFIDENTIALITY, PUBLICITY AND MARKETING

3.1 The contents of this Mini-Competition are confidential and must be used only for the purpose of submitting a Proposal. The Consultant must not

make any such communication or enter into any collusive arrangement with any third party save for the purpose of sub-consulting.

3.2 Consultants must maintain strictest confidence and not disclose to any third party without prior written consent of LBS, the information supplied by LBS in this invitation to tender document and other confidential information supplied by LBS to the Consultant.

3.3 Consultants must not communicate to any person other than LBS, the amount or approximate amount of the charges and such charges must not be
determined or adjusted by arrangement or in collusion with any third party. The Consultant must not make any such communication or enter into any collusive arrangement with any third party whether in relation to this tender or a tender submitted or to be submitted by such third party.

3.4 The technical specification made available to the Consultant during the course of this invitation to tender is strictly confidential. Such information should not be disclosed to any third party including subcontractors without the prior consent of LBS.

3.5 Consultants are not permitted to:

- Make any public statement or communicate in any form with the media in connection with this Tender Process.
- Use any trademarks, logos or any other Intellectual Property Rights associated with LBS.
- Represent that the Consultant is directly or indirectly associated in any way with LBS or this Tender Process.
- Engage in any form of marketing which creates, implies or refers to an association between the Consultant and LBS and/or the Tender Process.
- Do anything or refrain from doing anything in relation to the Tender Process that would have an adverse effect on LBS.
- Consultants must direct any queries from the media to Opportunity Sutton opportunitysutton@sutton.gov.uk.

4. TRANSPARENCY AND PUBLIC ACCOUNTABILITY

4.1 Consultants are reminded that LBS has the highest standards of procurement and intends to maintain a fair and open selection process. It will select a firm best suited to the brief and is not obliged to select the lowest or indeed any of the returns. Late tenders will be returned unopened and any attempt to influence the outcome through hospitality or other inducements will result in the disqualification of the tender.

5. RETURN OF TENDER DOCUMENTS

5.1 Please complete and return your tender document on or before **noon on Tuesday 15th October** via the LBS eTendering portal. https://procontract.due-north.com

5.2 The tender document submitted must be in electronic format such as (Technical Word or PDF) and (Commercial excel). Please note that no other form of document transmission, e.g. hard copy by Courier, will be accepted.

5.3 Tenders submitted after the deadline time will not be accepted.

5.4 The LBS e-Tendering portal will reject any tender submission if it is published after the deadline stated in this document. The Consultant is strongly advised not to leave submission of the tender to the last minute.

5.5 Consultant must note that all files uploaded cannot be amended by anyone once published and that original files published by Consultants will be maintained in an unaltered state on the system right through the procurement process.

6. VALIDITY

6.1 Proposals must remain open for acceptance for 6 (six) months from the return of proposal date.

7. PROPOSAL SUBMISSION CLARIFICATIONS

7.1 During the course of the evaluation of submissions, the Consultant may be asked to answer questions about his submission and other matters related to the Services. The Consultant must respond to such questions as quickly as possible but, in any event, within 2 (two) working days or, if a deadline is specified, responses must be submitted by that deadline. Failure to respond may result in us rejecting the Proposal submission. Any amendments to the Proposal submission arising from these discussions with the Consultant will be taken into account in the final evaluation.

8. PROPOSAL CLARIFICATION MEETING

8.1 To enable moderation of the Proposal evaluation process, we may request a meeting from all, some or one of the Consultants. Failure to attend may result in us rejecting the Proposal submission.

9. PROPOSAL SUBMISSION EVALUATION

9.1 Evaluation of submissions will be on the basis of most economically advantageous proposal as per the assessment criteria set out in the tables contained in this ITT.

10. COMPLIANCE

10.1 All Proposals returned should comply in every respect with the requirements of this Mini-Competition. However, we reserve the right to consider non-compliant submissions where permitted.

10.2 Failure to disclose all material information (facts that we regard as likely to affect the evaluation process), or disclosure of false information at any stage of this procurement process may result in ineligibility for award. The Consultant must provide all information requested and not assume that we has prior knowledge of any of the Consultant's information.

10.3 Proposals that contain Specialist Consultants at above Framework Maximum Charge Out Rates will be deemed non-compliant. If you wish us to consider the approval of Specialist Consultants (at above Framework Maximum Charge Out Rates), this must be requested within the Mini-Competition clarification process prior to submitting your Proposal.

10.4 We shall not be liable for any costs, charges or expenses borne by the Consultant whether or not he is awarded a Call Off Contract, which for the avoidance of doubt includes any costs, charges and expenses arising from or associated with an abortive or cancelled procurement process.

11. ACKNOWLEDGEMENT OF RECEIPT OF THIS MINI-COMPETITION

11.1 The Consultant should acknowledge in the e-tendering portal receipt of this Mini Competition and confirm whether they intend to submit a Proposal. Failure to do so may lead to the Consultant not receiving any amendments, addendums and clarifications to Mini-Competition documentation.

12. CONTACT

12.2 All contact must be via the e-tendering portal. Any issues with the portal should be raised with Due-North and additional guidance is available at: https://supplierhelp.due-north.com/

13. EVALUATION CRITERIA

13.1 Evaluation of submissions will be on the basis of most economically advantageous tender.

13.2 Consultants will be scored against the following Scoring Key as detailed in the Table below:

	Scoring Key
5	Excellent; full and accurate understanding of the requirement with some added value
4	Very Good; demonstrates good understanding of the requirement, above minimum requirement
3	Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement
2	Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response
1	Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement
0	No submission/question not answered

13.3 Grade Definitions

Partner/Director

General	For a partnership, a Partner in the practice; for a limited company, any employee who is a “Company Director” as defined in the Companies Act 2006. Responsible for all grades of personnel.
Typical Education / Qualifications and Experience	Hold appropriate professional qualifications applicable to the discipline commissioned to perform and/or corporate membership of a major institution. Must have relevant work experience spanning several major programmes. The ability to demonstrate key involvement in delivering projects of high value and complexity. Overall responsibility for project(s) and for supervision, control and development of subordinate personnel. Significant management responsibility and direction within the consultancy including client liaison, specialist skills or experience.

Principal Consultant

General	Reporting to Partner / Director. Member of a company who is able to deputise for the Director. The person will have the ability to manage and control teams and ensure that there are sufficient teams of personnel assigned to commissions. Responsible for all grades of consultants and support staff.
Typical Education /Qualifications and Experience	Hold appropriate professional qualifications applicable to the discipline commissioned to perform and/or corporate membership of a major institution. Must have relevant work experience spanning several programmes. The ability to demonstrate key involvement in delivering projects of high value and complexity. Must have substantial transport experience and technical skills appropriate to the discipline. Responsibility for project(s) and for supervision, control and development of junior personnel. Significant management responsibility and direction within the Consultancy including client liaison, specialist skills or experience.

Senior Consultant

General	Reporting to Partner / Director or Principal Consultant. Person holding corporate membership of a professional body recognised by TfL and has the ability to demonstrate key involvement in delivering projects of high value and complexity. Responsible for all grades of consultants and support staff on behalf of the Director/Partner.
Typical Education /Qualifications and Experience	Must have relevant work experience spanning several programmes / projects The ability to demonstrate key involvement in delivering projects of high value and complexity. Must have substantial transport experience and technical skills appropriate to the discipline. Responsibility for project(s) and for supervision, control and development of junior personnel. Significant management responsibility and direction within the organisation including client liaison, specialist skills or experience.

Consultant

General	Reporting to Principal Consultant / Senior Consultant. A person with the ability to assist in the management and control of a project team to ensure delivery of the required projects. Responsible for Junior Consultant / administration staff
Typical Education /Qualifications and Experience	Hold appropriate professional qualifications applicable to the discipline commissioned to perform and/or corporate membership of a major institution. Must have relevant work experience spanning several projects. Must have some transport experience and technical skills appropriate to the discipline. Responsibility for project(s) and for supervision, control and development of junior personnel.

Junior consultant

General	Reporting to Senior Consultant/Consultant. A person with the relevant experience capable of working on some aspects of the delivery of the required project. Responsible for support staff.
Typical Education /Qualifications and Experience	Must have relevant work experience in at least one completed project.

13.5 Quality Evaluation

The Quality will be weighted at **70%** of the total score. The Price will be weighted at **30%** of the overall score of the tender.

Please note that Tenders must score a minimum of 50 out of 70 or higher of the overall quality score and achieve passes against all Pass/Fail questions in order to proceed to Award Criteria evaluation. Any tender achieving lower than 50 out of 70 of the overall quality score will be eliminated from progressing to the award criteria evaluation.

13.6 Price Evaluation

The lowest priced compliant tender will be awarded the maximum score (30%) of the overall marks. All other tender bids will be scored for price pro-rata against the lowest priced tender. The following formula will be used to score bids:

Supplier Score = Maximum Score x (Lowest price/ Supplier price)

Bids are accepted subject to regulation 69 (Abdominally Low Tenders) of the Public Contracts Regulations 2015.

13.7 Submissions & Evaluation Criteria

Technical		
Evaluation**: 70%** and discretionary pass/fail		
The technical submission page limits exclude CVs.		
The *Authority* will not appoint a *Consultant* that scores less than **50** out of the available **70** marks		
Evaluation Criteria		**Weighting**
T1	Understanding Outline in brief of your understanding of the purpose of this project. **Max 2 sides A4**	5%
T2	Methodology Proposed approach to this work, describing the key activities and methodology. The information provided should be specifically applicable to this scheme. (Scope of Services - Attachment 1). ● Outline of proposed methodology for undertaking the services outlined including detailed description of the deliverables that will be provided. ● The key issues that may be encountered and how You propose to address these ● Why your organisation has the specific expertise and experience to undertake the Services ● the innovation you propose to bring to these Services	25%

	Max 8 sides A4	
T3	<u>Quality of Resource</u> For each proposed consultant, supply: ▪ CV's (max 2 pages per person) of key staff to be involved in this work. This should include synopsis of their role and the expertise they would bring to the project and their level of involvement across the stages the commission ▪ Confirmation of the consultant's availability for the duration of the contract. **SUPPLIERS PLEASE NOTE:** When scoring this Question, London Borough of Sutton will consider the application of these resources stated in response to this Question in conjunction with the pricing schedule, i.e. if senior staff who the Supplier features in response to this Question are not reflected in the pricing schedule as having a material involvement with the Services then this will result in a lower score. London Borough of Sutton will be particularly looking for members of your team who have specific experience with large scale heat networks both in development and delivery either as an internal resource or one that you propose to employ as a subcontractor for parts of the Services and details of any subcontractors to be used. **Max 6 sides A4 excluding CVs**	30%
T4	<u>Programme & Risk Register</u> Provide a programme to deliver the services to include: ▪ A full project plan with clear milestones. ▪ A full resource schedule (in person days and broken down by role) for the full programme. ▪ Any risks associated with the delivery of the project, along with rationale.	10%

	Max 6 sides A4	
T5	Conflicts of Interest: Provide details of actual or potential conflicts of Interests that would arise were you to be appointed, and details of how these conflicts would be mitigated. **Max 2 sides A4**	Discretionary Pass/Fail
Commercial		
Evaluation**: 30%**		
Evaluation Criteria		**Weighting**
	▪ Price – Fixed Rate for the scope of services ▪ Schedule of resource (resource name, f/w grade, days and day rate) Day rates are within the framework agreement, and allowable discounts applied.	30%
	Acceptance to GLA 80814 – Call-Off terms and conditions including limitations of liability. The limit of liability for uninsured losses will be three times the final contract price agreed.	Discretionary Pass/Fail
	Full contact details of the *Consultant's* bid manager	For info

13.8 Important Notes

- Consultants are required to provide full contact details of the Account Manager within the Commercial submission only for the purposes of clarification.
- Please be aware that failure to accept GLA 80814 – Call-Off Terms and Conditions will equate to a failure, unless in the opinion of LBS, any issues raised are genuine and done so in a timely manner, i.e. at clarification stage.
- The limit on liability for uninsured losses will be three times the contract sum.
- All Consultants are reminded of the maximum framework rates upon which the framework operates. Proposals containing rates for personnel who exceed these predefined amounts may lead to your proposal being rejected, if not previously authorized during the clarification process.

- LBS reserve the right to accept all or any part of an offer and, if necessary, establish trading arrangements with more than one supplier.

14. TIMELINE

Activities	Dates
ITT issue date	Wednesday 25th September 2019
Supplier Clarification Questions Received	Monday 7th October 2019
Confirmation of intention to bid registered via ProContract	Monday 7th October 2019
Deadline for receipt of tender	Noon on Tuesday 15th October 2019
Tender Evaluation	Wednesday 16th October to Thursday 31st October 2019
Clarifications/presentations/interviews (If required)	Monday 28th to Wednesday 30th October 2019
Award subject to contract	w/c 4th November 2019
Inception meeting	w/c 11th November 2019
Estimated start date	w/c 18th November 2019
Estimated completion date	End-March 2020

Please note that LBS reserves the right to change the above dates and timings

15. DURATION

The estimated completion date for this commission will be March 2020, which is also the end date of the GLA's DEEP Framework.

If the GLA's DEEP Framework is extended beyond March 2020 in order to utilise all available funding, this commission may also be extended in line with the framework. The contract value may be increased proportionally in line with this extension.

Specification

for the provision of Project Management and Commercialisation Services under the GLA's DEEP LOT 2.3

for Decentralised Energy Schemes

in the London Borough of Sutton for

Sutton Decentralised Energy Network Limited

1. Introduction

The London Borough of Sutton ("the Authority") has an ambition to become London's most sustainability borough, as set out in its new Environment Strategy. This drives the Authority towards the approach of maximising the use of resources that exist within the borough to try and reduce the reliance on imported energy sources. One of the key projects to deliver this vision has been the desire to use heat from the existing landfill gas engines (LFG) on the Viridor waste processing site and energy from the large scale energy recovery facility (ERF), currently under construction.

To deliver this landmark project the Authority created a wholly owned energy services company; Sutton Decentralised Energy Network Limited (SDEN) which has now brought the first phase (Phase 1) of this project to financial close.

Phase 1 involves taking heat from the Viridor ERF and supplying this via a buried district heat network to a new build housing development, being constructed by Barratt Homes on the site owned by Schroders, formerly known as the Felnex Industrial Estate but is now the New Mill Quarter.

There are a number of work streams being progressed by SDEN both in the development of Phase 1 and the rapid expansion of the scheme (Phase 2) where there is a requirement for a project management and commercialisation function. These services are needed to assist SDEN to achieve its growth potential and this specification sets out these requirements ("the Services").

It is intended that the GLA's Decentralised Energy Enabling Project (DEEP) will contribute towards funding these Services and will use the DEEP consultancy framework. This document sets out the Authority's requirements for the Services.

2. Works to Date

In July 2013, the London Borough of Sutton's Strategy and Resources Committee (S&R) approved the Conceptual Business Case for the development of a district heating network in Sutton, with funding of £4.5m. The Strategy and Resources Committee agreed that heat supply contracts should be completed with Viridor and the Felnex Developer (Barratt Homes). Delegated authority was given to the Strategic Directors (Resources and Environment and Neighbourhoods) in liaison with the Vice-Chair of Strategy and Resources Committee and the Chairs of Housing, Economy and Business and Environment and Neighbourhood Committees to progress the project.

Following consideration of the Outline Business Case at the Housing Economy and Business Committee (HEB) in March 2015, the Sutton Decentralised Energy Network project was deemed viable, with a projected cumulative cash return over 25 years meeting acceptable levels. The committee also approved the carrying out of an OJEU compliant procurement process to appoint a Design and Build, Operation and Maintenance, Customer Services and Meter and Billing Contractor(s). It also delegated authority to award and sign contracts with preferred bidders.

Following these approvals, a number of work streams commenced to take Phase 1 of the project to financial close. These included:

- Negotiation of a heat purchase agreement with Viridor for a 25-year period
- Land agreements with Thames Water, Viridor and Network Rail to allow the pipework to be installed
- Negotiation of a connection and supply agreement with Barratt Homes for the Felnex Development
- The procurement of design and build contractors to construct the network from the Viridor plan to the Felnex site
- The procurement of operation and maintenance contractors to operate the network and take over the district heating infrastructure assets being constructed by Barratts on the Felnex site

Together the conclusion of these various agreements in June 2017 have allowed SDEN to reach financial close on Phase 1 and now deliver a core "proof of concept" scheme supplying heat from the LFG/ERF to the Barratt's development.

3. The Services

Moving forward from this significant landmark in the project's development the Authority wishes to appoint a suitably qualified and experienced individual (the Consultant) to work within the Authority to undertake project management and commercialisation services for a period until the end of March 2020. These services will be to help coordinate the Phase 1 scheme and its early phase of operation to ensure system stabilisation and develop the scheme beyond that which is being delivered under Phase 1 into a larger Phase 2 area, including but not limited to developments in the Hackbridge area of the borough (such as the Lavenders Estate being developed by Clarion Housing) as well as extending the network West into Sutton Town Centre and East into Croydon. In undertaking these services the Consultant shall need to work within the framework of existing approvals and policies which are already in place for the LA ESCo, which include IRR hurdle rates and pricing policies.

To achieve these aims the selected the Consultant shall undertake a number of activities under the Services including but not limited to:

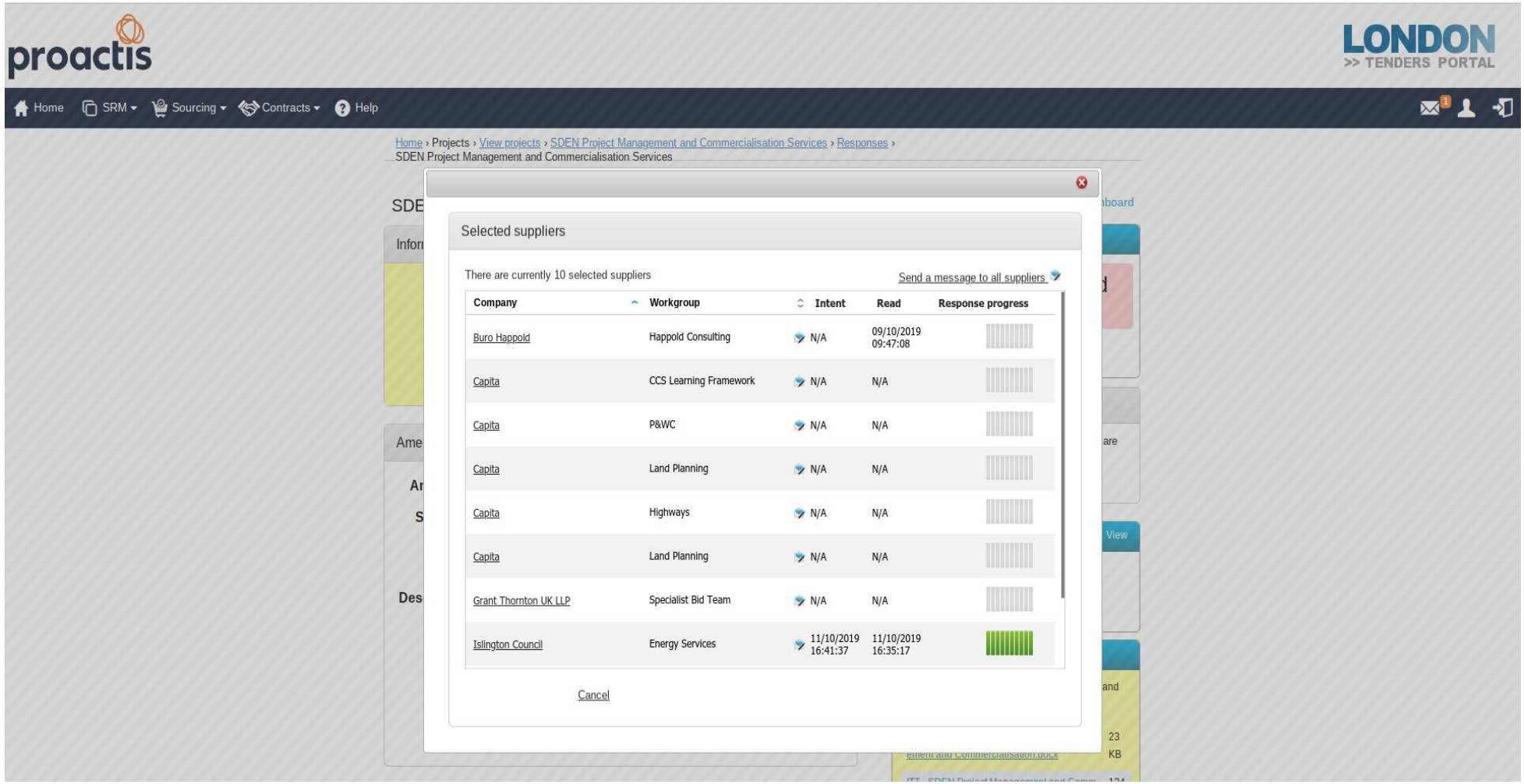
i. Managing the consultants being procured under a separate DEEP commission who are undertaking works with respect to the extension to Sutton Town Centre, specifically:
    a. Compilation of building and development site data
    b. Undertaking a heat network routing study and design
    c. Preparing a detailed capital costs plan
ii. From this study the Consultant shall update SDEN's detailed techno-economic model aimed at appraising viable options of the expansion of the Phase 1 scheme into Phase 2 to reflect these findings. This model is based on hourly energy demand and supply data, will incorporate the data from (i.) above and

is to contain proposed heat prices for commercial consumers as well as calculate financial indicators such as IRR, NPV, etc

iii. Writing briefing papers and reports to communicate the development of the scheme and progress on Phase 2 within a local authority environment via a wholly owned energy services company
iv. Where required for new connections, establishing and developing project contract and commercial structures
v. Negotiating and concluding energy purchase and sale agreements in relation to the above
vi. Updating Business development plans for SDEN
vii. Developing and managing the procurement processes for project delivery
viii. Supporting the Phase 1 operational delivery team with expertise on scheme development and operation and well as stabilisation of Phase 1 operations
ix. Drafting scopes of works for other consultants who may be utilized on the development of this project

In summary, the Consultant shall take the lead role for co-ordinating the Phase 1 scheme and it's early phase of operation to ensure system stabilisation and the SDEN Phase 2 project development ensuring that the new connections reach financial close in a manner which will deliver an optimised financially viable outcome for SDEN. The Consultant should allow for an average of 2 days per week (FTE), however there may be a requirement for this to be flexible to meet the demands of the project.

Evidence of who tender was advertised to



Selected suppliers

There are currently 10 selected suppliers

Send a message to all suppliers

Capita	CCS Learning Framework	N/A	N/A	
Capita	P&WC	N/A	N/A	
Capita	Land Planning	N/A	N/A	
Capita	Highways	N/A	N/A	
Capita	Land Planning	N/A	N/A	
Grant Thornton UK LLP	Specialist Bid Team	N/A	N/A	
Islington Council	Energy Services	11/10/2019 16:41:37	11/10/2019 16:35:17	
Ove Arup & Partners Ltd	Energy	N/A	N/A	
woodward energy consulting lmited	Energy Consulting	12/10/2019 17:54:51	08/10/2019 18:42:48	

Cancel

Tenders received:

proactis

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RFx response details

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Narrow your results

Published

Start date End date

dd/mm/yyyy dd/mm/yyyy

Reset Update

On time 2 Late 0 Opt out 0 No response 8

Company name	Workgroup	Version	Published	Verified
Islington Council	Energy Services	1	21/10/19 17:03:11	Yes - Accepted
woodward energy consulting lmited	Energy Consulting	1	12/10/19 18:02:55	Yes - Accepted

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SDEN Project Management and Commercialisation Services

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Information

Status : Published 08 October 2019 17:04 (Version 2)

Respond by : 22 October 2019 12:00

Title : SDEN Project Management and Commercialisation Services

More

Amendments

Amended 08/10/2019 17:02:41

Sections Highlighted in yellow

Description ITT: There appears to be an admin error in the ITT document where it is referencing a threshold of 50 out of 70. This threshold has been REMOVED and the UPDATED ITT document is attached PRICE SCHEDULE: The Price Schedule has been UPDATED to request ADDITIONAL information should the contract be extended by an additional 3 months. This is for INFORMATION ONLY and will NOT be scored.

History Version 2 Current

Version 1
Amended 08/10/2019 17:02:41 View

Deadline & time remaining

ITT deadline expired

View responses

Messages (0)

You have received 0 message(s) of which 0 are unread

View all | View unread | Export all

Suppliers (10)

View

Viewed by -	3
Intent to Respond	2

Attachments (5)

Attachments can be viewed by all suppliers and procurers involved in this ITT

Consultant Proposal - SDEN Project Management and Commercialisation.docx	23 KB
ITT - SDEN Project Management and Commercialisation UPDATED.docx	124 KB

ISLINGTON

Conflicts of Interest

As a local authority, we do not believe we have any potential conflicts of interest with regards to this piece of work. We do not have any other parts of our organisation that would benefit from decentralised energy schemes in Sutton, nor any profitable relationships with any organisations that we would interact with during the commission.

ISLINGTON

Methodology

Proposed methodology and deliverables

The below provides an outline of our proposed methodology for the commission and details of the deliverables.

Sutton Town Centre study

We will manage the consultants working on the three parts of the Sutton Town Centre expansion study. This will include an introductory meeting including Sutton Council to make clear expectations and agree timescales and deliverables. We will then liaise at least weekly with the appointed consultant to ensure their work is on track. When the draft versions of the deliverables are completed, we will review them, present our thoughts to Sutton at a meeting, and provide a final set of comments to be taken into account. We will then review the final outputs to ensure that the changes have been made.

The deliverables for this piece of work will be the building and development site data, the heat network routing study and design proposal, and the detailed capital costs plan produced by the consultant.

Updating the techno-economic model

After receiving the final data from the consultant, we will update the SDEN techno-economic model to appraise the viable expansion options. The updates will include modifiable figures for heat prices to allow for future amendments following negotiations with potential connections. The results of the updated model, including IRR and NPV will be written up in a report for Sutton Council.

Any changes to the model to accommodate the additional connections will be documented for future reference. The deliverable for this task will be the updated techno-economic model.

Briefing papers and reports

We will produce briefing papers and reports as agreed with Sutton Council. These will include regular update reports at intervals to be agreed upon appointment. The reports will be the deliverables.

New connection contract and commercial structures

We will assist Sutton Council in establishing what the appropriate contract and commercial structures are for potential new connections. If the existing heat supply contracts agreed with

the phase 1 connection are not transferable. Any proposed structures will be written up in reports, which will be the deliverables for this task. We can also support Sutton's planning team with developing new planning policies that support the development of heat networks by encouraging developers to connect or make their developments ready to connect.

Energy purchase and sale agreements
We will negotiate with developers and site owners on behalf of the SDEN to reach agreement on heat supply contracts. This will include requests to share recent heat-related data (gas bills, half-hourly readings etc.) to assess heat demand and their current price. This will verify the proposed connection size and allow the development (in discussions with Sutton) to develop a proposed heat tariff and standing charge that will provide value for money and be attractive to the developer/site owner. We will also need to reach agreement on how the tariff and standing charge will be indexed going forward. These negotiations will be concluded with a heads of terms document prior to the contract signing.

We will help draw up the heads of terms and contract documents with the relevant details, which will be the deliverables for this task.

Business development plans
We will keep the SDEN business plans updated as new information becomes available, including potential connection costs and heat supply agreements. The updated plans will be the deliverables.

Procurement
We will lead on any procurements required during the commission. This will include drawing up the specifications/scopes of works, T&Cs, contracts and any other tender documents required, with input from Sutton's procurement team. Where possible we will utilise frameworks such as DEEP (feasibility studies) or StokeDEPO (heat network supplies) to minimise the time required to go through the process. For award decisions, we will convene a panel of three people to score the bidders, and will include at least one person from Sutton Council on this panel (two if requested). We will also give Sutton Council a final say on any potential appointments, which are the deliverables for this area of work.

Support for the Phase 1 delivery team
We will be able to provide a wide range of support for the phase 1 delivery team, including advice on both the build and operational stages of the project. We have numerous officers with experience of different elements of heat network development that we will be able to call upon (detailed further in the Expertise and Experience section below).

Key issues and solutions

Based on our experience of building and operating heat networks, we believe the following are potentially the key issues that are likely to be faced (and the potential solutions). A more detailed set of potential issues and solutions is set out in the risk register also provided.

- **Quality of consultants' work**. In the last decade we have had numerous heat network feasibility studies carried out by external consultants (we believe Islington is probably the single largest recipient of HNDU funding). In many cases it has been a challenge to secure useful outputs. We have also seen this when acting on behalf of other local authorises and helping oversee the outputs of their consultants. In particular, we have found that many consultants find it difficult to understand that the motives of local authorities go beyond financial returns, and that fuel poverty alleviation is a desired outcome.

  To mitigate this risk, we will ensure that the outputs from the consultants are reviewed by at least two members of staff prior to acceptance. If there are any issues identified, we will request their rectification. In the scenario that the outputs are not fit for purpose and something is needed quickly, we would propose seeking support from an alternative consultancy – something we had to do prior to an HNIP deadline.

- [redacted]

  [redacted]

- **Underutilisation of the network**: Failure to achieve the planned connections is likely to leave the network temporarily oversized. This may have ramifications in terms of committed purchase volumes with Viridor and operational efficiency.

  As well as working to avoid underutilisation by trying to ensure connections take place, we would look to maximise the heat take of existing connections and (if required) work with Viridor to try and reach agreement on temporarily lower volumes of supply.

Our expertise and experience

Our team has significant experience of heat network development and operation. We began working on heat network development in the late 2000s, before starting building our own heat network in 2012. We have also managed its operations since its completion in the same year, as well as overseeing its expansion and connection to other council and privately-owned sites.

Having commissioned numerous feasibility studies from consultants, we have a long track record of managing consultants doing this type of work. We have also carried out this role on behalf of other local authorities that did not have sufficient capacity or in-house expertise to do this. We did this for Hampshire County Council, reviewing the outputs from the consultants to ensure that they were fit-for-purpose.

We have overseen the creation of techno-economic models for heat networks using both Excel and EnergyPRO. We have staff proficient in both forms of modelling and recently received refresher training on EnergyPRO.

As a local authority team, we regularly produce reports and briefing papers within a local authority environment. We understand the roles, requirements and expectations of officers, management, directors and councillors and are able to tailor reports depending on the potential audience. We have also worked with our planning department to develop pro-district heating policies that encourage developers to connect to existing networks and, in areas where there is currently no network, build developments that are connection-ready.

Through our running and expansion of the Bunhill heat network, we have negotiated and concluded connection agreements, including the heat supply contracts. To date we have secured two private connections to our network, and are currently negotiating a third with a developer that has not had experience of doing so before. In this process, we have produced business case reports for the developer detailing our proposed price structure and how future prices are calculated. We have also been able to calculate appropriate heat prices based on their proposed alternative heating solutions and ensure that we would be able to offer a lower price whilst still maintaining a margin on our heat production costs.

We are experienced in local government procurement and with frameworks and funding streams such as DEEP and HNDU. This includes drawing up specifications and scopes of works and contract awards.

We have been operating the Bunhill Heat Network since 2012 and can provide advice based on this experience. This includes energy purchasing (we are one of the only councils in London to still purchase our own energy rather than using LASER or CCS and have a dedicated officer who is an expert on electricity and gas markets), O&M contract management and working with private connections.

Innovation

Islington's Energy Services team has a track record of delivering highly innovative projects. The Bunhill Heat Network, which began operating in 2012 was the first new council-owned district heating network in London for many years. Whilst phase 1 of the network was based on conventional gas CHP and boilers, the phase 2 expansion is a world-first – extracting waste heat from London Underground tunnels using a two-stage heat pump to add additional supply capacity to the network. This innovation has involved lowering the operating temperature of the network to accommodate heat pumps, also delivering great efficiencies due to lower heat losses.

In addition to the phase 2 expansion underway, we have explored the potential to use several other sources of waste heat in the area to further expand the network though several feasibility studies, including an underground electrical substation (currently vented at the surface via an oil-cooled system), a water source heat pump in a canal basin, and using a heat pump to provide both cooling to a data centre and heat to the network, using boreholes for thermal balancing.

Outside of the development of the Bunhill heat network, we are a lead partner in GreenSCIES, a research project with London South Bank University and TfL looking at the potential for developing a fifth-generation heat network using heat from another Underground ventilation shaft, which would be raised to the appropriate temperature at each building via heat pumps. The concept also integrates solar power generation and vehicle charging together with thermal, coolth and electricity storage to deliver whole-system integration.

Due to our reputation for innovation around heat networks, we were invited to become a partner in the EU-funded THERMOS project. Through the project, we are contributing to developing a heat network mapping and modelling tool to allow local authorities to carry out early stage feasibility work themselves rather than having to employ consultants. The tool will allow a quick and easy comparison of network configurations and pipe routes, as well as providing estimated heat demand for all buildings in an area if real data is not available. We would be happy to train up staff at Sutton to use the tool to allow them to use it going forwards.

In addition to our work on district heating, we have delivered innovation in other areas of energy efficiency, setting up London's first Carbon Offset Fund, which to date has brought in more money than any other authority. We launched the SHINE (Seasonal Health Intervention Network), which is now rolled out across several London boroughs and created a Warmth on Prescription scheme for vulnerable residents.

Price Schedule

Provision of Project Management and Commercialisation Services for the Sutton Decentralised Energy Network

COMPANY NAME: London Borough of Islington

Please provide a full response below and ensure you upload the price schedule onto the portal.

PART A:

Prices should be:
a. in UK pounds sterling (£), decimal fractions of a pound to 2 decimal places.
b. inclusive of all costs associated with the provision of goods/services but exclusive of vat.

The Council will use the Grand Total Price (cell G13) to evaluate the price element of this tender (weighted 30%).

TASK No.	Activity Description	Position of Staff Resource (please see definitions in ITT i.e Partner, Senior Consultant)	Name of Staff Member	Number of Days	Daily Rate	Grand Total Cost
1	Project Management and Commercialisation Services	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
						£0.00
						£0.00
						£0.00
		Total Number of Days, Daily Rate and Total		**50**	**£2,066.00**	**£26,907.00**

PART B: VAT 20%

If the GLA's DEEP Framework is extended beyond March 2020; this commission may also be extended in line with the framework in order to utilise all available funding. Please provide details below accordingly for a 3 month extension. <u>Please note that this information will not evaluated as part of the tender assessment but will be referenced with the successful provider should the commssion be extended</u>

TASK No.	Activity Description	Position of Staff Resource (please see definitions in ITT i.e Partner, Senior Consultant)	Name of Staff Member	Number of Days	Daily Rate	Grand Total Cost
3 Month extension	Project Management and Commercialisation Services	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
						£0.00
						£0.00
						£0.00
		Total Number of Days, Daily Rate and Total		**34**	**£2,066.00**	**£18,306.00**

ISLINGTON

Programme & Risk Register

Project Plan and resource schedule

Based on the information available in the specification it is not possible to put together a programme with clear timings (for example, it does not specify the expected completion of the Sutton Town Centre work that will be carried out by the other consultants). We envisage that many of the nine workstreams will take place simultaneously and several of them on the ad hoc basis (e.g. supporting the phase 1 team and developing contract structures for new connections).

Below is an indicative timeline of the actions and milestones.

Task	Time						
i. Manage consultants							
ii. Update model							
iii. Write briefing papers							
iv. Contract/commercial structures							
v. Negotiate contracts							
vi. Update business plans							
vii. Procurement							
viii. Support Phase 1 team							
ix. Drafting scopes of works							
Resource availability							
[redacted]							
[redacted]							
[redacted]							
[redacted]							

Key:

	Resource available/full time work
	Resource on demand/ad hoc work

Risks

We have experience of preparing risk registers for different stages of district heating projects. When we produced the Whitechapel Energy Services Masterplan for Tower Hamlets, we used our experience of developing the Bunhill Heat Network to identify 52 general risks for heat networks and 9 risks specific to the network proposals in question. Below is a brief summary of what we envisage the main risks to be, together with potential mitigation measures. The likelihood and impact are indicated by green (low), amber (medium) or red (high)

Risk	Result	Likelihood	Impact	Mitigation
Poor quality of work on Sutton Town Centre extension from consultants.	Study is not fit for purpose in terms of business planning and either has to be redone or causes extension to be abandoned			Work closely with consultants to ensure outputs are fit for purpose, reviewing all work produced prior to acceptance
Failure to achieve connections	Network has insufficient demand			Work closely with potential connections to ensure the offer made is cheaper than their existing or proposed heat supply.
Heat sale revenue is lower than costs	Network loses money and is not a going concern			Ensure new heat supply agreements have sufficient margins.
Connection costs are higher than initial quotes due to delays or unexpected services in ground	Overspends affect network finances			Ensure trenching sites are surveyed prior to procurement. Closely monitor connection works to try to avoid overspends
Resident complaints about high heat prices	Reputational damage to the network and reduces future connections			Ensure supply costs are cheaper than gas boilers over life cycle and residents are aware of what costs are built in to heat price (e.g. maintenance, replacement)
Civils contractor goes bust during or after works	Work is left incomplete or warranties are worthless			Require statements of financial health and possibly bonds during procurement process.

Risk	Result	Likelihood	Impact	Mitigation
O&M contractor goes bust	Heat network is temporarily left without maintenance			Seek regular assurance of financial health of the contractor and prepare a response plan for potential demise of the contractor
Connections or extensions are not financially viable due to high cost of civils work	Network cannot be expanded			Work to maximise number of bids through procurement process
Loss of support from senior management or councillors for SDEN	Difficulty in progressing extensions			Ensure senior management and councillors are regularly briefed on the network and its benefits – e.g. by tours of new connections/extensions
Local residents affected by connection works	Reputational risk			Ensure local residents are kept updated about development works and any unexpected delays
Brexit	Increased contractor costs, reduced development means lower connection potential			Try to build risk into contracts. Line up alternative potential connections.
Failure to secure sufficient funding for expansion	Expansion does not go ahead			Ensure a strong business case is put together prior to seeking funding
Plant rooms in new connections have issues such as asbestos	Increased cost and delays in connecting			Ensure asbestos and other surveys (e.g. electrical) are complete prior to commissioning works.
Problems with connection of existing sites due to pre-existing issues with their internal systems.	Delays in connecting, possible loss of heat supply during connection period			Ensure potential connections provide a thorough report on the condition and functioning of their existing system. Also work to ensure clarification of who is responsible for what during connection.

Risk	Result	Likelihood	Impact	Mitigation
Incorrect design of new connections (e.g. pipe sizing)	Loss of efficiency			Work to ensure high quality hydraulic analysis and design
Lack of compatibility with internal systems of connections	Loss of efficiency, insufficient temperatures supplied			Produce SDEN connection guidance for developers to ensure their systems are compatible and include clause in agreement

ISLINGTON

Quality of Resource

We are putting forward four members of our team to be available to deliver this commission:

- [redacted]
- [redacted]
- [redacted]
- [redacted]

CVs of the staff are included over the next few pages. We can confirm that all four members of staff are available for the duration of the contract. [redacted]

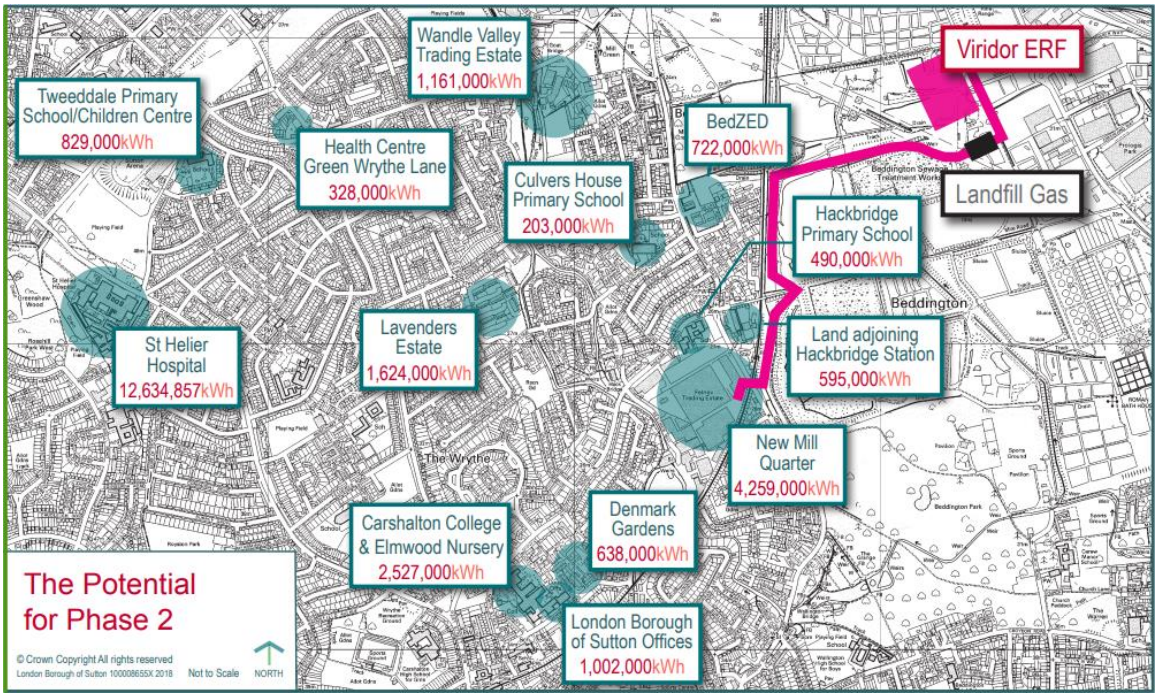
[Exempt Personal Information - Regulation 13]

ISLINGTON

Understanding

The London Borough of Sutton, through its wholly owned Sutton Decentralised Energy Network Limited, is planning to build a new heat network using waste heat from a Viridor Energy Recovery Facility. Phase 1 has reached financial close, which involved agreeing a 25-year heat purchase contract with Viridor, reaching agreement with Viridor, Network Rail and Thames Water for pipework installation, agreement of a heat supply contract with Barratt Homes for the New Mill Quarter and the procurement of design and build and O&M contractors for the network, including taking over the district heating assets at New Mill Quarter from Barratt Homes. Until the pipework is laid, the New Mill Quarter will be supplied with heat from on-site centralised boilers.

The council is also now looking to progress Phase 2 of the project, agreeing additional connections to the network, which will expand into Hackbridge, Sutton town centre and Croydon as detailed in the map below



The main purpose of this commission is to coordinate the delivery of phase 1 and its early period of operations, and to lead on the phase 2 work.

Phase 1

The work on phase 1 will involve coordinating the delivery of the design and build contract, overseeing the construction of the pipe network connecting the Viridor site to New Mill Quarter and the changeover from the local gas boiler plant to the heat network. It will also involve overseeing testing and commissioning and the early stages of the O&M contract.

Phase 2

The work on phase 2 will include several areas of work, including:

- Overseeing already-procured consultants producing a feasibility study on extending the network to Sutton town centre, which in turn will be used to update the existing techno-economic model of the heat network.

- Working with potential connections to agree heat supply contracts that are financially viable for SDEN and updating the techno-economic model with the proposed heat prices agreed

- Managing any additional procurements required for scheme delivery – e.g. work required to connect sites that is not already covered in the existing design and build contract

- Updating the business development plans for SDEN and writing specifications for other pieces of work to be delivered by consultants.

This work should be brought to financial close by the end of the commission.

General

For both phases, an ongoing workstream will be to produce reports and briefing papers for senior management and councillors at Sutton.

Woodward Energy Consulting Limited (WEC) Consultant – LB Sutton/SDEN Project Management and Commercialisation Services

Technical	
T1	Understanding Outline in brief of your understanding of the purpose of this project.
T1	**WEC Response**

WEC understands that the London Borough of Sutton are committed to the concept of One Planet Sutton whereby energy resources that are available within the borough are utilised wherever possible. Therefore the SDEN projects fits perfectly with this approach by taking heat from two sources that are within the borough (existing Landfill Gas Engines and an ERF currently being constructed) and using these to provide very low carbon heat to residents and businesses to displace the use of fossil fuels.

We also understand that the agreements to deliver Phase 1 of the project, which is in effect a “proof of concept” for the much larger Phase 2 scheme, have now all been signed and the construction of Phase 1 is on going. However, we also understand that the very complex commissioning and bringing into operation of the offsite heat sources, in conjunction with the on site energy centre, will shortly commence which will require considerable time input to ensure that a successful scheme is brought into operation to enable heat to then be delivered to both Phase 1 and Phase 2 customers. These Phase 1 agreements include a “heat franchise” with Viridor to procure heat under a long term basis from these two sources and a long term heat supply agreement with Barratt Homes.

Therefore we understand that the need for the resource being procured under this process, is to provide robust project management and commercialisation services to ensure that the Phase 1 scheme is successfully brought into operation and stabilised, and that the many opportunities for the sales of heat from the scheme are progressed. In particular to consider which are the most viable options for these future heat sales, whether this be into Sutton Town Centre, North into Merton or East into Croydon or a combination of these. As well as working to try and deliver decarbonisation of heat supplies in the Hackbridge area of Sutton, which we understand is the initial “target area” for these heat supplies.

T2	Methodology Proposed approach to this work, describing the key activities and methodology. The information provided should be specifically applicable to this scheme. (Scope - Attachment 2). • Outline of proposed methodology for undertaking the 'outline scope of study' including detailed description of the deliverables that will be provided and any additional data required from OPDC/GLA or other third parties.
T2	**WEC Response**

Our proposed approach and methodology to this work package being tendered by the GLA/SDEN is set out below. We have split this into eight key Workstreams which are then reflected in the project program shown in response to T4:

Workstream 1 (WS1) – Phase 1 Operation and Project Stabilisation

A critical role under this commission will be to ensure that the supplies of heat from Phase 1 are brought into operation and these energy flows are stabilised to deliver reliable supplies of heat to Phase 1 customers with the minimum carbon content ("the Key Outputs").

We would see our role in this being to support the existing operations team which we understand is comprised of Veolia providing Technical Services and SDEN's own customer services team providing interaction with the residents.

Although the we understand the project has up to now been operating on temporary boilers, it is expected that imminently the main energy centre will be brought on line and the offsite heat supplies introduced. This is a critical moment for the project due to the complex contracting chain of Viridor, SDEN's own network contractor, Barratt's contractors who are installing the on site equipment and Veolia who will take over operation.

We would see our role as providing Client interface for this process to ensure that the various parties are working together in a collaborative approach to achieve the Key Outputs. We would proactively identify possible issues and work with all stakeholders to ensure that these are quickly resolved.

We would also expect this workstream to involved overseeing the monitoring of the energy flows and general performance of the scheme once brought into operation and providing feedback to ensure that any issues which are preventing the Key Outputs are addressed as quickly as possible.

Workstream 2 (WS2) – Managing, Analysing and Progressing Phase 2 Connections

We understand that there are two groups of connections:

1. Hackbridge connections which can be progressed in the near term such as the extension to the Lavenders Developments
2. Wider connection opportunities which comprise extensions:
    a. West to Sutton Town Centre – we understand a consultant will shortly be contracted to carry out load identification, routing proving and capital costs work for this
    b. North to LB Merton – this includes potential connections in Morden Town Centre and various Clarion Housing sites
    c. East to Croydon – we understand that LB Croydon has employed WSP and ARUP to look at the potential to take heat from the SDEN network into the centre of Croydon

WEC sees our role in progressing each of these opportunities split into a variety of sub works streams including:

- Managing specialist consultants carrying the tasks as already identified under (2a.) and those employed to carry out route proving and design for (1.) and those which may be employed under (2b.) to ensure that viable connection opportunities can be created and delivered
- Meeting with LB Croydon's consultants under (2c.) and developing SDEN's approach to the expansion of the scheme in Croydon and continuing that dialogue to progress this opportunity
- Where applicable within the time window of the commission (e.g. Lavenders) directly leading on the negotiation of proposed heat sale agreements, ensuring these are agreed and executed including where necessary developing bespoke commercial structures to enable connections to be secured
- Regularly updating the techno economic model to reflect the status of the potential and actual expansions secured, in particularly incorporating the outputs from the Sutton Town Centre study.
- Preparing detailed plans for delivering each of these various extensions including:
    - what works are required
    - what resources are required
    - how these would be procured
    - what contracts would need to be secured (and where not existing, heads of terms for the proposed heat supply contracts)
    - land agreements, planning permissions etc..
    - risks (in a detailed risk matrix)
    - budgets for these works and services
    - development timeline

Overall the critical impetrative is to maximise viable connection opportunities for SDEN

Workstream 3 (WS3) – Communicating and Agreeing the Planned Phase 2 Connections

A key parallel workstream will be to communicate to and then agree the way forward in delivering each of these connections with both the SDEN Directors, it's Holding Company and the Shareholders. This will include a number of sub workstreams including

1. high level documents which summarise each opportunity for an audience such as the shareholders of the company
2. a much more detailed plan which contains sufficient granularity for the directors relating to the proposed connection to allow them to fully understand the opportunity and to make informed decisions as to the next steps, including extracts from the techno economic model

It is expected that the high level documents set out above will be in the form of briefing papers to ensure that all stakeholders fully understand the nature of what is planned, the opportunity, the costs and the risks.

Workstream 4 (WS4) – Implementing Phase 2

This key workstream will then be for WEC to lead and project manage the implementation of the works agreed for each of the planned connections, as far as possible under the period allowed by this commission. This workstream will vary by connections and is expected to include:

- Lavenders Estate – arranging procurement of the network to deliver this connection
- Wider Connections to Sutton Town Centre, Merton and Croydon – which could include leading on HNIP applications to support the delivery of these connections once they have been approved by the SDEN Board

Furthermore it is critically important that Phase 2 is not developed in isolation from Phase 1, but learns lessons from Phase 1 and WEC will ensure that these are applied wherever possible to Phase 2. This will ensure that risks are minimised, and opportunities both to expand the network and deliver a financial viable scheme to SDEN are maximised, i.e.

- what impacts the delivery of Phase 1 may have on Phase 2, i.e. delays, changes in contracting or connection arrangements etc..
- lessons learned in terms of contracting structure used, delivery and commercial mechanisms, planning applications etc..

T3	Quality of Resource For each proposed consultant, supply: CV's (max 2 pages per person) of key staff to be involved in this work. This should include synopsis of their role and the expertise they would bring to the project and their level of involvement across the stages the commission Confirmation of the consultant's availability for the duration of the contract.
T3	**WEC Response**
Please see overleaf a two page CV which sets out the extensive skills and experience in the development of district energy schemes of WEC's Principal Consultant [redacted] who will undertake the works required by SDEN under this commission.	

[CV Removed - Regulation 13 Personal Information]

T4	Programme & Risk Register - Provide a programme to deliver the services to include: • A full project plan with clear milestones. • A full resource schedule (in person days and broken down by role) for the full programme. • Any risks associated with the delivery of the project, along with rationale.
T4	**WEC Response**

Program

The draft program set out below reflects the key workstreams set out in response to Question T3

It is also important to note that this is a program for the works being requested under this mini competition. In parallel to this program will be the other subsidiary workstreams such as route proving, procurement processes, planning permissions, designs, legal advice on contract terms etc.. which are required as a result of these WEC workstreams shown below. These will be led and project managed by WEC but undertaken by other specialist consultants.

			2019		2020					
	Workstream	Sub Workstream	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	Phase 1 Operation and Project Stablisation									
2	Managing, Analysing and Progressing Phase 2 Connections	Hackbridge								
		Complete Route Proving and Financial Viability								
		Negotiations with Clarion to conclude agreement								
		Seek Board Approvals to deliver scheme								
		Sutton Town Centre								
		Manage consultant undertaking study								
		Input study outputs into TEM								
		Provide report to Board on next steps								
		Morden								
		Confirm Clarion interest and progress to further routing proving								
		Croydon								
		Progress discussions with LB Croydon and consultants								
3	Communicating and Agreeing the Planned Phase 2 Connections									
4	Implementing Phase 2	including connection to Lavenders and HNIP Applications								

Resourcing

In terms of a resource schedule we have assumed that the time expended by WEC's Principal Consultant (Simon Woodward) who will undertake this commission will be spread equally across the entire program period at 2 days per week as set out in the documents provided, i.e. "*the consultant shall allow an average of 2 days per week (FTE)*" . Particularly as each of the tasks are as intensive as each other. Therefore WEC will be invoicing on this basis across this commission, i.e. 2 days per week, whilst undertaking the workstreams and delivering the outputs as set out above..

Risks

Whilst the project has been significantly de-risked by the commercial development of Phase 1, the expansion of the scheme into Phase 2 is not risk free and WEC has set out overleaf some of the key risks and mitigations that it sees arising in the development of Phase 2.

SDEN Phase 2 Risk Matrix

No	Issue	Description	Mitigation
1	**Data Quality**	A major risk for any Development Plan is the quality of data upon which is it based. In this case for example energy consumptions of prospective consumers. It is therefore critically important that this is of sufficient quality to prepare a plan from which investment decisions can be made	Wherever possible the data will be based on actual site data and not rules of thumb or estimates. A key part of this process will be a comprehensive information schedule which will need to be populated for each potential consumer during the customer engagement process
2	**Engagement of Key Consumers**	There will be key consumers that it is important for SDEN to secure which will become clear as the WS's progress. It is critically important that these customers are engaged with and their commitment secured. If this is not secured then this is a key risk to the development of Phase 2	Identify these key consumers and ensure that they are engaged with from an early stage and that any issues which may prevent them from linking to the scheme are known and if possible addressed at an early stage
3	**Phase 1 Contracting Structures**	Phase 1 will have been delivering under a certain contracting structure in terms of construction and operation and it will be important to understand whether these structures prevent any risks or barriers to the expansion of Phase 2	Review existing contracting structures to ensure that the plans for Phase 2 can be overlaid onto these structures
4	**Integration of Phase 2 with 1**	Large scale district energy schemes as proposed by SDEN will have relatively complex hydraulic issues which have to be considered as future phases are added. These arise from the need to ensure that the maximum amount of heat from the LFG and ERF sources are utilised	Ensure that a high level hydraulic conceptual integration of the future phases is developed and run in parallel with the preparation of the Development Plan
5	**Timing and output of heat sources - LFG and ERF**	These heat sources will have both an amount of heat that is available and timing over which it is available (start and end dates) and availability across the year. The risk is that these may impact on what heat contracts SDEN can enter into and what the plan is when these sources end	Ensure that this base data is collated and a strategy developed to ensure that the contracting structure proposed takes this into account in terms of period, pricing, future strategies etc... , to avoid issues when the plan is implemented.
6	**Availability of funding to SDEN for Phase 2**	It is assumed that without further detailed knowledge that both the required development and capital funds will be available to SDEN to enable the development and construction of Phase 2. If this is not the case then this is a major risk	Establish at an early stage SDEN's appetite and ability to fund both the development and construction of Phase 2. If this identifies issues then consider with SDEN what support may be available from third parties, e.g. GLA, BEIS etc...
7	**Funding gaps for Phase 2**	Even if funding is available to SDEN for all aspects of Phase 2, if proposed extensions do not meet the IRR Hurdle rate set for SDEN then these extensions are unlikely to be approved	Use a risk based approach to analyse multiple connections to increase IRR's and maximise the use of the BEIS £300M HNIP fund
8	**Land Agreements**	At this time it is not known what land agreements may be required for the implementation of Phase 2 therefore this must be a risk	Where possible avoid third party land, but if this is not possible then identify these parcels of land at an early stage and ensure these are clearly shown on the project risk register. Engage with these stakeholders is undertaken at an early stage to ensure that issues do not arise which may prevent the network being routed across this third party land
9	**Planning Permissions**	It is understood that unlike other London Boroughs, SDEN and its stakeholders took the decision to obtain planning permission for it's Phase 1 buried heat network. Unless this approach can be removed under Phase then obtaining planning permissions for network extensions must form a part of any Phase 2 risk register	Establish if a mechanism can be put in place to avoid this requirement and if not possible then engage at an early stage with the LB Sutton planning department to ensure that their requirements are taken into account on a pragmatic basis
10	**Timing of consumer developments or replacement of boilers**	A key risk for any district energy network developer is that the consumer they wish to connect has just completed their development with their own on site LZC plant or that an existing buildings boiler plant has just been renewed. In both cases this will reduce both the interest of the consumer to connect and damage the financial business case to SDEN as any connection charge may then have to be significantly reduced or not charged	Identify those developments where this may the case and develop strategies to address this, such as communicating with existing buildings SDEN's plans to delay reboilering pending connection, or for new sites interim heat sources or omitting LZC plant.
11	**Routing and route proving**	Until the proposed outline route for the Phase 2 network has been fully developed this cannot be known but it is important to highlight importance of route proving and the risks of installing networks in congested highways	Ensure that route proving is undertaken at sufficient level of enable the preparation of the development plan, and that this is followed through during implementation of the plan
12	**Back up and top up heat supplies**	There will be a certain quantity of back up and top up heat sources that SDEN has in Phase1. A critical issue for Phase 2 will be how much spare capacity there is in these sources and whether they can be used at all to support Phase 2 consumers. In any event further back up and top up boiler plant will be required at some stage and until the location, costing etc.. for this is known then this represents a risk for the Phase 2 plan	Identify at an early stage the potential standby and top up boiler plant requirements for Phase 2 and establish possible locations, costs, feasibility etc...
13	**Scale and location of heat loads**	A recurring problem with the development of any district energy scheme is often that the keenest potential consumers are either the smallest or those at the greatest distance. Whilst every potential consumers is important, risks in trying to connect such consumers in terms of financial viability to the business and wasting valuable time analysing such connections must be taken into account	Developed a clear triage of what it is viable to consider in terms of distance and size of load at an early stage to ensure time is not wasted engaging with and analysing consumers who cannot realistically connect in the short to medium term or at all.

Outline Risk Matrix

T5	Conflicts of Interest: Provide details of actual or potential conflicts of Interests that would arise were you to be appointed, and details of how these conflicts would be mitigated.
T5	**WEC Response**
WEC can confirm that there are no actual or potential conflicts of interest that would arise were WEC to be appointed	

Price Schedule

Provision of Project Management and Commercialisation Services for the Sutton Decentralised Energy Network

COMPANY NAME: Woodward Energy Consulting Lmited

Please provide a full response below and ensure you upload the price schedule onto the portal.

PART A:

Prices should be:
a. in UK pounds sterling (£), decimal fractions of a pound to 2 decimal places.
b. inclusive of all costs associated with the provision of goods/services but exclusive of vat.

The Council will use the Grand Total Price (cell G13) to evaluate the price element of this tender (weighted 30%).

[redacted]

If the GLA's DEEP Framework is extended beyond March 2020; this commission may also be extended in line with the framework in order to utilise all available funding. Please provide details below accordingly for a 3 month extension. Please note that this information will not evaluated as part of the tender assessment but will be referenced with the successful provider should the commssion be extended

[redacted]

Score Criteria			[redacted]	WEC Ltd					
	Question	Weighting (%)		[redacted]				Weighted Moderated Score	Comments
Quality	Understanding brief	5	[redacted]	4	5	4	4	4	A very good response that demonstrates a detailed understanding of SDEN and its ambitions, including plans for expansion. A very good understanding of the project context, the purpose of this study and the issues facing delivering district heating in the local area.
	Methodology	25	[redacted]	4	5	5	5	25	An excellent response that provides a clear methodology for completing the commission. Workstreams are clearly defined and laid out. The methodology is clearly structured by work streams and progress stages, with a set of deliverables and added value.
	Quality of Resource • CV's • Confirmation of the consultant's availability for the duration of the contract.	30	[redacted]	5	4	5	4	24	Excellent experience in delivering district heating schemes, including for the private sector. Furthermore, significant experience of working in local government. However did not achieve full marks as only one consultant has been put forward, which could potentially impact business continuity.
	Programme & Risk Register	10	[redacted]	5	4	5	4	8	A very good response which includes a clear programme plan that outlines each workstream and the tasks required to deliver them. A comprehensive and risk register is provided, that is very specific to SDEN. However the risk register did not address continuity of service risk, which prevented the response from being awarded full marks.
	Conflicts of Interest	Pass/ Fail	[redacted]	Pass	Pass	Pass	Pass	Pass	N/A
	Sub-total		[redacted]					61	
Commercial	• Price – Fixed Rate for the scope of services • Schedule of resource (resource name, f/w grade, days and day rate) Day rates are within the framework agreement, and allowable discounts applied.	30	[redacted]						
	Acceptance to GLA 80814 – Call-Off terms and conditions including limitations of liability. The limit of liability for uninsured losses will be three times the final contract price agreed.	Pass/ Fail	[redacted]						
	Sub-total		[redacted]						
Total			[redacted]						

Recommendation

Appoint WEC with a total contract value of [redacted]

Evaluator [redacted]

3/12/19

3/12/2019.

3/12/19

Tender report

The services were procured via a mini-competition undertaken by the GLA's Decentralised Energy framework (80814) which was set up and established specifically for the Decentralised Energy Enabling Project (DEEP).

A mini-competition was ran from sub-lot (s) 2.3. The suppliers from the sub-lot (s) were notified of the opportunity to bid for services.Two responded to the invitation to tender which were:

- LB Islington
- Woodward Energy Consulting Limited (WEC)

The evaluation was undertaken by:

- [redacted] - London Borough of Sutton
- [redacted] - London Borough of Sutton
- [redacted] - London Borough of Sutton

Individual scoring was undertaken followed by consensus scoring. The evaluation had the following weightings; 70% quality / 30% price. Following the evaluation WEC were the highest scoring bidder and appointed.

An inception meeting was undertaken with **WEC Ltd** on the **5th December 2019** at **24 Denmark Road,** Carshalton, Surrey, SM5 2JG.

Milestone	**Date**
ITT on procurement portal	08/10/2019
Deadline for suppliers to confirm interest in bidding for services	22/10/2019
Evaluation of bids	23/10/2019-21/11/19
Notification of bid outcome:	09/12/2019
Inception meeting:	10/12/2019
Contract award (including signature of all parties):	To be confirmed

[redacted]
London Borough of Islington
7 Newington Barrow Way,
London, N7 7EP
www.islington.gov.uk

Sent: Via ProContract

Date: 9th December 2019

Dear [redacted],

Re: SDEN Ltd Project Management and Commercialisation Services Ref: DN 437687

Further to the submission of your quotation in respect of the above, I regret to inform you that your proposal has not been successful on this occasion. After extensive comparative evaluation of your quotation using the published selection criteria, the Evaluation Panel has concluded that an alternative organisation be recommended for appointment.

The results are as follows:

- Award Criteria: Most Economically Advantageous Tender (MEAT)
- Method Statements: [redacted]
- Price: [redacted]

Summary of the winning bid:

Name of successful Organisation/s: **Woodward Energy Consulting Limited (WEC Ltd)**

Please see the following comparison table for details:

Supplier	Quality Score	Price Score	Total Score
WEC Ltd (Winning bid)	61%	26.55%	87.55%
LB Islington	[redacted]	[redacted]	[redacted]

As indicated by the scores above, the price element of your tender submission scored higher comparable to the winning bid. However, the winning bidder achieved the maximum score on the quality element, and as the quality weighting for this tender was 70%, WEC Ltd was allocated a higher overall percentage score. Attached Appendix 1 is a report detailing the scores obtained by LB Islington against the Authority's evaluation criteria.

We thank you for participating in the tender process and whilst you were unsuccessful on this occasion, we look forward to your participation in any future requirements that may arise.

Council Contact

[redacted]
London Borough of Sutton
24 Denmark Road
Carshalton, Surrey
SM5 2JG
[redacted]

Yours sincerely

Project Team

Appendix 1

ID	Question	Weighting (%)	Score Obtained	Comments
1.1	**Understanding** Outline in brief of your understanding of the purpose of this *Max 2 sides of A4*	[redacted]	[redacted]	[redacted]
1.2	**Methodology** Proposed approach to this work, describing the key activities and methodology. The information provided should be specifically applicable to this scheme. ● Outline of proposed methodology for undertaking the services outlined including detailed description of the deliverables that will be provided. ● The key issues that may be encountered and how You propose to address these ● Why your organisation has the specific expertise and experience to undertake the Services ● the innovation you propose to bring to these Services *Max 8 sides of A4*	[redacted]	[redacted]	[redacted]

1.3	**Quality of Resource** For each proposed consultant, supply: ▪ CV's (max 2 pages per person) of key staff to be involved in this work. This should include synopsis of their role and the expertise they would bring to the project and their level of involvement across the stages the commission ▪ Confirmation of the consultant's availability for the duration of the contract. *Max 6 sides A4 excluding CVs*	[redacted]	[redacted]	[redacted]
1.4	**Programme & Risk Register** Provide a programme to deliver the services to include: ▪ A full project plan with clear milestones. ▪ A full resource schedule (in person days and broken down by role) for the full programme. ▪ Any risks associated with the delivery of the project, along with rationale. *Max 6 sides A4*	[redacted]	[redacted]	[redacted]
2.1	**Commercial:** ▪ Price – Fixed Rate for the scope of services ▪ Schedule of resource	[redacted]	[redacted]	[redacted]
2.2	**Acceptance to GLA 80814 – Call-Off terms and conditions** including limitations of liability. The limit of liability for uninsured losses will be three times the final contract price agreed.	[redacted]	[redacted]	[redacted]

3	**Conflicts of Interest** Provide details of actual or potential conflicts of Interests that would arise were you to be appointed, and details of how these conflicts would be mitigated. *Max 2 sides A4*	Pass/ Fail	Pass	N/A

[redacted]
Woodward Energy Consulting
Limited (WEC)
[redacted]
www.wec.solutions

Sent: Via ProContract

Date: 9th December 2019

Dear [redacted]

Re: SDEN Ltd Project Management and Commercialisation Services Ref: DN 437687

Contract Award

We are delighted to inform you that you have been successful in your bid to the London Borough of Sutton dated 12th October 2019 for the above mentioned opportunity, subject to contract.

Contract Documents

The Contract Documents are as follows:

1. Special Conditions for Call-Off
2. Guidance and Instructions (via Procontract)
3. Specification of Requirements and all appendices (via Procontract)
4. Online method statements (Quality) (via Procontract)
5. Price Schedule (Price) (via Procontract)

6. Insurance Indemnity documents as outlined in the Framework Agreement (**to**

be provided by “WEC Ltd”)

A hard copy of the contract will be sent to you for signature, to be signed and returned to us.

Contract Price

The Contract Price will be as stated in your price Schedule dated 12th October and clarified in the documentation referred to above.

To confirm, the total maximum contract value is up to £51,200 - including £30,400 for delivering the defined scope of services until March 2020; it also includes £20,800 for carrying out the 3-month extended commission until June 2020 if the GLA’s DEEP Funding Programme extension is confirmed and this commission is extended.

Contract Duration

Initial contract duration - November 2019 to March 2020.

Extended contract duration - The project completion date may extend to June 2020 if the GLA’s DEEP Funding Programme extension is confirmed and this commission is extended.

Council Contact

[redacted]
London Borough of Sutton
24 Denmark Road
Carshalton, Surrey
SM5 2JG
[redacted]

We will be in contact shortly to discuss the possibility of arranging the Project Initiation Meeting on 10th December 2019.

Yours sincerely

Project Team

Special Conditions for Call-Off

Schedule 6A - Call-Off Contract

Framework Number: GLA80814

Call-Off Contract Number:
GLA Sutton_SDEN_Project Management & Commercialisation_01 - LOT 2.3

THIS CALL-OFF CONTRACT is made the day of:

BETWEEN:

(1) "the Authority" means The Mayor and Burgesses of The London Borough of Sutton of Civic Offices, St. Nicholas Way, Surrey. SM1 1EA (**"the Authority"**); and

(2) Woodward Energy Consulting Ltd (WEC), a company registered in England and Wales (Company Registration Number 09080011) whose registered office is at Kempston, Mill Hill, Edenbridge, Kent, TN8 5DQ (**"the Service Provider"**).

(3) **THE GREATER LONDON AUTHORITY** whose principal offices are at City Hall, The Queen's Walk, London, SE1 2AA (**"the Contracting Authority"**).

RECITALS:

a. The Contracting Authority and the Service Provider entered into an agreement dated 26/06/2017 which sets out the framework for the Service Provider to provide certain Services to the Contracting Authority or the Authority (**"the Agreement"**).

b. The Authority wishes the Service Provider to provide the specific Services described in this Call-Off Contract pursuant to the terms of the Agreement and this Call-Off Contract and the Service Provider has agreed to provide such Services on those terms and conditions set out in the Call-Off Contract.

c. The Contracting Authority has agreed to fund or part fund the Services being provided to the Authority and shall make some or all the payments on the behalf of the Authority as set out in this Call-Off Contract.

THE PARTIES AGREE THAT:

1. CALL-OFF CONTRACT

1.1 The terms and conditions of the Agreement shall be incorporated into this Call-Off Contract.

1.2 In this Call-Off Contract the words and expressions defined in the Agreement shall, except where the context requires otherwise, have the meanings given in the Agreement. In this Call-Off Contract references to Attachments are, unless otherwise provided, references to attachments of this Call-Off Contract.

2. SERVICES

2.1 The Services to be performed by the Service Provider pursuant to this Call-Off Contract are set out in Attachment 1.

2.2 The Service Provider acknowledges that it has been supplied with sufficient information about the Agreement and the Services to be provided and that it has made all appropriate and necessary enquiries to enable it to perform the Services under this Call-Off Contract. The Service Provider shall neither be entitled to any additional payment nor excused from any obligation or liability under this Call-Off Contract or the Agreement due to any misinterpretation or misunderstanding by the Service Provider of any fact relating to the Services to be provided. The Service Provider shall promptly bring to the attention of the Call-Off Co-ordinator any matter that is not adequately specified or defined in the Call-Off Contract or any other relevant document.

2.3 The timetable for any Services to be provided by the Service Provider and the corresponding Milestones (if any) and Project Plan (if any) are set out in Attachment 1. The Service Provider must provide the Services in respect of this Call-Off Contract in accordance with such timing and the Service Provider must pay liquidated damages in accordance with the Agreement of such an amount as may be specified in Attachment 1. The Service Provider shall be liable for the ongoing costs of providing Services in order to meet a Milestone.

2.4 The Service Provider acknowledges and agrees that as at the commencement date of this Call- Off Contract it does not have an interest in any matter where there is or is reasonably likely to be a conflict of interest with the Services provided to the Authority under this Call-Off Contract.

3. CALL-OFF TERM

3.1 This Call-Off Contract commences on the date of this Call-Off Contract or such other date as may be specified in Attachment 1 and subject to Clause 4.2 of the Agreement, shall continue in force for the Call-Off Term stated in Attachment 1 unless terminated earlier in whole or in part in accordance with the Agreement.

4. CHARGES

4.1 Attachment 2 specifies the Charges payable in respect of the Services provided under this Call- Off Contract. The Charges shall not increase during the duration of this Call-Off Contract unless varied in accordance with the Agreement.

4.2 The Service Provider shall invoice the Contracting Authority and provide a copy of the invoice to the Authority in respect of the Charges in accordance with Attachment 2.

4.3 The Service Provider shall submit invoices to the address set out in Attachment 1 or in electronic format as set out in Attachment 1. Each invoice shall contain all information required by the Authority as required in Attachment 1. Invoices shall be clear, concise, accurate, and adequately descriptive to avoid delays in processing subsequent payment.

4.4 In the event of a variation to the Services in accordance with this Call-Off Contract that involves the payment of additional charges to the Service Provider, the Service Provider shall identify these separately on the relevant invoice.

4.5 The Authority shall consider and verify each invoice, which is submitted in accordance with this Clause 4 in a timely manner. If the Authority considers that the Charges claimed by the Service Provider in any invoice have:

4.5.1 been correctly calculated and that such invoice is otherwise correct, the invoice shall be approved and forward to the Contracting Authority together with a completion certificate for payment which shall be made by bank transfer (Bank Automated Clearance System (BACS)) or such other method as the Contracting Authority may choose from time to time within 30 days of receipt of such invoice from the Authority;

4.5.2 not been calculated correctly and/or if the invoice contains any other error or inadequacy, the Authority shall notify the Service Provider. The Parties shall work together to resolve the error or inadequacy. Upon

resolution, the Service Provider shall submit a revised invoice to the Authority. The Authority shall keep the Contracting Authority updated at all times.

4.5.3 Except where otherwise provided the Charges shall be inclusive of all costs of staff, facilities, equipment, materials and other expenses whatsoever incurred by the Service Provider in discharging its obligations under the Call-Off Contract.

5. CALL-OFF CO-ORDINATOR AND KEY PERSONNEL

The Authority's Call-Off Co-ordinator in respect of this Call-Off Contract is named in Attachment 1 and the Service Provider's Key Personnel in respect of this Call-Off Contract are named in Attachment 2

This Call-Off Contract has been signed by duly authorised representatives of each of the Parties.

SIGNED

For and on behalf of the ~~[*Authority*] London Borough of Sutton~~ Contracting Authority

Signature: [redacted]

Name: PHILIP GRAHAM

Title: EXEC DIRECTOR, GOOD GROWTH

Date: 22/1/20

SIGNED

For and on behalf of [*the Service Provider*] Woodward Energy Consulting Limited

Signature: [redacted]

Name: [redacted]

Title: [redacted]

Date: 10th December 2019.

[redacted]

SIGNED [Authority] London Borough of Sutton

For and on behalf of the ~~Contracting Authority~~

Signature: MARY MORRISSEY

Name: [redacted]

Title: STRATEGIC DIRECTOR OF EH&R

Date: 17 DEC '19

Attachment 1

Services to be provided Timetable

Commencement date: 10th December 2019

Call-Off Term: November 2019 - March 2020 (Extend to June 2020 in line with GLA DEEP Programme extension, if this is confirmed)

Attach Project Plan - See attached Specification

Expenses
Expenses (if any) that the Service Provider may claim: No expenses are claimable

Address for Invoices
Greater London Authority
Accounts Payable
PO Box 45276
14 Pier Walk
London
SE10 1AJ

Address where invoices shall be sent:
[redacted]london.gov.uk

Set out information required in each Invoice.

- Framework number GLA80814, call off DN419630
- Description of work being invoiced for
- The net amount for Goods Received to be paid by GLA to a sum of £xxx
- The VAT amount to be paid by London Borough of Sutton to a sum of £xxx

Date/Period for submission of Invoices: As agreed in the pay schedule.

Address where invoices shall be sent:
London Borough of Sutton
The Payments Team
3rd Floor Civic Offices,
St Nicholas Way,
Surrey, Sutton, SM1 1EA

Electronic format required (if any) for submission of orders by the Authority and of invoices by the Service Provider:
[redacted]@sutton.gov.uk and [redacted]@sutton.gov.uk

Authority Call-Off Co-ordinator
[redacted]

Service Manager
24 Denmark Road
Carshalton
SM3 5JG
[redacted]

Availability of Key Personnel
The Service Provider's Key Personnel must have availability to satisfactorily complete all work by March 2020. (Extend to June 2020 if GLA DEEP Funding Programme extension is confirmed)

Other information or conditions
The limit on liability for uninsured losses will be three times the contract sum.

Attachment 2

5. Charges
As set out in the attached Price Schedule.

6. Key Personnel
The Service Provider's Key Personnel is set out in the attached tender response.

[redacted]

Woodward Energy Consulting Limited (WEC)

[redacted]

7. Proposed sub-contractors (if any)

Name and contact details of proposed sub-contractor(s) and details of any proposed sub-contracted work:

- As set out in the attached tender response.

8. Proposed completion date

March 2020, extend to June 2020 if GLA DEEP Funding Programme extension is confirmed.

Decision to award contract

Woodward Energy Consulting Limited (WEC) was appointed to provide London Borough of Sutton with Project Management and Commercialisation services for the potential expansion of SDEN Heat Network to Sutton Town Centre procured with a total contract value of £51,200.

Reasons for Decision:
Through a mini-competition undertaken on the GLA's DEEP Framework, the tender was directed to all 10 providers listed in sub-lot (s) insert 2.3 on the framework and was based on 70% quality and 30% price.

From the tenders submitted the winning bid was from WEC that received the highest score and fully met the tender specification.

ANNEX 2
Model declaration for conflicts of interest[1]

Project Reference: ERDF 2R15S00019
Project Name: Decentralised Energy Enabling Project (DEEP)

I, the undersigned [redacted] being authorised as a responsible person for the above mentioned ESIF Project, declare I am aware of Article 57 of the Financial Regulation, the Procurement Law Guidance note and the requirements of this Conflicts of Interest guidance note.

For the purposes of this declaration, a conflict of interests exists where the impartial and objective exercise of the functions of a financial actor or other person, is compromised for reasons involving family, emotional life, political or national affinity, economic interest[2] or any other shared interest with a recipient.[3]"

I hereby declare that, to my knowledge, I nor anyone working on the Project has any conflict of interests with regard to the operators who have applied to participate in this procurement procedure or submitted a tender for this procurement, whether as individuals or members of a consortium, or the subcontractors proposed.

To the best of my knowledge and belief, there are no facts or circumstances, past or present, or that could arise in the foreseeable future, which might call into question the independence of project staff in the eyes of any party.

I confirm that if I discover or should it become apparent during the course of the procurement process (including performance of or amendment to the contract) that such a conflict exists or has arisen, I will declare it immediately to the Department and if a conflict of interests is found, I or any staff directly affected will cease to take part in the process and all related activities.

I also confirm that I will keep all matters entrusted to me confidential. Specifically, I agree to hold in trust and confidence any information or documents disclosed to me or discovered by me or prepared by me in the course of or as a result of the evaluation and I agree that it will be used only for the purposes of this evaluation and will not be disclosed to any third party.[4]

Signed (date and place): [redacted] 20/11/2019 24 Denmark Road

Name: [redacted]

Function: Evaluator

---

[1] "Identifying conflicts of interests in public procurement procedures for structural actions: A practical guide for managers", European Commission European Anti-Fraud Office (OLAF), endorsed 12 November 2013, accessible at: http://www.esfondi.lv/upload/02-kohezijas_fonds/Lielie_projekti/EK_vadl_par_interesu_konflikta_identif_publ_iepirk_EN.pdf (pp 27-28)

[2] Contractual relationship or paid or unpaid consultancy currently applicable.

[3] Including voluntary work, member of a board or directive council.

[4] The declaration is personal and does not have any impact on the requirements under the Grant Funding Agreement for Grant Recipients to retain and make all relevant documents available for audit

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Signed (date and place):

[redacted] 20/11/19 24 DENMARK ROAD, CARSHALTON, SURREY, SM5 2JG

Name: [redacted]

Function: EVALUATOR

[1] "Identifying conflicts of interests in public procurement procedures for structural actions: A practical guide for managers", European Commission European Anti-Fraud Office (OLAF), endorsed 12 November 2013, accessible at: http://www.esfondi.lv/upload/02-kohezijas_fonds/Lielie_projekti/EK_vadl_par_interesu_konflikta_identif_publ_iepirk_EN.pdf (pp 27-28)

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I hereby declare that, to my knowledge, I nor anyone working on the Project has any conflict of interests with regard to the operators who have applied to participate in this procurement procedure or submitted a tender for this procurement, whether as individuals or members of a consortium, or the subcontractors proposed.

To the best of my knowledge and belief, there are no facts or circumstances, past or present, or that could arise in the foreseeable future, which might call into question the independence of project staff in the eyes of any party.

I confirm that if I discover or should it become apparent during the course of the procurement process (including performance of or amendment to the contract) that such a conflict exists or has arisen, I will declare it immediately to the Department and if a conflict of interests is found, I or any staff directly affected will cease to take part in the process and all related activities.

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Signed (date and place): [redacted] 24 DENMARK ROAD

Name: [redacted]

Function: [redacted]

---

[1] "Identifying conflicts of interests in public procurement procedures for structural actions: A practical guide for managers", European Commission European Anti-Fraud Office (OLAF), endorsed 12 November 2013, accessible at: http://www.esfondi.lv/upload/02-kohezijas_fonds/Lielie_projekti/EK_vadl_par_interesu_konflikta_identif_publ_iepirk_EN.pdf (pp 27-28)

[2] Contractual relationship or paid or unpaid consultancy currently applicable.

[3] Including voluntary work, member of a board or directive council.

[4] The declaration is personal and does not have any impact on the requirements under the Grant Funding Agreement for Grant Recipients to retain and make all relevant documents available for audit

D_Sutton_extension

INVITATION TO TENDER

(ITT) For

REF: GLA Sutton_SDEN_Extension_01

London Borough of Sutton ("the Authority")

Route Proving and Development of a Design and Capital Costs for the Extension of SDEN Heat Network to Sutton Town Centre

Mini-Competition Request Form

Framework Agreement Name and Reference Number: **GLA Sutton_SDEN_Extension_01 – Decentralised Energy Framework**

Subcategory: 1.4 FEASIBILITY STUDIES FOR PROJECTS

Mini-competition Reference: **GLA Sutton_SDEN_Extension_01 - London Borough of Sutton Decentralised Energy Network – Sutton Town Centre Heat Network Extension Services**

Date: 3rd July 2019

This is a Mini-Competition Request Form for the provision of Services in accordance with the Framework Agreement referenced above. This is an enquiry document only, constituting an invitation to treat, and does not constitute an offer capable of acceptance. Your Proposal must be submitted as an offer capable of acceptance by the *Authority*; however such acceptance will not occur unless and until the *Authority* posts notice of acceptance to you.

Attachment 1 of this Mini-Competition Request Form sets out the *Services*.

The contractor will be required to enter into a standard call off contract in accordance with the DEEP Framework.

Your Proposal will be assessed against those submitted by other Consultants as part of a Mini-Competition process. Subject to the *Authority* not having any obligation to award a Call Off Contract the *Authority* will evaluate the Proposals to determine which is the most economically advantageous with reference to the assessment criteria set out in this ITT.

Any clarifications regarding this Mini-Competition should be directed per the instructions in this ITT. Any queries regarding the Framework Agreement should be directed to the Procurement Manager named in the Framework Agreement.

This procurement is being managed by the London **Borough of Sutton (LBS)**. The process is being carried out electronically via the LBS's eTendering portal: Pro-Contract from ProActis Link: https://procontract.due-north.com

From: London Borough of Sutton (LBS)
Name: [redacted], SDEN Project Director

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1. INSTRUCTIONS TO CONSULTANTS

1.1 Please read the following instructions carefully before submitting a tender.

1.2 A submission in response to this invitation shall be referred to hereafter as the "Tender" and the organisation making such as submission shall be referred to as the "Consultant".

1.3 All references to "Schedules" in this document refer to Schedules within this document.

1.4 Consultants are asked to confirm their intention to bid by Friday 19th July 2019.

1.5 Consultants are required to submit a separate Technical Proposal and a separate Commercial Proposal.

1.6 The technical submission should be no longer than 25 A4 pages (Single Sided) with the font size comparable to Arial 11 points (excluding synopsis and CVs – no more than two pages per CV). must include the following as a minimum:

1.7 The Tender Submission must comprise of 1. **'Technical Proposal' 2. 'Commercial Proposal'** as follows::

1) **Technical Proposal** (response to the Technical Proposal T1, T2, T3, T4 and T5 addressing Attachment 1)
2) **Commercial Proposal**

Please note:
The Technical Proposal and the Commercial Proposal must be separate documents. **Prices must not be included in the Technical Proposal**. The documents must be clearly titled **'Technical Proposal**' and **'Commercial Proposal'**. Submissions must be (**Technical Proposal** in Microsoft Office applications or Adobe Portable Document Format **(pdf)** documents) and
(**Commercial Proposal** in Microsoft Office applications or Adobe Portable Document Format **(pdf)** documents).

1.8 Consultants are welcome to partner with other organisations if they feel that they can provide the expertise required to complete the project. Full details of how the partnership would work (governance etc.) should be provided in the Tender Submission.

1.9 LBS will not pay any costs associated with producing a Tender or incurred in any subsequent discussions or clarifications, regardless of whether that Tender is successful or not.

1.10 Tender returns must have all pages numbered and returns must be submitted in English.

1.11 All communications will be sent via the portal to the main contact who registered on the LBS's eTendering portal: https://procontract.due-north.com

1.12 Consultants that require additional online help to use the eTendering portal must contact the portal's Supplier Help Desk which is available by email to: ProContractSuppliers@ProActis.com as soon as possible.

1.7 LBS reserves the right to award the Call-Off Contract for which tenders are being invited in whole, in part, or not at all.

1.8 LBS reserves the right not to award this Call-Off Contract to the lowest or any Tenderer and LBS will have no liability (contractual, tortious or otherwise) for failure to consider any tender. Following receipt of tender documents, LBS reserves the right to arrive at a shortlist of prospective organisations without any reference to, or communication with any of the Consultants.

1.9 The Call – Off Contract will be awarded post evaluation to the most economically advantageous tender (MEAT) submitted, using the specified evaluation criteria.

1.10 This tender shall remain open for the acceptance by LBS (or its nominee) and will not be withdrawn by us for a period of three calendar months from the date fixed for return.

2. CLARIFICATION QUESTIONS

2.1 Any technical questions or requests for clarification regarding this ITT should be submitted via the LBS e Tendering portal https://procontract.due-north.com . If LBS considers any question or request for clarification to be of material significance, both the question and the response will be communicated, in a suitably anonymous form to all Consultants who have responded. The deadline for any clarification questions is Friday 19th July 2019.

2.2 Please **do not** contact LBS staff directly as it is imperative that the process remains fair and transparent to all Consultants. Any direct contact may in your bid may be deemed non-compliant.

3. CONFIDENTIALITY, PUBLICITY AND MARKETING

3.1 The contents of this Mini-Competition are confidential and must be used only for the purpose of submitting a Proposal. The Consultant must not make any such communication or enter into any collusive arrangement with any third party save for the purpose of sub-consulting.

3.2 Consultants must maintain strictest confidence and not disclose to any third party without prior written consent of LBS, the information supplied by LBS in this invitation to tender document and other confidential information supplied by LBS to the Consultant.

3.3 Consultants must not communicate to any person other than LBS, the amount or approximate amount of the charges and such charges must not be determined or adjusted by arrangement or in collusion with any third party. The Consultant must not make any such communication or enter into any collusive arrangement with any third party whether in relation to this tender or a tender submitted or to be submitted by such third party.

3.4 The technical specification made available to the Consultant during the course of this invitation to tender is strictly confidential. Such information should not be disclosed to any third party including subcontractors without the prior consent of LBS.

3.5 Consultants are not permitted to:

- Make any public statement or communicate in any form with the media in connection with this Tender Process.
- Use any trademarks, logos or any other Intellectual Property Rights associated with LBS.
- Represent that the Consultant is directly or indirectly associated in any way with LBS or this Tender Process.
- Engage in any form of marketing which creates, implies or refers to an association between the Consultant and LBS and/or the Tender Process.
- Do anything or refrain from doing anything in relation to the Tender Process that would have an adverse effect on LBS.
- Consultants must direct any queries from the media to Opportunity Sutton opportunitysutton@sutton.gov.uk.

4. TRANSPARENCY AND PUBLIC ACCOUNTABILITY

4.1 Consultants are reminded that LBS has the highest standards of procurement and intends to maintain a fair and open selection process. It will select a firm best suited to the brief and is not obliged to select the lowest or indeed any of the returns. Late tenders will be returned unopened and any attempt to influence the outcome through hospitality or other inducements will result in the disqualification of the tender.

5. RETURN OF TENDER DOCUMENTS

5.1 Please complete and return your tender document on or before **12 Noon on** Tuesday 30th July via the LBS eTendering portal.
https://procontract.due-north.com

5.2 The tender document submitted must be in electronic format such as (Technical PDF) and (Commercial excel). Please note that no other form of document transmission, e.g. hard copy by Courier, will be accepted.

5.3 Tenders submitted after the deadline time will not be accepted.

5.4 The LBS e-Tendering portal will reject any tender submission if it is published after the deadline stated in this document. The Consultant is strongly advised not to leave submission of the tender to the last minute.

5.5 Consultant must note that all files uploaded cannot be amended by anyone once published and that original files published by Consultants will be maintained in an unaltered state on the system right through the procurement process.

6. VALIDITY

6.1 Proposals must remain open for acceptance for 6 (six) months from the return of proposal date.

7. PROPOSAL SUBMISSION CLARIFICATIONS

7.1 During the course of the evaluation of submissions, the Consultant may be asked to answer questions about his submission and other matters related to the Services. The Consultant must respond to such questions as quickly as possible but, in any event, within 2 (two) working days or, if a deadline is specified, responses must be submitted by that deadline. Failure to respond may result in us rejecting the Proposal submission. Any amendments to the Proposal submission arising from these discussions with the Consultant will be taken into account in the final evaluation.

8. PROPOSAL CLARIFICATION MEETING

8.1 To enable moderation of the Proposal evaluation process, we may request a meeting from all, some or one of the Consultants. Failure to attend may result in us rejecting the Proposal submission.

9. PROPOSAL SUBMISSION EVALUATION

9.1 Evaluation of submissions will be on the basis of most economically advantageous proposal as per the assessment criteria set out in the tables contained in this ITT.

10. COMPLIANCE

10.1 All Proposals returned should comply in every respect with the requirements of this Mini-Competition. However, we reserve the right to consider non-compliant submissions where permitted.

10.2 Failure to disclose all material information (facts that we regard as likely to affect the evaluation process), or disclosure of false information at any stage of this procurement process may result in ineligibility for award. The Consultant must provide all information requested and not assume that we has prior knowledge of any of the Consultant's information.

10.3 Proposals that contain Specialist Consultants at above Framework Maximum Charge Out Rates will be deemed non-compliant. If you wish us to consider the approval of Specialist Consultants (at above Framework Maximum Charge Out Rates), this must be requested within the Mini-Competition clarification process prior to submitting your Proposal.

10.4 We shall not be liable for any costs, charges or expenses borne by the Consultant whether or not he is awarded a Call Off Contract, which for the avoidance of doubt includes any costs, charges and expenses arising from or associated with an abortive or cancelled procurement process.

11. ACKNOWLEDGEMENT OF RECEIPT OF THIS MINI-COMPETITION

11.1 The Consultant should acknowledge in the e-tendering portal receipt of this Mini Competition and confirm whether they intend to submit a Proposal. Failure to do so may lead to the Consultant not receiving any amendments, addendums and clarifications to Mini-Competition documentation.

12. CONTACT

All contact must be via the ProContract messaging portal.

Any contact with other personnel relating to this Mini-Competition may invalidate the Consultant's proposal submission. All contact must be via the e-tendering portal. If you are having any technical issues, please contact the Proactis Team.

13. THE SERVICES

The Services to be provided under this appointment are any or all of the Services detailed in Appendix 1.

14. EVALUATION CRITERIA

Evaluation of submissions will be on the basis of most economically advantageous tender.

Consultants will be scored against the following Scoring Key as detailed in the Table below:

	Scoring Key
5	Excellent; full and accurate understanding of the requirement with some added value
4	Very Good; demonstrates good understanding of the requirement, above minimum requirement
3	Good; demonstrates satisfactory understanding of the requirement, meets minimum requirement
2	Fair; shows some evidence of understanding of the requirement but provides a limited or inadequate response
1	Unacceptable/Poor; response is weak and does not demonstrate understanding of the full requirement
0	No submission/question not answered

Quality Evaluation

The Quality will be weighted at **70%** of the total score. The Price will be weighted at **30%** of the overall score of the tender.

Please note that Tenders must score a minimum of 50 out of 70 or higher of the overall quality score and achieve passes against all Pass/Fail questions in order to proceed to Award Criteria evaluation. Any tender achieving lower than 50 out of 70 of the overall quality score will be eliminated from progressing to the award criteria evaluation.

Price Evaluation

The lowest priced compliant tender will be awarded the maximum score (30%) of the overall marks. All other tender bids will be scored for price pro-rata against the lowest priced tender. The following formula will be used to score bids:

Supplier Score = Maximum Score x (Lowest price/ Supplier price)

Bids are accepted subject to regulation 69 (Abdominally Low Tenders) of the Public Contracts Regulations 2015.

Submissions & Evaluation Criteria

Technical (QUALITY EVALUATION)	
Evaluation**: 70%** and discretionary pass/fail	
The *Authority* will not appoint a *Consultant* that scores less than **50** out of the available **70** marks	
Evaluation Criteria	**Weighting**

2.1	Understanding Outline in brief of your understanding of the purpose of this project. **Maximum 1 side A4, Size 11 Arial font**	5%
2.2	Methodology Describe your proposed approach to delivering the Services in the Specification, by Work Package. Your response should include but not be limited to: ● the key issues that may be encountered and how You propose to address these ● why Your organisation has the specific expertise and experience to undertake each of these Services and Your specific experience in developing and delivering large scale district energy projects ● the innovation you propose to bring to these Services ● Your understanding and appreciation of the requirements set out in the Specification (Attachment 1) of this document in that this is not a traditional study. Please note that LBS is seeking a Supplier who really understands what is required and simply reiterating large elements of the published specification (Attachment 1) is unlikely to lead to a high score. **Maximum 4 sides A4, Size 11 Arial font**	25%
2.3	Quality of Resource Please provide details of your project team, including: ● CVs (max 2 sides A4 per person) with relevant knowledge, skills and experience that demonstrate the suitability of the team members. ● Details of key staff to be involved in this work. This should include a synopsis of their role, the expertise they would bring and their expected level of involvement across the stages the commission. ● Confirmation of the consultant's availability for the duration of the contract. ● Areas of individual responsibility with time commitments to the project. **SUPPLIERS PLEASE NOTE:** When scoring this Question, London Borough of Sutton will consider the application of these resources stated in response to this Question in conjunction with the pricing schedule, i.e. if senior staff who the Supplier features in response to this Question are not reflected in the pricing schedule as having a material involvement with the Services then this will result in a lower score.	30%

	London Borough of Sutton will be particularly looking for members of your team who have specific experience with large scale heat networks both in development and delivery either as an internal resource or one that you propose to employ as a subcontractor for parts of the Services and details of any subcontractors to be used. **Maximum 16 sides A4, Size 11 Arial font**	
2.4	<u>Programme & Risk Register</u> Provide a programme to deliver the services to include: ▪ A full project plan with clear milestones. ▪ A full resource schedule (in person days and broken down by role) for the full programme. ▪ Any risks associated with the delivery of the project, along with rationale. **Maximum 4 sides A4, Size 11 Arial font**	10%
PASS/FAIL & INFORMATION SECTION		
1.1	**Understanding and complying with specification:** Please state if you have fully understood and are able to comply with the specification which can be found in the attachments section. Please note that if you do not understand and/or are unable to comply with the specification, the Council at their sole discretion reserves the right to disqualify your submission.	Pass/Fail
1.2	**Conflicts of Interest:** Provide details of actual or potential conflicts of Interests that would arise were you to be appointed, and details of how these conflicts would be mitigated.	Discretionary Pass/Fail

1.3	**Acceptance to GLA 80814:** Please confirm acceptance to GLA 80814 – Call-Off terms and conditions including limitations of liability.	Pass/Fail
1.4	**Full contact details of the *Consultant's* Bid Manager:** Please provide the Contact Details of Consultant's Bid Manager	For info

Commercial (PRICE EVALUATION)		
Evaluation: **30%**		
Evaluation Criteria		**Weighting**
1	▪ Price – Fixed Rate for the scope of services ▪ Schedule of resource (resource name, grade, effort days and day rate) Day rates are within the framework agreement, and allowable discounts applied. Work Package 1 Work Package 2 Work Package 3 GRAND TOTAL PRICE	30%

Grade Definitions:

Partner/Director

General	For a partnership, a Partner in the practice; for a limited company, any employee who is a "Company Director" as defined in the Companies Act 2006. Responsible for all grades of personnel.
Typical Education /Qualifications and Experience	Hold appropriate professional qualifications applicable to the discipline commissioned to perform and/or corporate membership of a major institution. Must have relevant work experience spanning several major programmes. The ability to demonstrate key involvement in delivering projects of high value and complexity. Overall responsibility for project(s) and for supervision, control and development of subordinate personnel Significant management responsibility and direction within the consultancy including client liaison, specialist skills or experience.

Principal Consultant

General	Reporting to Partner / Director. Member of a company who is able to deputise for the Director. The person will have the ability to manage and control teams and ensure that there are sufficient teams of personnel assigned to commissions. Responsible for all grades of consultants and support staff.

Typical Education /Qualifications and Experience	Hold appropriate professional qualifications applicable to the discipline commissioned to perform and/or corporate membership of a major institution. Must have relevant work experience spanning several programmes. The ability to demonstrate key involvement in delivering projects of high value and complexity. Must have substantial transport experience and technical skills appropriate to the discipline. Responsibility for project(s) and for supervision, control and development of junior personnel. Significant management responsibility and direction within the Consultancy including client liaison, specialist skills or experience.

Senior Consultant

General	Reporting to Partner / Director or Principal Consultant. Person holding corporate membership of a professional body recognised by TfL and has the ability to demonstrate key involvement in delivering projects of high value and complexity. Responsible for all grades of consultants and support staff on behalf of the Director/Partner.
Typical Education /Qualifications and Experience	Must have relevant work experience spanning several programmes / projects The ability to demonstrate key involvement in delivering projects of high value and complexity. Must have substantial transport experience and technical skills appropriate to the discipline. Responsibility for project(s) and for supervision, control and development of junior personnel. Significant management responsibility and direction within the organisation including client liaison, specialist skills or experience.

Consultant

General	Reporting to Principal Consultant / Senior Consultant. A person with the ability to assist in the management and control of a project team to ensure delivery of the required projects. Responsible for Junior Consultant / administration staff

Typical Education /Qualifications and Experience	Hold appropriate professional qualifications applicable to the discipline commissioned to perform and/or corporate membership of a major institution. Must have relevant work experience spanning several projects. Must have some transport experience and technical skills appropriate to the discipline. Responsibility for project(s) and for supervision, control and development of junior personnel.

Junior Consultant

General	Reporting to Senior Consultant/Consultant. A person with the relevant experience capable of working on some aspects of the delivery of the required project. Responsible for support staff.
Typical Education /Qualifications and Experience	Must have relevant work experience in at least one completed project.

Important Notes

1. Consultants are required to provide full contact details of the Account Manager within the Commercial submission only for the purposes of clarification.
2. Please be aware that failure to accept GLA – Call-Off Terms and Conditions will equate to a failure, unless in the opinion of LBS, any issues raised are genuine and done so in a timely manner, i.e. at clarification stage.
3. All Consultants are reminded of the maximum framework rates upon which the framework operates. Proposals containing rates for personnel who exceed these predefined amounts

may lead to your proposal being rejected, if not previously authorized during the clarification process.

4. Following the evaluation of the tenders received, LBS may, in its sole discretion, invite Tenderers (by application of the evaluation criteria set out in the ITT) to prepare and submit further opportunities to adjust the price element of their submission. At LBS's discretion there may be up to three such opportunities for adjustment. This is an optional stage.
5. LBS reserve the right to accept all or any part of an offer and, if necessary, establish trading arrangements with more than one supplier.
6. **To confirm and for the avoidance of doubt the contract entered into with the selected Consultant shall be on the basis that they complete the Services as set out in this document for the fixed fee as set out in the Price Schedule (Grand Total Cost) and as scheduled by Work Package**.
7. Although Appendix 1 sets out the detailed requirements for each Work Package the Consultant will be expected to undertake everything necessary for the proper execution and completion of that Work Package in accordance with the intent and meaning of the detailed requirements in Appendix 1. Services that have not been specifically referred to in Appendix 1 but the necessity for which could reasonably be implied or inferred from Appendix 1 or which would usually be supplied or carried out in undertaking such a Work Packages shall be undertaken at no additional cost.

Indicative Procurement Timetable

Activities	Dates
ITT issue date	Wednesday 3rd July 2019
Supplier Clarification Questions Received	Friday 19th July 2019
Deadline for receipt of tender	Noon on Tuesday 30th July
Tender Evaluation	Wednesday 31st July to Friday 15th August
Clarifications/presentations/interviews (If Required)	w/c 12th August 2019
Award subject to contract	w/c 19th August 2019
Inception meeting	w/c 26th August 2019
Estimated start date	September 19
Estimated completion date	December 19

Please note that LBS reserves the right to change the above dates and timings

Duration

The estimated completion date for this commission will be approximately three months after the start date.

SPECIFICATION OF THE SERVICES TO BE PROVIDED

REF: GLA Sutton SDEN Extension 01

London Borough of Sutton ("the Authority")

Route Proving and Development of a Design and Capital Costs for the Extension of SDEN Heat Network to Sutton Town Centre

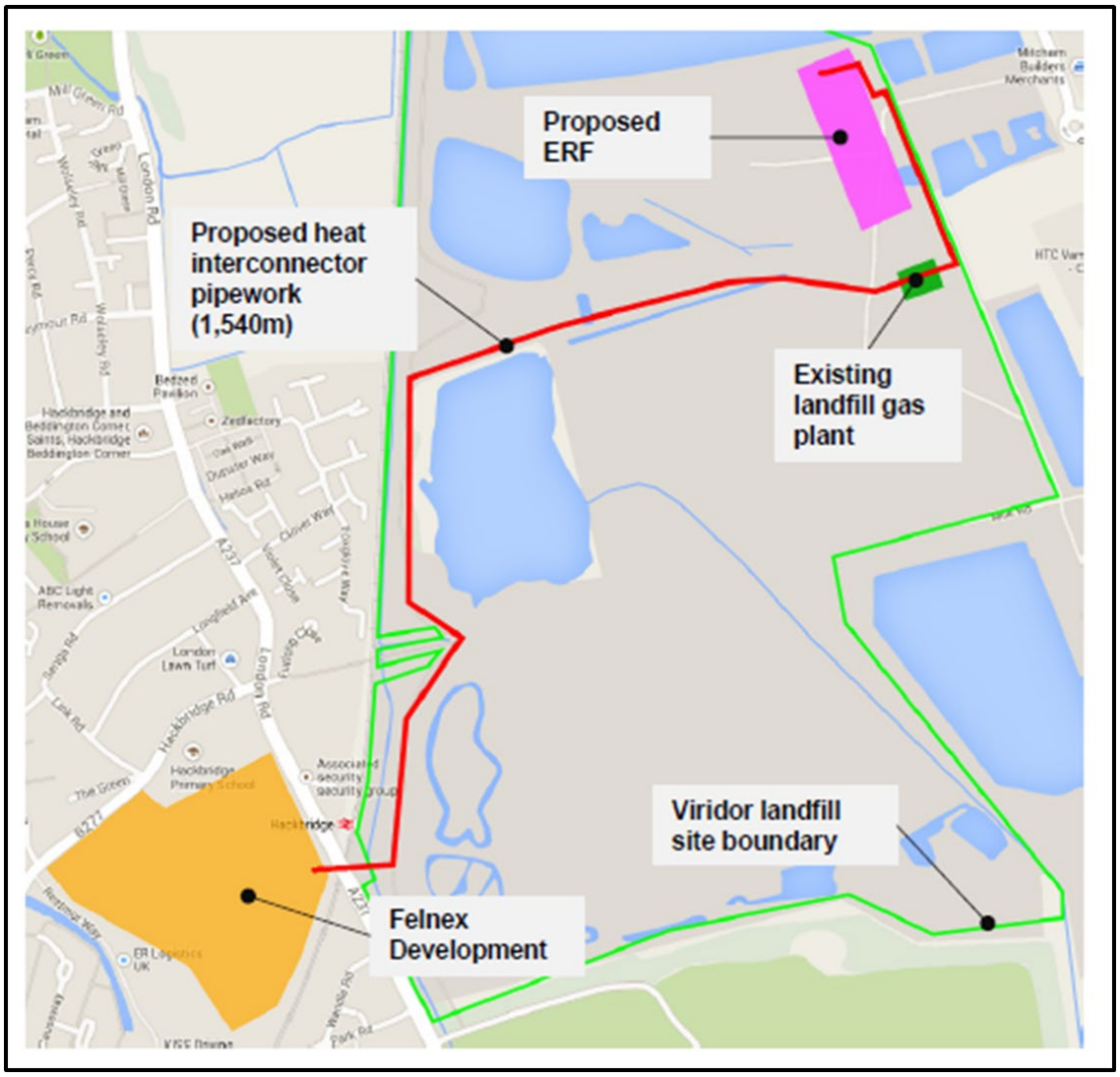
1.0 Introduction and Background

The London Borough of Sutton has a long held vision to decarbonise the Borough and one of its flagship projects to achieve this is the Sutton Decentralised Energy Network (SDEN), which has been developed by its wholly owned ESCo subsidiary Sutton Decentralised Energy Network Limited. The purpose of SDEN is to create heat networks across the borough, primarily using heat from the Viridor energy from waste plant but in future other sources may be added.

To date the developments undertaken by SDEN have been in relation to Phase 1 of the project which involved :

- Securing a long term heat purchase agreement with Viridor Ltd from their EfW Plant
- Entering into a Connection and Supply Agreement with Barratt homes for the redevelopment of the Felnex site into New Mill Quarter
- Procuring a Design and Build Contractor for the heat network for Phase 1 and an Operation and Maintenance Contractor

Phase 1 of the scheme is illustrated below



Financial close for Phase 1 was reached in Summer 2017 and during 2019 the heat interconnector will be brought on line.

SDEN are already supplying heat to the initial residents on the Felnex Site from temporary boilers. The long term Energy Centre which will contain 6 MW of back up boilers and over 200 m3 of thermal storage (supplied and installed by Barratts) will come on line at the same time as the interconnector.

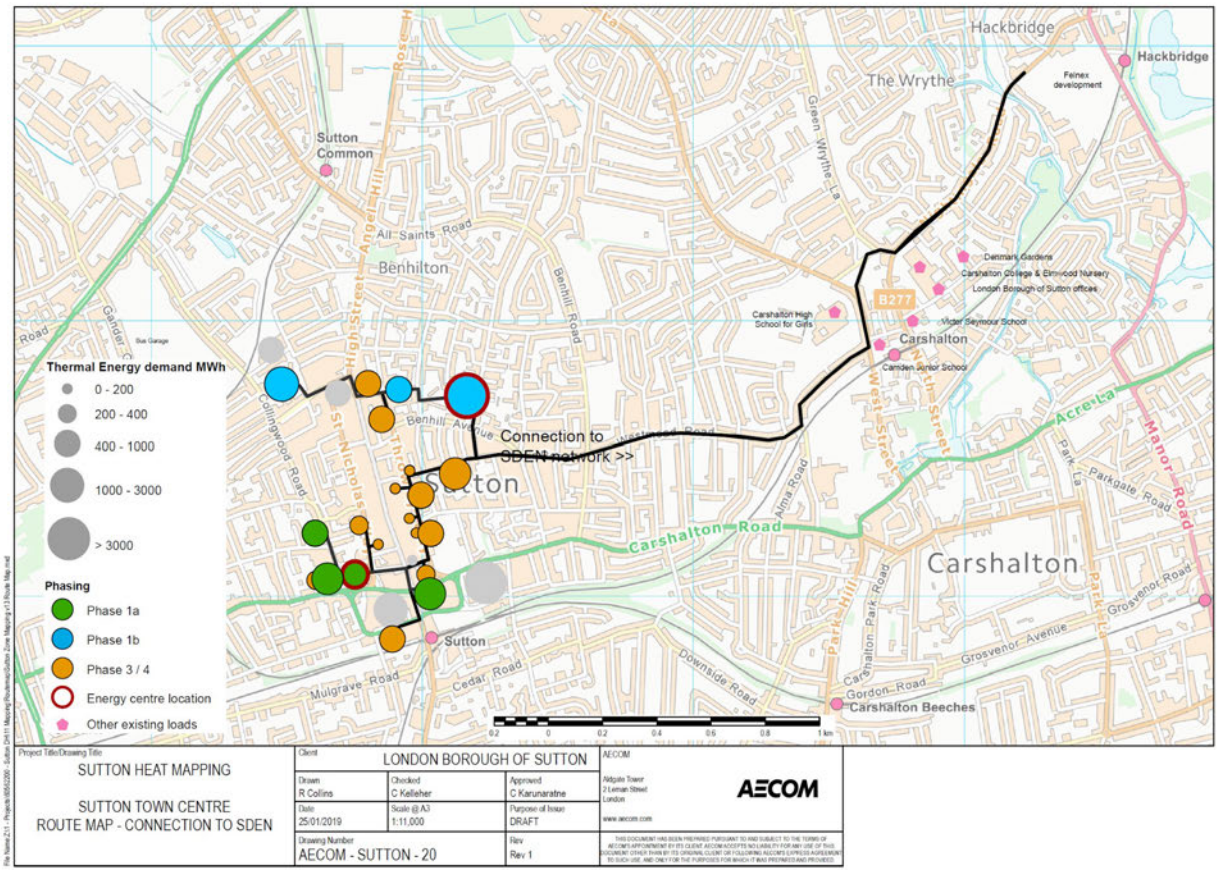
SDEN has access under the agreement with Viridor to up to 15 MW of heat.

As Phase 1 was only ever the "proof of concept", there is therefore considerable potential to expand heat supplies from SDEN more widely across the borough. At this stage, all future supplies are known as Phase 2.

Phase 2 will be a combination of "local connections" and "strategic extensions"

- Local Connections – to be made in the Hackbridge area, currently progressing a circa 400 unit development
- Strategic Connections – Croydon and Sutton Town Centre - the investigation of both of these potential links has been and is to be supported by DEEP Funding

In 2018 AECOM undertook an Energy Masterplanning Study (a copy of which will be made available to the successful tenderer) to consider the options for providing low carbon energy to the planned regeneration of Sutton Town Centre. The recommended option from this study was to extend the network via a Strategic Connection from the Felnex Site to Sutton Town Centre, generally in accordance with the plan shown below



2.0 Services Required

SDEN have agreed with the GLA that the potential to make this Strategic Connection will be investigated in greater detail to establish if a business case can be developed by SDEN (with HNIP funding support) to deliver this extension to the existing SDEN heat network.

SDEN already possesses substantial knowledge of operating and developing heat networks and has an internal techno-economic model which it uses to appraise both the original Phase 1 Scheme and extensions.

Therefore the Services required are discrete Work Packages ("WP") to develop outputs which can

- inform this business case
- be used to model this proposed extension

together these are the Purpose ("the Purpose") of this commission

Work Package 1 – Building and Development Site Data

Summary

Although the AECOM study considered the buildings to be connected in the Town Centre this was relatively high level and no site surveys were undertaken to establish connection points or survey existing buildings.

Under this WP the Consultant will develop a spreadsheet data base of all consumers who may be considered for connection in the Town Centre and along the proposed route via Denmark Road (including but not limited to the consumers identified in SDEN's heat mapping) to be used for sizing the heat network and associated plant under WP2.

Services Required

The Consultant will

i. Agree with the Authority a list of existing buildings and development sites included in the area outlined in the AECOM report and those identified by the Authority along a route from Hackbridge (existing network) via Denmark Road which can be considered for connection.

ii. Compile details on all the buildings and development sites from (i) above into an Excel spreadsheet (**Output No.1**) which details all information that would reasonably be required for the Purpose including but not limited to the following information for each site:

    a. Site Name
    b. Owner or Developer and full contact details
    c. Age(s) if not new build
    d. If new build development timescale (dwellings/m2 per year, first heat on date)
    e. Usage, i.e. housing, offices, school (primary, secondary etc..)
    f. Any notes re occupation, e.g. used during weekend during day for events, or 24/7 operation
    g. Number of dwellings (size where possible, i.e. 1 bed, 2 bed etc..)
    h. Gross floor area – from building owner where possible, but it will be acceptable for the consultant to measure off the floor area and use the number of stories per block to establish this, but the detailed methodology will need to be shown.
    i. Existing heating system – i.e. centralised boiler, boilers per block, electric etc ... and age of system
    j. General arrangement of existing heating systems to understand what the temperature regime is, i.e. constant speed, variable speed, 2 port or 3 port control, single pipe etc… Sufficient details should be gathered to understand how in principle the

building/site could be connected to the network and in particular to estimate the likely best return temperature that can be reasonably achieved.

k. General arrangement of water services e.g. centralised, decentralised, storage, instantaneous, from main boilers, directly fired and so on.
l. Number, type, rating, age, location (boiler plant area to be identified on site plan) and fuel of all combustion plant, calorifiers and CHP plant if applicable.
m. Details of planned major plant replacement, timing, scope and expected cost
n. Photographs of the boiler plant both in terms of the plant items, general plant and external location shot (photographs to be appended in a Word document and referenced to site)
o. Check if building uses gas for catering or other non HVAC use. Identify if this gas is separately metered or how else it can be quantified
p. Potential locations of thermal substation to enable connection of network and pipe route from site boundary to substation location.
q. Primary heating fuel consumption for the site (gas, electricity or oil) in kWh and peak demand for the site in kW to be obtained from site data via physical reading of the meters across a morning with a known OAT with adjustment for worst case OAT. and not from metrics, unless otherwise agreed with the Authority which can then be used to determine heat demand, or for a new development the proposed heat demand with full supporting details as to why that value has been chosen and is robust (TM46 or similar not to be used in any circumstance).
r. Where the peak heat demand is derived from gas meter data, the data is likely to be a reflection of the boiler capacity rather than the building requirement. The Consultant shall review the data and where applicable estimate the peak data that would be appropriate to the future district heating connection.
s. Maintenance and repair costs for the site for the heating plant to be obtained from site data and not from metrics unless otherwise agreed with the Authority

iii. The Consultant shall gather the information on the existing buildings from visits to each of the sites, which the Consultant will be responsible for arranging, planning and co-ordinating with the Authority only acting as a facilitator where reasonably necessary.

iv. During the site visit the Consultant will also identify the routing for the SDEN network onto the site and the methodology for the connection into the current or proposed heat source which shall be of sufficient detail to develop the Outputs required below

Work Package 2 – Heat Network Routing and Design

Summary

Under this WP the Consultant will use the data gathered under WP1 to prepare a design for the proposed heat network extension including any modifications required to the existing SDEN owned or adopted facilities at any point on the existing systems or network to allow the proposed buildings to be supplied with resilient low carbon heat, together with any additions including but not limited to pumping, controls, thermal stores, backup boilers, and everything necessary to allow the proposed extension to function fully to deliver robust supplies of heat to all connected consumers and maximise the use of heat from the Energy from Waste plant ("the Works").

Services Required

The Consultant shall carry out/provide the following:

i. Obtain all buried services drawings for the proposed route and develop a routing plan for the entire network to connect all building identified under WP1. This plan shall include identifying constraints and how these constraints will be overcome via the selected route. Not only will

the Consultants be expected to establish service constraints by obtaining details of all existing services, they will also identify a detailed route via site surveys and liaison with SDEN, the Authorities Highways Department and any other relevant stakeholder. Identify affected bus /tram routes and potential diversions. Identify rail crossings or areas where works might impinge upon the railways and identify how these will constrain the network and what risks are posed.

ii. The routing plan shall be a series of scaled general arrangement drawings in AutoCAD and pdf format showing the entire area (one overall drawing) and then broken down into a series of drawings at a scale of 1:500 showing the detailed routing of the SDEN network from the exit of the Felnex site up to and into each of the buildings and a suitable connection point inside of each building or group of buildings onto the internal heating systems, clearly showing the connection point and the arrangement of the connection (drawings for building connections at an appropriate scale) (**Output No.2**). These drawings shall show the network in a series of logical pipe lengths connected by nodes (each note is where the demand changes/consumer is connected), each of which are connected back to the exit of the SDEN network at the Felnex site. Each length and node shall be coded for reference and shall be the same across Outputs 2, 3 and 4.

iii. The Consultant shall also prepare an area wide P&ID showing the fully dimensioned pipework and working to the temperature regime selected by the Consultant in conjunction with SDEN and flow rates to correspond with the general arrangement network drawing, building connections (substations and size in kW) flow rates, pressure drops, demands and demands assumptions used to model each length of the network. The Consultant shall provide a P&ID drawing and an Excel spreadsheet showing this information **(Outputs Nos 3 and 4).** The Consultant shall ensure that the demands and synthesis of these at each node to ensure the networks are not oversized and take into account integrated loads and diversity is demonstrated in the Outputs. The consultant shall robustly demonstrate the derivation and/or evidence to support the chosen diversity factors.

iv. In undertaking this WP, the Consultant shall develop a conceptual design for the entire extension to the SDEN network as contemplated by the tender document to a stage generally in accordance with RIBA Stage 3/D but more advanced when required by this document. The design must be of sufficient detail to be included in the D&B contract for these Works to provide a consistent level of pricing and remove any ambiguity as to what is required as well as clarify all issues in sufficient detail so that any additional future variations from the selected D&B contractor to bring the system into operation in accordance with the Specification are minimised.

v. The Consultant shall also ensure that the designs for the scheme are compliant with the requirements of all regulatory bodies and with all regulations, British/ISO/EN Standards and CIBSE Codes of Practice V2.1 and shall provide a report/checklist **(Output No.5**) setting out how the design has been developed, the assumptions made and demonstrating compliance with CP2.1.

vi. In developing the design wherever possible, the Consultant shall do this on the basis of delivering the most efficient system in terms of minimised whole life cycle cost.

vii. The Consultant shall develop this design in stages and shall submit draft proposals to SDEN for comment, and shall allow for meetings with SDEN to discuss such comments and for taking into account these comments when undertaking further stages of design development

viii. The Consultant shall also develop a technical project risk register which shall include health and safety risks/hazards which identifies any issues which may exist which would prevent the technical delivery and operation of the scheme as set out in this document and the mitigation of these. The Consultant shall incorporate such mitigations when undertaking the

works set out above **(Output No.6)**, the risk register shall clearly identify the residual risk after the Consultant's mitigations and where further mitigation would be required at Stage 4 or by others. Issues to be addressed shall include but not be limited to: Health and safety, capital cost, operating cost, programme, continuity of supplies and condition of plant and equipment.

Work Package 3 – Capital Costs

Summary

Under this WP the Consultant will use the data produced under WP2 to develop a detailed capital cost schedule for all Works required to be undertaken to supply the buildings identified under WP1 with heat from the SDEN network.

Services Required

i. The Consultant shall develop a detailed cost plan for the development of this network and all associated equipment including all plant and equipment additions/modifications etc... broken down by the costs of each connection point, i.e. substation as well as each network length using the same codes as highlighted above. For any new central plant or modifications to existing plant the costs for these works shall be shown by location in an itemised breakdown. This will then enable the Authority to consider different network extension options.

ii. These capital costs shall initially be developed using cost benchmarks proposed by the Consultant and agreed with the Authority which shall be robust, based on actual completed installations and include a detailed price breakdown to include all elements to complete the works, i.e. pipe supply and install, civils, prelims, design, project management, appropriate risks and provisions etc…each by line item suitable for use in scoring any future tendering of the works.

iii. The Consultant shall test the costs once prepared with two potential contractors who could reasonably be expected to deliver these works The method of testing shall not prejudice or invalidate any future tender in which the contractors may participate?

iv. This costing shall be supplied in the form of a spreadsheet (**Output No.7)** attached to a report (**Output No.8)** setting out the process undertaken by the Consultant and the detailed feedback received from the two contractors and how this feedback has been taken into account in the final costing.

Evidence of who tender was advertised to

proactis

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Home › Projects › View projects › Route Proving and Development of a Design and Capital Costs for the Extension of SDEN Heat Network to Sutton Town Centre › Responses › Route

Selected suppliers

There are currently 29 selected suppliers

Send a message to all suppliers

Company	Workgroup	Intent	Read	Response progress
AECOM	Program, Cost, Consultancy	N/A	N/A	
AECOM	AECOM	N/A	N/A	
AECOM	Programme Management	N/A	N/A	
AECOM	Environment	N/A	N/A	
AECOM	AECOM	12/07/2019 14:06:15	03/07/2019 17:58:47	
Arup Associates	Arup Associates	N/A	N/A	
Atkins Limited	Transport Planning & Management	N/A	05/07/2019 11:07:39	
Atkins Limited	Transportation	N/A	N/A	

Cancel

Title
Terms and Conditions - ITT/RFQ

Consultants Proposal - SDEN Extension to Sutton Town Centre (Attachment 2).docx	26 KB
ITT - SDEN Extension to Sutton Town Centre - DEEP Tender v2.docx	115 KB
Price Schedule - GLA Sutton SDEN Extension 01.xlsx	32 KB

Selected suppliers

There are currently 29 selected suppliers

Send a message to all suppliers

Company	Workgroup	Intent	Read	Response progress
AECOM	Program, Cost, Consultancy	N/A	N/A	
AECOM	AECOM	N/A	N/A	
AECOM	Programme Management	N/A	N/A	
AECOM	Environment	N/A	N/A	
AECOM	AECOM	12/07/2019 14:06:15	03/07/2019 17:58:47	
Arup Associates	Arup Associates	N/A	N/A	
Atkins Limited	Transport Planning & Management	N/A	05/07/2019 11:07:39	
Atkins Limited	Transportation	N/A	N/A	

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Selected suppliers

There are currently 29 selected suppliers

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Buro Happold	Happold Consulting	06/08/2019 11:11:12	03/07/2019 08:54:42	
Capita	ASD	N/A	N/A	
Greenfield Nordic Ltd	Management	N/A	N/A	
London Borough of Islington	Environmental Services	N/A	N/A	
London Borough of Islington	Environment and Regeneration	N/A	16/07/2019 09:28:55	
Ove Arup and Partners Ltd	IMG	N/A	04/07/2019 10:16:30	
Ove Arup and Partners Ltd	City Economics	N/A	N/A	
Ramboll UK Limited	TfL 80814 - Decentralised Energy Framework	N/A	03/07/2019 10:42:15	
Sustain Ltd	Products & Technologies	N/A	N/A	

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Selected suppliers

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Sustainable Energy Ltd	N/A	N/A	04/07/2019 10:37:54
Sustainable Energy Ltd	N/A	N/A	N/A
Sustainable Energy Ltd	N/A	N/A	N/A
Syzygy Renewables	Renewable Energy Consultancy	N/A	N/A
WSP UK Limited	Strategic Consulting	N/A	N/A
WSP UK Limited	Highways and Transportation	N/A	N/A
WSP UK Limited	Highways/infrastructure	N/A	N/A
WSP UK Limited	Environment	N/A	N/A
WSP UK Limited	Land Restoration & Ground Engineering	N/A	N/A

Cancel

Selected suppliers

There are currently 29 selected suppliers

Send a message to all suppliers

Syzygy Renewables	Renewable Energy Consultancy	N/A	N/A	
WSP UK Limited	Strategic Consulting	N/A	N/A	
WSP UK Limited	Highways and Transportation	N/A	N/A	
WSP UK Limited	Highways/infrastructure	N/A	N/A	
WSP UK Limited	Environment	N/A	N/A	
WSP UK Limited	Land Restoration & Ground Engineering	N/A	N/A	
WSP UK Limited	Highways and Transportation	N/A	N/A	
WSP UK Limited	Management Solutions	N/A	N/A	
WSP UK Limited	Risk Management Services	N/A	03/07/2019 14:36:23	

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Company name	Workgroup	Version	Published	Verified
AECOM	AECOM	1	06/08/19 10:34:15	Yes - Accepted
Buro Happold	Happold Consulting	1	06/08/19 11:24:05	Yes - Accepted

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Information

Status : Published 02 July 2019 16:50 (Version 1)

Respond by : 06 August 2019 12:00

Title : Route Proving and Development of a Design and Capital Costs for the Extension of SDEN Heat Network to Sutton Town Centre

More

Evaluations (optional)

Name	Version	Visible	Supplier ques.	Lot
Route Proving and Development of a Design and Capital Costs for the Extension of SDEN Heat Network to Sutton Town Centre	1	Yes	Yes	No

Terms & conditions

Title
Terms and Conditions - ITT/RFQ

Deadline & time remaining

ITT deadline expired

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Viewed by -	8
Intent to Respond	2

Attachments (6)

Attachments can be viewed by all suppliers and procurers involved in this ITT

Consultants Proposal - SDEN Extension to Sutton Town Centre (Attachment 2).docx	26 KB
ITT - SDEN Extension to Sutton Town Centre - DEEP Tender v2.docx	115 KB
Price Schedule - GLA Sutton SDEN Extension 01.xlsx	32 KB
Services to be Provided - SDEN Extension t	5

Sutton Town Centre SDEN extension

July 2019

Quality information

Prepared by	Checked by	Approved by
[redacted]	[redacted]	[redacted]

Prepared for:

[redacted]
London Borough of Sutton (LBS)

Prepared by and Bid manager contact details:

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1. AECOM's Understanding of the Brief

The London Borough of Sutton would like to undertake an assessment to investigate the potential for the extension of the Sutton District Energy Network (SDEN) from the New Mill Quarter (formerly Felnex) site. The scheme will utilise waste heat from the Beddington Energy Recovery Facility (ERF) which can supply up to 15MW of heat and will be backed up by gas-fired boilers.

The scheme has been developed by Sutton Council's wholly owned ESCo subsidiary Sutton Decentralised Energy Network Limited. This phase of the project follows on from the Phase 1 which developed the network from the ERF to the New Mill Quarter site and initial energy centre. In addition, a long-term heat purchase agreement with Viridor Ltd from the ERF Plant and a heat supply agreement with the developers of the Felnex site were concluded which were vital first steps in developing the heat network in Sutton.

Building on our work for Sutton Town Centre (STC) where we suggested the connection to the ERF as part of the route map, we understand the key requirements of this brief as the next steps in the route map to connect STC to the low carbon heat available from the ERF.

The core focus of this work will be to identify potential network customers along the suggested route, assess building connections, understand the route constraints posed by utilities and other factors such as the proposed tram, develop and design the network distribution in light of these constraints, and develop a detailed capital cost plan. These actions will to enable the scheme to make a strategic expansion to STC to provide low carbon heat to Sutton and the large number of proposed developments scheduled for build out in the early 2020s, of particular note is the proposed redevelopment of the Benhill estate and the benefits a district heating scheme could bring to its development.

As identified in the previous work, the ability of the project to access HNIP funding to bridge the funding gap will be vital to allow the expansion of the network. We see this as driving the programme, with the HNIP programme scheduled to close in March 2022 and with the lead time required to progress the project to a stage where a successful application can be submitted it is imperative that this scope of work is delivered on time.

The project has three work streams to support the proposed network expansion. Work package 1 which looks to identifying sites with significant heat load and DH connection compatibility. Proactive Stakeholder engagement will be required from us to deliver this work in a timely manner to allow the other work packages to progress. Quality building data with a high level of confidence for use in the SDEN TEM is key to this WP's success.

Work package 2 is seeking to prove a viable and deliverable route for the proposed network is possible, especially considering the impact to residents from installing any route. A clear delivery route with all the required technical design information from additional energy centre capacity to each individual building connection is required for the stage to be deemed successful.

Work package 3 aims to provide price certainty in an uncertain market. By developing a detailed cost plan and engaging with reputable contractors to test the price this WP will give SDEN/Sutton a high degree of price certainty and return on investment. This quality of data will be also able to support a HNIP application.

By bringing the work streams together with open and collaborative project delivery we believe that AECOM can provide high-quality information for the client to make a clear business case decision about the further expansion of the SDEN network in the most advantageous manner.

2. Methodology

Work Package 1 – Building and Development Site Data

Pre-Survey Work

1.1 Following on from the potential connections identified in the previous Heat Mapping and Master planning work, AECOM will review heat loads and identify any missed opportunities.

1.2 AECOM shall facilitate an initial project kick off meeting with the client project team (and any key stakeholders) in which the definitive list of buildings to be investigated for connection shall be discussed and confirmed.

1.3 AECOM will lead on ascertaining contact details for all of the building owners, FM team etc. A key project risk is getting a response and being able to organise the required surveys in the short period of the study. AECOM have worked with challenging stakeholders on multiple projects and found a persistent approach with succinct requests generates the needed results.

- Recently on a heat mapping study for Burnley we had very poor stakeholder engagement and spent significant effort in identifying key contacts in the organisation's hierarchy through online searches, planning app documents, ownership details and inside leads.

1.4 Following building list confirmation AECOM will contact all building owners via email and follow up calls where required, to request the following (but not limited to) information:

- Primary energy billing data.
- Hourly or half hourly metered gas and heat data if available.
- Any record drawings including schematics layouts, floor plans and equipment schedules.
- O&M logs and invoices for any maintenance & upgrade works.
- Plans for refurbishment or plant replacement.
- Asbestos register / surveys.

1.5 From experience It is likely that much of this information will not be readily available through remote contact and will need to be recorded onsite from the visual inspections or through discussion with facilities staff.

Surveys

1.6 Only once appropriate arrangements have been made with the building owners and RAM's (risk assessment method statements) have been signed off, surveys shall be carried out. Surveys will cover:

- Surveys of existing plant / equipment / and pipework to establish condition, capacity and life expectancy.
- Surveys to identify required adaptations, spatial constraints, plant movement methodology.
- Review hot water services; space heating; mechanical heating/cooling/chilled water systems; mechanical ventilation.
- Review existing low voltage electrical supply; review current Building Management System including capturing scheduling strategy for each building.
- Survey the nature of the existing heat systems (operating temperature, age, location and nature of plant rooms etc.).
- Review the building stock, age, condition, fabric, energy efficiency (DEC).
- Review energy data such as sub-metering and control system data points and sequences of operation.
- Review proposed/active alteration works being undertaken.
- Review energy data collected on site, such as sub-metering and control system data points and sequences of operation.
- Cross checking P&ID's and drawings with as built installation.
- Walk (and measure) the route from the external boundary to the plantroom to assess the potential DH pipe route.

1.7 To establish where buildings may be able to reduce their supply and return temperatures information shall be gathered on any fabric upgrades since installation of the wet systems as well as the building owner's appetite for replacement/modification of emitters.

1.8 Developing an understanding of the buildings is crucial. The key personnel that can assist with this are often the site FM team, maintenance contractors or facilities managers. This will add the 'human' element to information gathering, and add a level of granularity to the survey that is crucial.

1.9 Route design shall be measured on site. Including marking up dimensions of all vertical and horizontal runs. Any obstacles or penetrations shall be noted including the type of material and level of risk the connection may pose.

1.10 All information shall be compiled into a standardised spreadsheet as per the client's requirements. **(Output No.1).** AECOM have also been working with BEIS HN Team to trial their whole life cost of heat tool which they will soon be requesting to be implemented on all HN feasibility projects where there is a connection to an existing building. AECOM would propose that it is utilised on this project to provide a robust assessment of the WLCoH.

1.11 Where assumptions are required to be made AECOM will utilise our library of metered data that we have collected from several other heat network studies and post-performance reviews of installed networks. We will look use the recently released (BETA) CIBSE energy benchmarking tool based on DECs, which is more reflective of energy use than Guide F, to confirm our values.

Key Experience

1.12 The team proposed have a significant experience of surveying buildings for potential DH connections. Most recently the team has been involved in a DPD study for the East Riding of Yorkshire which required survey works of a complex campus with over 12 connection points. AECOM surveyed all primary plantrooms and secondary generation plant and developed a RIBA 3 cost plan to a +/- 15% accuracy. Key lessons learnt were i) ensure all generation plant is captured (the site had several distributed gas fired water heaters not shown on record drawings) ii) establish an agreeable & safe route through the building for distribution pipework to any landlocked plantrooms. iii) capture information of upcoming building modifications or expansion which may impact their demands.

- The AECOM team are currently carrying out a similar piece of work for BEIS and the MoJ looking at the potential connection of a DH network to a prison. The scope entails detailed plantroom surveys, and development of a RIBA 3 cost plan with a targeted accuracy of +/- 15%.

Work Package 2 – Heat Network Routing & Design

Route Development

2.1 Once loads have been ascertained from WP1. AECOM will carry out a second-round review and score the loads based on a pre-agreed set of criteria. For example: *level of works required to connect, risks (e.g. pipe routing, secondary system modifications) and likelihood to connect*. The outcome will be an optimised list of buildings to connect to.

2.2 Route optioneering will be carried out to the agreed connections, each option will be assessed for constraints, risk and impacts.

2.3 Initial consultations with relevant stakeholders will be made at this stage to inform the discussions. Such as: the tram link developers to ascertain their requirements (depths of cover, distance from DH pipe, access requirements etc), highways department and legal land ownership boundaries.

2.4 A key stakeholder schedule and management plan will be developed as data is assembled and reviewed, such as the Local Highway Authority, Local Authority, affected utility companies, Environment Agency, local residents' groups and so on.

2.5 The AECOM team will re survey (visual) the network route and consult with SDEN on the findings thus far.

Utilities Survey

2.6 British Standards 'PAS128' aims to raise Buried Utility ('BU') Survey standards across the UK. AECOM is committed to delivery of robust and efficient PAS128 surveys of all types; we have a wide experience of delivery of projects, which have reduced technical and health and safety risk for a variety of client types. The company has a significant, proactive and visible support network delivering site access and logistical support.

2.7 AECOM propose to use Premier Energy, or equivalent services, to obtain the C2 information for the entire network route. This forms QL D of the PAS128 process record information. The accuracy and completeness of these are traditionally inconsistent and they can be unreliable, but they are a useful guide. They contain information which non-intrusive surveys would not normally deliver, so add to the mass of deliverable data and as such are a very useful element of the survey process.

2.8 The C2 information coupled with the visual surveys and initial stakeholder engagement will be used to identify key pinch points, for which further targeted surveys will be undertaken. Pinch points are initially defined as areas where two or more major utilities / buried services are running near the proposed heat network route.

2.9 QL B – Detection. Following on from QL D and C (visual survey) processes, AECOM propose that at the pinch points the project employs the use of instrumentation on site to trace and record buried utilities to a PAS128 QL-B3P Survey Category and M3P method. This will provide adequate accuracy to design the heat network routing to the required detail ensuring that pipe design either re-routes, avoiding buried services/infrastructure, or where relevant cost allowance is made for C3 design development and diversion of the utility. The preferred option in each case will differ and needs to account for risk, programme impacts as well as whole life cost.

2.10 Utilities scans are subject to significant cost variance dependant on their location and the type of area being surveyed. Traffic management and road closure restrictions may require night shifts to complete the required works. AECOM recommend that the GPR and Topographic scans are directly procured by the client (AECOM will produce the topographic and GPR utilities survey specification and assist throughout the procurement process). However, should the client require, AECOM can procure this service and have allowed for a provision sum to do so.

Design Output

2.11 From the C2 works and utilities scan, 2D AutoCAD drawings will be produced, with all known buried assets presented. Individual drawing sheets would be generated along the survey routes, each with a drawing frame containing a legend, drawing scale and associated relevant information. Individual asset sets will be shown with a unique and identifiable line type, which will also individually show the quality level achieved. **Output No.2**

- DH pipework route will be drawn (updated to account for GPR utility survey data etc.).
- Health & Safety risks and hazards will be marked up on the drawing following CDM best practice.
- A number of cross sections with pipework elevations shall be developed.
- Schematics to RIBA 3 shall be developed for each building connection type.
- A schedule of materials (pipe lengths, valves, other inline items) shall be produced for pricing.

The impact of the network design on the SDEN generation assets is unclear until the loads have been defined, however AECOM will work with SDEN to provide an appropriate level of design detail to enable costing of the required plant and equipment.

2.12 AECOM will develop an 8760 profile for each building using the available metered data and historic profile library. All data will be degree day corrected. The resultant profiles will be used to create an accurate demand profile at each node of the network, from which the diversified load and pipe sizing can be undertaken.

2.13 The P&ID and excel spreadsheet detailing flow rates, pressure drop's and demands shall be developed as required **for Outputs 3 and 4**. P&ID's will show isolation points for maintenance and network expansion.

2.14 CP2.1 is not formally released, AECOM will work to CP1, however, we will work to the aims of CP2.1 where possible. We will complete the CP1 checklist as per the ITT requested scope **Output 5.**

2.15 A technical project risk register will be maintained by the project manager and cover the whole extent of the project from generation to the end connections. Register will be continually updated and periodically provided to the client. Health and safety risks shall be identified through a HAZID workshop and utilise AECOMS imbedded safety procedures. **Output No 7.**

Key Experience

2.16 The AECOM energy team have recently tendered a PAS-128 compliant GPR survey of 1km of urban roadways in Beverley Town Centre and through the process built up contacts with several scanning companies.

- The infrastructure teams who will be coordinating all below ground surveys and design have extensive experience in DH network design including the RIBA 3 for North West Cambridge Phase 1 and currently Phase 2. As well as the development of a comprehensive 3D coordinated utility model for an entire MoD site which included including High Voltage (HV), Low Voltage (LV), surface water, foul water, low pressure (LP) gas, medium pressure (MP) gas, potable water, oil pipeline, communication networks and steam condensate network.

<u>Work Package 3 Capital Costs</u>

3.1 A RIBA 3 cost plan for the network, connections and any SDEN modifications will be developed with our QS team and DEN pricing specialist, costs shall be presented using NRM categories. Costs will be broken down in to constituent parts i.e. valves, pipes (DNxx), heat substation (xxkW) **Output 7.**

3.2 The AECOM cost library is maintained through our broad range of direct and indirect energy projects with cost data. Project specific costs may also be requested to ensure the assessment is accurate at a plant item level. Costs allow for prelims, contractor overhead and profit, fees and risk and are routinely benchmarked to allow AECOM to assess cost performance. This unique experience assisted in developing a dynamic cost model for use by Zero Waste Scotland on district energy projects.

3.3 A key issue that may be encountered is that using a bottom up approach to build up costs from supplier quotations and a £/m rate can lead to inflated costs which do not account for market efficiencies and bulk discounts. That is why it is crucial to benchmark costs plans against tendered projects.

3.4 As required by the ITT we will approach two contractors for pricing of the project and to inform development of a delivery programme. The project will be fully anonymised, and all drawings issued will remove 'background', **Output 8**.

Key Experience

3.5 From several years of being involved in the district energy market, AECOM have a vast array of cost data sources and developed detailed costs plans on heat network projects such as Beverley and for the MoD. Most recently we have worked with Currie and Brown to develop a cost plan of over £40Million for a sitewide energy project at the Houses of Parliament.

3. Team and Resource

Team

AECOM proposed team and structure:

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

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instructions for changes to work, either by carrying out the required action, or delegating to the appropriate team member. The Project Manager will act as the team lead for this project. That role will be supported by the Project Director as detailed in the organogram. These individuals will oversee the project's delivery, adding a high level of resilience. The individuals named will be designated to the project throughout its life, ensuring a consistent approach.

Escalation Procedure
Any issues or concerns that SDEN has in relation to the project can be brought up with Channa Karunaratne, the Project Director. We will commit to responding to project management related issues within a day and more specific technical requests within 3 days.

Cost and Scope control
One of the key roles of the lead consultant is to ensure the cost of the project is protected. This goes hand in hand with the scope of the project. The AECOM PM will coordinate with the client and have regular updates.

Quality Assurance
AECOM is accredited to ISO 9001, ISO 14001 and OHSAS 18001. We have a robust quality assurance system, designed to ensure high quality output and customer satisfaction. This is reflected in our approach to project organisation and management.

Our IMS system sets out robust procedures to ensure that high quality work is delivered on time. These include structured allocation of project tasks to team members, frequent reviews by the project manager, and an internal QA review process which requires the technical lead, project manager and technical expert's review before it is issued.

AECOM will check the client's advisor's deliverables to ensure they align with the overall strategy. AECOM will not ensure the quality of these deliverables as this is outside of the contractual obligation.

All deliverables (e.g. the reports) must be signed off by both a 'checker' (Project Manager) and an 'approver' (Project Director). Moreover, all deliverables will be verified by a technical person, who will not be directly involved in the project, in order to ensure an impartial view on any work undertaken.

Example Projects

North West Cambridge

North West Cambridge is the largest single capital development project that the University of Cambridge has undertaken in its 800-year history. AECOM was engaged by University of Cambridge to design, as part of a multi-disciplinary appointment, an energy centre and a low carbon district heating network for the greenfield residential led multi-use community development.

The scheme will comprise 5,000 dwellings (house, flats and student accommodation) in addition to commercial facilities comprising of hotel, school, super market, community facilities and academic research buildings.

As well as from energy efficient passive design strategies, low and zero carbon (LZC) energy technologies were incorporated into the scheme, with the site connected to a Combined Heat and Power (CHP) led District Heating (DH) system which will generate and distribute low carbon heat to the new campus including Code for Sustainable Homes Level 5 dwellings.

AECOM worked closely with the scheme Architects and masterplanners to design the single energy centre in a heavily constrained part of the site. With a long phased build planned AECOM had to work closely with the client to agree the TEM and ensure that the EC and network were built out in a progressively logical manner.

As part of the multi-disciplinary delivery AECOM developed and communicated common design principles that were implemented in all delivered buildings. Key design areas were the primary thermal interface, internal pipe work design, metering strategy and overall system performance.

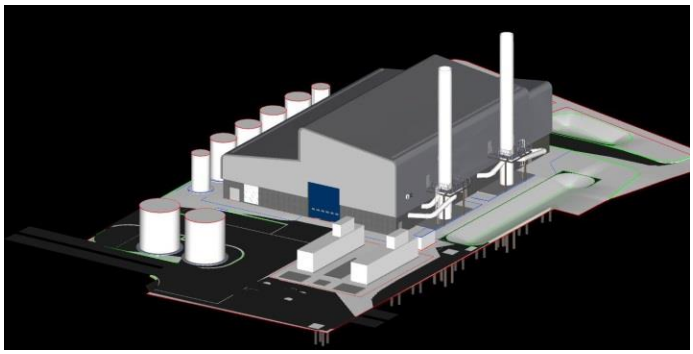
AECOM produced two D&B packages to RIBA 3, one for the network and one for the EC to allow for separate procurement. We were involved during the tender phase, helping select and evaluate contractors. Post appointment AECOM worked closely with the contractors and planners to validate the EC and network design.

AECOM were then present during the construction of phase 1, which comprised of the energy centre and the initial core of the development. We witnessed the installation and testing of the 3 MWe CHP and 20 MW of gas fired boilers, alongside the large thermal storage.
Extensive coordination with designers of the incoming utilities led to design and cost efficiencies through optimisation of routes and trenching schedules.

AECOMs involvement included all civil works, including power and utilities, environmental services and district heating.

The entire regeneration plan was £1.5bn, with £4m spent on the Energy Centre and £8m spent on the DH network that AECOM designed. AECOM are currently working for the client and are looking at the incorporation of Air Source Heat Pumps as part of Phase 2.

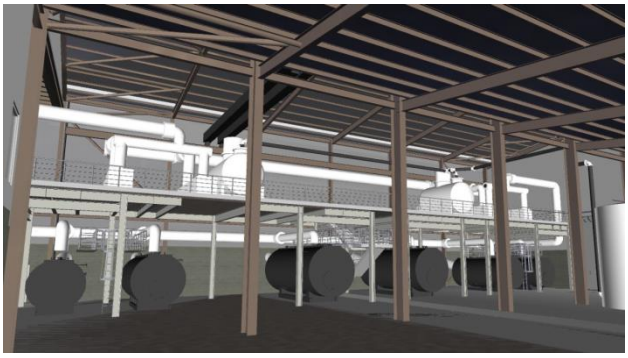
Confidential Ministry of Defence Site



AECOM were commissioned to carry out an in-depth review of the heating network on this large 750-acre MoD facility in the South of England. Comprising of over 400 buildings this facility has a 64km, 1960's steam district heating system in significant need of upgrade and repair.

The specific aim of the project was to propose a technically, financially and environmentally robust method of delivering long term heat on-site, tying in with the sites 25-year masterplan and development potential.

AECOM carried out a thorough review of the site building stock, carrying out over 200 plant room surveys, network inspections and energy consumption audits. Using this information, we created an accurate heat demand profile of 400+ buildings and a GIS heat map. This profile was applied to the future development of the site, thus allowing for accurate prediction of heat demand patterns going forward 25 years. Feasibility of renewable and low-carbon technologies were subsequently assessed, such as fuel cells, heat pumps and combined heat and power (CHP). AECOM also carried out IES energy modelling of a cross section of building stock to validate the energy profiles, thus brining a high level of accuracy to our techno-economic modelling.



AECOM progressed the feasibility to develop 5 options, which included a fully decentralised option, a de-steamed option and new steam network. AECOMs techno-economic model analysed all proposed engineering solutions and indicated that a rationalised steam network with air source heat pumps feeding peripheral buildings would provide the greatest cost benefit and carbon savings.

Following the successful signoff of the AECOM business case AECOM were undertook the RIBA stage 3 design of the new energy network, including the decentralised buildings.

Deptford Wharves

AECOM was engaged by Lend Lease (Deptford) Limited to develop thermal profiling assessment of Deptford Wharves Energy Centre. The aim was to demonstrate phasing and energy centre capacity of a large phased mixed-use development of 1,132 residential units and 11,782 m^2 non-residential space.

AECOM established the appropriate points at which energy centre capacity increases are anticipated in accordance with Peak load profiling. Base load profiling analysis for the development was conducted to determine Combined Heat and Power (CHP) and thermal storage capacity at fully phased condition. A peak thermal capacity of 5,2 MW with a further 840 kWth of CHP engine capacity were estimated.

Aiming to deliver this load, AECOM recommended condensing boiler technologies to provide an initial solution for the developing load. A CHP of 410 kW heat output combined with 40 m3 thermal storage was identified as the most appropriate engine. Two identical CHP spark

ignition gas engines were proposed to be installed at differing times in order to achieve the carbon performance requirements of the development whilst minimising upfront cost..

AECOM also designed the primary district heating network and the connections to individual plots. All buried services coordination was undertaken with the specialist utilities consultant, PBA. The connection of the proposed energy centre to an external district heating scheme was evaluated; under current market conditions it was determined not to be a cost-effective proposal. AECOM then carried out the preparation of technical contract documents, working with the client procurement team (legal and commercial) to produce a single stage tender pack. AECOM evaluated the ESCO responses and developed a tender evaluation report. AECOM worked with a selected contractor to validate their designs ensuring design compliance in the lead up to the construction phase.

4. Programme & Risk Register

We believe we can achieve the ambitious programme set out in the ITT and have resourced the project accordingly, as set out in the resource schedule below. This programme is not without its risks and we have identified several of these risks in the risk register and show our proposed mitigation measures which are reflected in the team we have selected and our proposed programme and resource schedule.

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[redacted]

[redacted]

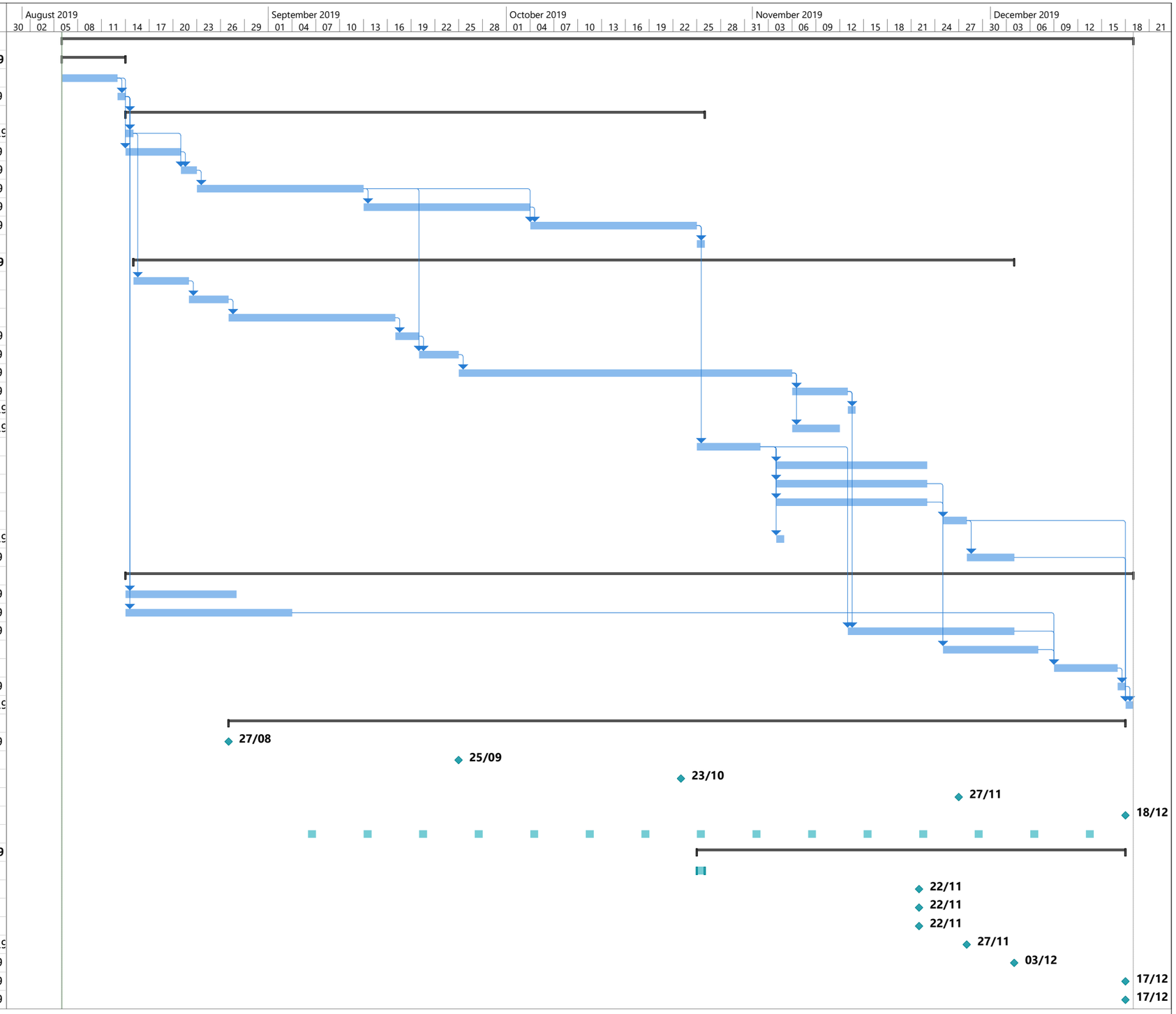
[redacted]

[redacted]

[redacted]

Programme

ID	Task Mode	Task Name	Duration	Start	Finish
1		**Route Proving and**	**97 days**	**Tue 06/08/19**	**Wed**
2		**Contract Award**	**6 days**	**Tue 06/08/19**	**Tue 13/08/19**
3		Contract Award & Setup	5 days	**Tue 06/08/19**	Mon
4		Project kick off	1 day	Tue 13/08/19	Tue 13/08/19
5		**Work Package 1 – Building**	**53 days**	**Wed**	**Fri 25/10/19**
6		Kick off meeting	1 day	Wed 14/08/19	Wed 14/08/19
7		Prepare list of buildings	5 days	Wed	Tue 20/08/19
8		Agree list of survey sites	2 days	Wed	Thu 22/08/19
9		Stakeholder engagement	15 days	Fri 23/08/19	Thu 12/09/19
10		Carryout site visits	15 days	Fri 13/09/19	Thu 03/10/19
11		Prepare buildings lists	15 days	Fri 04/10/19	Thu 24/10/19
12		Output 1	1 day	Fri 25/10/19	Fri 25/10/19
13		**Work package 2 - Heat**	**79 days**	**Thu 15/08/19**	**Tue 03/12/19**
14		Agree route for C2	5 days	Thu 15/08/19	Wed
15		Instructor C2 utilities	3 days	Thu 22/08/19	Mon
16		Prepare cad drawings of	15 days	Tue 27/08/19	Mon
17		Agree target areas for	3 days	Tue 17/09/19	Thu 19/09/19
18		Issue PAS 128 survey	3 days	Fri 20/09/19	Tue 24/09/19
19		Carry out PAS 128	30 days	Wed	Tue 05/11/19
20		Prepare results	5 days	Wed	Tue 12/11/19
21		Issue to client	1 day	Wed 13/11/19	Wed 13/11/19
22		Prepare routing plan	4 days	Wed 06/11/19	Mon 11/11/19
23		Heat load calculations	6 days	Fri 25/10/19	Fri 01/11/19
24		Detail building	15 days	Mon	Fri 22/11/19
25		Prepare P&ID drawings	15 days	Mon 04/11/19	Fri 22/11/19
26		Identify addition	15 days	Mon	Fri 22/11/19
27		CP1 checklist	3 days	Mon	Wed
28		Design review points	1 day	Mon 04/11/19	Mon 04/11/19
29		Project risk register	4 days	Thu 28/11/19	Tue 03/12/19
30		**Work Package 3 – Capital**	**91 days**	**Wed**	**Wed**
31		Agree Cost plan template	10 days	Wed	Tue 27/08/19
32		Agree information to	15 days	Wed	Tue 03/09/19
33		Develop cost plan	15 days	Wed 13/11/19	Tue 03/12/19
34		Engage contractors for	10 days	Mon	Fri 06/12/19
35		Validate cost plan	6 days	Mon	Mon
36		Issue report to client	1 day	Tue 17/12/19	Tue 17/12/19
37		Final report meeting	1 day	Wed 18/12/19	Wed 18/12/19
38		**Meeting Schedule**	**81 days**	**Tue 27/08/19**	**Wed**
39		Kick off meeting	0 days	Tue 27/08/19	Tue 27/08/19
40		Monthly meeting 1	0 days	Wed	Wed
41		Monthly meeting 2	0 days	Wed	Wed
42		Monthly meeting 3	0 days	Wed	Wed
43		Final report meeting	0 days	Wed	Wed
44		**Weekly PM catch up call**	**71 days**	**Fri 06/09/19**	Fri 13/12/19
60		**Deliverables**	**38 days**	**Fri 25/10/19**	**Tue 17/12/19**
61		Output 1	1 day	Fri 25/10/19	Fri 25/10/19
62		output 2	0 days	Fri 22/11/19	Fri 22/11/19
63		Output 3	0 days	Fri 22/11/19	Fri 22/11/19
64		Output 4	0 days	Fri 22/11/19	Fri 22/11/19
65		Output 5	0 days	Wed 27/11/19	Wed 27/11/19
66		Output 6	0 days	Tue 03/12/19	Tue 03/12/19
67		Output 7	0 days	Tue 17/12/19	Tue 17/12/19
68		Output8	0 days	Tue 17/12/19	Tue 17/12/19



Project: SDEN STC extension pr
Date: Tue 06/08/19

Task		Summary		Inactive Milestone		Duration-only		Start-only		External Milestone		Manual Progress	
Split		Project Summary		Inactive Summary		Manual Summary Rollup		Finish-only		Deadline			
Milestone		Inactive Task		Manual Task		Manual Summary		External Tasks		Progress			

Risk Register

In developing this proposal, we have reviewed some of the key risks to delivering the requested scope of works and created a risk register as shown below. We have created our proposed team, resource schedule and methodology to address these risk items to ensure the successful delivery of the project. Our project manager will be responsible for updating the risk register and will provide the client with regular updates. Our project management tools and methods outlined in section 3 will be utilities to manage the below risks to ensure successful project delivery.

Project delivery risk register

Risk Name	Description	Mitigation
Project Risk		
Team resilience	Change in key AECOM members	AECOM have proposed a strong robust team with a large number of alterative team members available within our wider energy team. We have developed project change controls to reduce the risks associated with change, if it arises during delivery. Our proposed team has been confirmed as available for the duration of the project.
Communication	Poor communication leading to confusion and or poor outcomes	AECOM will arrange weekly catch up calls with the PM and client lead, we will provide meeting minutes and regular client updates to ensure the open flow of information.
Programme	Not meeting the client programme risks including stakeholder engagement, surveys and contractor engagement	AECOM have resourced the project to deliver the required timescales. We plan to deliver all 3 work packages in parallel where possible to reduce programme risk and avail of cost synergies.
Work Package 1 – Building and Development		
Poor stakeholder engagement	Inability to identify the correct stakeholder, lack of response and or very long lead times for surveys	We have identified some of the target buildings already and will begin the stakeholder engagement process immediately to allow the maximum time possible within the programme. We have dedicated Sam to lead this work.
Poor quality data	Stakeholders provide poor quality data (energy, utilities etc.)	AECOM will be reviewing incoming data for quality and score all data. Poor data will not be used and we will use industry recognised data sources in agreement with SDEN to ensure the quality and reliability. Any gaps in data will be highlighted to the client.
Work Package 2 – Heat Network Routing and Design		
Buried services feedback	Response periods for compiling C2 utilities can exceed the allowed time	Our proposed team includes a infrastructure and utilities expert.

	period and impact the critical path.	We will agree the search area as soon as possible to reduce the lead time for searches and information return. We will use a specialist C2 utilities subcontractor to carry out this work. We have allowed for the 5 day response time fee in proposal (compared to the cheapest 20 day fee).
Highways team	Local Highways teams can have poor response times	We will look to engage the highways team in collaborative manner as soon as possible. They will be vital for the route planning with their existing knowledge.
Road closer requirements	Required PAS 128 survey could require significant traffic management	Working with SDEN and the local highways team we will work to reduce the amount of required traffic management.
Local support	District heating is a controversial topic in Sutton	We will look to minimise impact to locals during the project delivery.
Work package 3 - Capital Costs		
Market testing	Contractors unable to price the proposed work or the process could prevent them from tendering the actual works	AECOM will work with the SDEN / Sutton procurement team to ensure they approve of the pricing exercise and that it will not exclude any potential contractor from bidding for future work.
Price accuracy	The required cost accuracy is not achieved	AECOM have included for the QS services and our in-house DH cost expert will manage the development of the cost plan. AECOM have significant expertise of heating network pricing which we will use to ensure price accuracy.

5. Conflict of Interest

AECOM can confirm that we have no know conflict of interest.

Appendix A CVs

[Exempt from disclosure - Regulation 13 Personal Information]

Summary Scores - SDEN Route Proving to Sutton Town Centre

		AECOM					
QUALITY	**Weighting**	**Simon**	**Dave**	**Elizabeth**	**Consensus score**	**Weighted score**	**Comments**
Understanding	5%	4	4	5	5	5	Excellent understanding of requirements, including next steps (ie accessing HNIP funding)
Methodology	25%	3	3	4	4	20	Very good methodology, including detailed plan for engaging with stakeholders.
Quality of Resource	30%	2	3	3	3	18	Good response, including relevant experience on CVs sumitted.
Programme & Risk Register	10%	3	4	5	5	10	Excellent response, including comprehensive risk register. All 3 Work Packages scheduled to start at the same time which gives the best chance of delivery.
Sub-total quality	70%					53	
Price					[redacted]		
Scored price for delivery of 3 work packages	30%						
Cost of conducting surveys for 10% of the route (unscored)							
Total contract value							
Total score							

[redacted]

Recommendation

Appoint AECOM with a total contract value of [redacted]

[redacted]

Signed & dated by [redacted]

29/10/19

Tender report

The services were procured via a mini-competition undertaken by the GLA's Decentralised Energy framework (80814) which was set up and established specifically for the Decentralised Energy Enabling Project (DEEP).

A mini-competition was ran from sub-lot (s) 1.4. The suppliers from the sub-lot (s) were notified of the opportunity to bid for services.Two responded to the invitation to tender which were:

- AECOM
- Buro Happold

The evaluation was undertaken by:

- [redacted] - London Borough of Sutton
- [redacted] - Woodward Energy Consulting Ltd
- [redacted]- Culver Energy Consulting Ltd

Individual scoring was undertaken followed by consensus scoring. The evaluation had the following weightings; 70% quality / 30% price. Following the evaluation AECOM were the highest scoring bidder and appointed.

An inception meeting was undertaken with **AECOM** on the **12th November 2019** at **24 Denmark Road.**

Milestone	**Date**
ITT on procurement portal	04/07/2019
Deadline for suppliers to confirm interest in bidding for services	06/08/2019
Evaluation of bids	07/08/2019-11/10/19
Notification of bid outcome:	28/10/2019
Inception meeting:	12/11/2019
Contract award (including signature of all parties):	To be confirmed

[redacted]
AECOM
Aldgate Tower,
2 Leman Street,
London, E1 8FA
[redacted]
aecom.com

Date: 23rd October 2019

Sent: Via ProContract

Dear [redacted]

Re: Route Proving and Development of a Design and Capital Costs for the Extension of SDEN Heat Network to Sutton Town Centre Ref: DN419630

Contract Award

We have pleasure in informing you that you have been successful in your bid to the London Borough of Sutton dated 6th August 2019 for the above mentioned opportunity, subject to contract.

Contract Documents

The Contract Documents are as follows:

1. Special Conditions for Call-Off
2. Guidance and Instructions (via Procontract)
3. Specification of Requirements and all appendices (via Procontract)
4. Online method statements (Quality) (via Procontract)
5. Price Schedule (Price) (via Procontract)
6. Insurance Indemnity documents as outlined in the Framework Agreement (**to be provided by** "AECOM")

A hard copy of the contract will be sent to you for signature, to be signed and returned to us.

Contract Price

The Contract Price will be as stated in your price Schedule dated 6th August and clarified in the documentation referred to above.

[redacted]

[redacted]

[redacted]

[redacted]

Contract Duration

November 2019 to March 2020

Council Contact

[redacted]
London Borough of Sutton
24 Denmark Road
Carshalton
Surrey
SM5 2JG
[redacted]

Please advise whether you are available for a project initiation meeting on either of the following dates at the London Borough of Sutton, 24 Denmark Road, Carshalton, Surrey, SM5 2JG.

- 11am-12:30pm on Tuesday 5th November 2019
- 3:30pm-5pm on Tuesday 12th November 2019

Yours sincerely

Project Team

SUPPORT LETTER

1. Task Summary

Task ref / title	GLA Sutton_SDEN_Project Management & Commercialisation_01 - LOT 2.3	Name of Project SDEN Project Management and Commercialisation		
Workstream / project codes	DEEP	GLA 80814 – Decentralised Energy Framework		
Type (▯):	e.g. New		Change	▯
Budget:	Existing budget	£51,200	New budget	£96,795
Programme dates	Start date	10th December 2019	Finish date	Current finish date: 30th June 2020 New finish date: 31st March 2021

Change History

Revision	Issue Date	Description	Budget
1	**09/10/20**	**Increase in project budget and extension of end date.**	£96,795

2. Project Description

The London Borough of Sutton has had two recent projects funded through DEEP - "Project Management and Commercialisation" and "Route Proving and Development of a Design and Capital Costs for the Extension of SDEN Heat Network to Sutton Town Centre" (GLA Sutton_SDEN_Extension_01 - LOT 1.4). The study on the extension to Sutton Town Centre has now been completed and the final report provided. The budget allocated to the project was £118,225, and the final spend was £72,630, which left an underspend of £45,595. This funding was originally allocated for PAS surveys, however these were delayed due to the impact of COVID-19, and at this point there is not sufficient value in taking these forward. In order to progress SDEN's phase 2 connections and phase 1 stabilisation it is requested that the £45,595 funding remaining is reallocated to the Project Management and Commercialisation project.

Due to the impact of the COVID-19 pandemic, it is increasingly difficult for the London Borough of Sutton to financially support these important but non-core services. If the work can be funded through DEEP, significant progress could be made on local and wider area network connections during this period, which have been delayed as a result of the pandemic and stakeholders involved with these projects being focused on other priorities. Potential phase 2 expansions include the extension to the Lavenders, and progressing the extension to Sutton Town Centre under the two options of the Public Sector Decarbonisation Scheme and the Green Heat Network Fund.

This change request increases the project budget by £45,595, and extends the end date to March 2021 to enable continued delivery of services to progress the project, including phase 2 connections and stabilisation of Phase 1 operations.

Project - GLA 80814	Original budget	Change	New budget
GLA Sutton_SDEN_Extension_01 - LOT 1.4	£118,225	-£45,595	£72,630
GLA Sutton_SDEN_Project Management & Commercialisation_01 - LOT 2.3	£51,200	+£45,595	£96,795

3. Scope of Task

No change to that set out in project specification.

4. Approach

No change to that set out in project specification.

5. Outputs

Although the overarching deliverable is the ongoing project management/commercialisations services for the scheme, a number of monthly meetings are held to review project progress both in Phase 1 and the expansions planned in Phase 2. Minutes of these meetings can be provided on request.

Agent	Deliverable	Deliverable date	Project Week
WEC Ltd	Progress report on phase 2 expansions and phase 1	31st March 2021	67

6. Budget

Increase of budget from £51,200 to £96,795.

7. Document Verification

Revision	Date	Filename	SDEN DEEP - Project Management Commercialisation - Support Letter - Oct 20		
1	09/10/20	Description	FINAL		
			Prepared by	Checked by	Approved by
		Name	[redacted]	[redacted]	[redacted]
		Signature	[redacted]		
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			

		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			

8. Final GLA Authorisation

Name [redacted]

Signed [redacted]

Date 23/10/2020

Special Conditions for Call-Off

Schedule 6A - Call-Off Contract

Framework Number: GLA80814

Call-Off Contract Number:
GLA Sutton_SDEN_Extension_01 - LOT 1.4

THIS CALL-OFF CONTRACT is made the day of:

BETWEEN:

(1) "the Authority" means The Mayor and Burgesses of The London Borough of Sutton of Civic Offices, St. Nicholas Way, Surrey. SM1 1EA (**"the Authority"**); and

(2) AECOM Ltd, a company registered in England and Wales (Company Registration Number 01846493) whose registered office is at Aldgate Tower, 2 Leman Street, London, United Kingdom, E1 8FA (**"the Service Provider"**).

(3) **THE GREATER LONDON AUTHORITY** whose principal offices are at City Hall, The Queen's Walk, London, SE1 2AA (**"the Contracting Authority"**).

RECITALS:

a. The Contracting Authority and the Service Provider entered into an agreement dated 26/06/2017 which sets out the framework for the Service Provider to provide certain Services to the Contracting Authority or the Authority (**"the Agreement"**).

b. The Authority wishes the Service Provider to provide the specific Services described in this Call-Off Contract pursuant to the terms of the Agreement and this Call-Off Contract and the Service Provider has agreed to provide such Services on those terms and conditions set out in the Call-Off Contract.

c. The Contracting Authority has agreed to fund or part fund the Services being provided to the Authority and shall make some or all the payments on the behalf of the Authority as set out in this Call-Off Contract.

THE PARTIES AGREE THAT:

1. CALL-OFF CONTRACT

1.1 The terms and conditions of the Agreement shall be incorporated into this Call-Off Contract.

1.2 In this Call-Off Contract the words and expressions defined in the Agreement shall, except where the context requires otherwise, have the meanings given in the Agreement. In this Call-Off Contract references to Attachments are, unless otherwise provided, references to attachments of this Call-Off Contract.

2. SERVICES

2.1 The Services to be performed by the Service Provider pursuant to this Call-Off Contract are set out in Attachment 1.

2.2 The Service Provider acknowledges that it has been supplied with sufficient information about the Agreement and the Services to be provided and that it has made all appropriate and necessary enquiries to enable it to perform the Services under this Call-Off Contract. The Service Provider shall neither be entitled to any additional payment nor excused from any obligation or liability under this Call-Off Contract or the Agreement due to any misinterpretation or misunderstanding by the Service Provider of any fact relating to the Services to be provided. The Service Provider shall promptly bring to the attention of the Call-Off Co-ordinator any matter that is not adequately specified or defined in the Call-Off Contract or any other relevant document.

2.3 The timetable for any Services to be provided by the Service Provider and the corresponding Milestones (if any) and Project Plan (if any) are set out in Attachment 1. The Service Provider must provide the Services in respect of this Call-Off Contract in accordance with such timing and the Service Provider must pay liquidated damages in accordance with the Agreement of such an amount as may be specified in Attachment 1. The Service Provider shall be liable for the ongoing costs of providing Services in order to meet a Milestone.

2.4 The Service Provider acknowledges and agrees that as at the commencement date of this Call- Off Contract it does not have an interest in any matter where there is or is reasonably likely to be a conflict of interest with the Services provided to the Authority under this Call-Off Contract.

3. CALL-OFF TERM

This Call-Off Contract commences on the date of this Call-Off Contract or such other date as may be specified in Attachment 1 and subject to Clause 4.2 of the Agreement, shall continue in force for the Call-Off Term stated in Attachment 1 unless terminated earlier in whole or in part in accordance with the Agreement.

4. CHARGES

4.1 Attachment 2 specifies the Charges payable in respect of the Services provided under this Call- Off Contract. The Charges shall not increase during the duration of this Call-Off Contract unless varied in accordance with the Agreement.

4.2 The Service Provider shall invoice the Contracting Authority and provide a copy of the invoice to the Authority in respect of the Charges in accordance with Attachment 2.

4.3 The Service Provider shall submit invoices to the address set out in Attachment 1 or in electronic format as set out in Attachment 1. Each invoice shall contain all information required by the Authority as required in Attachment 1. Invoices shall be clear, concise, accurate, and adequately descriptive to avoid delays in processing subsequent payment.

4.4 In the event of a variation to the Services in accordance with this Call-Off Contract that involves the payment of additional charges to the Service Provider, the Service Provider shall identify these separately on the relevant invoice.

4.5 The Authority shall consider and verify each invoice, which is submitted in accordance with this Clause 4 in a timely manner. If the Authority considers that the Charges claimed by the Service Provider in any invoice have:

4.5.1 been correctly calculated and that such invoice is otherwise correct, the invoice shall be approved and forward to the Contracting Authority together with a completion certificate for payment which shall be made by bank transfer (Bank Automated Clearance System (BACS)) or such other method as the Contracting Authority may choose from time to time within
30 days of receipt of such invoice from the Authority;

4.5.2 not been calculated correctly and/or if the invoice contains any other error or inadequacy, the Authority shall notify the Service Provider. The Parties shall work together to resolve the error or inadequacy. Upon resolution, the Service Provider shall submit a revised invoice to the Authority. The Authority shall keep the Contracting Authority updated at all times.

4.5.3 Except where otherwise provided the Charges shall be inclusive of all costs of staff, facilities, equipment, materials and other expenses whatsoever incurred by the Service Provider in discharging its obligations under the Call-Off Contract

5. CALL-OFF CO-ORDINATOR AND KEY PERSONNEL

The Authority's Call-Off Co-ordinator in respect of this Call-Off Contract is named in Attachment 1 and the Service Provider's Key Personnel in respect of this Call-Off Contract are named in Attachment 2

This Call-Off Contract has been signed by duly authorised representatives of each of the Parties.

SIGNED

For and on behalf of the ~~[*Authority*] London Borough of Sutton~~ Contracting Authority

Signature:

Name: PHILIP GRAHAM

Title: EXEC DIRECTOR, GOOD GROWTH

Date: 22/1/20

SIGNED

For and on behalf of [*the Service Provider*] AECOM Ltd

Signature:

Name: PSOTCLIFFE

Title: DIRECTOR

Date:

SIGNED [Authority] London Borough of Sutton

For and on behalf of ~~the Contracting Authority~~

Signature:

Name: Mary Morrissey

Title: Strategic Director of Environment, Housing & Regeneration

Date: 17 Dec '19

Attachment 1

Services to be provided Timetable

Commencement date: 12th November 2019

Call-Off Term: November 2019 - March 2020

Attach Project Plan - See attached Specification

Expenses
Expenses (if any) that the Service Provider may claim: No expenses are claimable

Address for Invoices
Greater London Authority
Accounts Payable
PO Box 45276
14 Pier Walk
London
SE10 1AJ

Address where invoices shall be sent:
[redacted]@london.gov.uk

Set out information required in each Invoice.

- Framework number GLA80814, call off DN419630
- Description of work being invoiced for
- The net amount for Goods Received to be paid by GLA to a sum of £xxx
- The VAT amount to be paid by London Borough of Sutton to a sum of £xxx

Date/Period for submission of Invoices: On completion of each Work Package, and/or on completion of surveys

Address where invoices shall be sent:
London Borough of Sutton
The Payments Team
3rd Floor Civic Offices,
St Nicholas Way,
Surrey, Sutton, SM1 1EA

Electronic format required (if any) for submission of orders by the Authority and of invoices by the Service Provider:
[redacted]@sutton.gov.uk

Authority Call-Off Co-ordinator

[redacted]
Service Manager
24 Denmark Road
Carshalton
SM3 5JG
[redacted]

Availability of Key Personnel
The Service Provider's Key Personnel must have availability to satisfactorily complete all work by March 2020.

Other information or conditions

1. The limit on liability for uninsured losses will be three times the contract sum.

2. AECOM shall have an obligation to carry out PAS128 QL-B3P GRP surveys to survey 10% of the route and incur up to £55,000 in doing so. However, where AECOM identify, on an open book basis, that in carrying out these surveys the costs for surveying 10% of the route will significantly exceed £55,000 then AECOM will:

- set out the full costs for surveying 10% of the route;
  and
- make a proposal to LBS as to what sections of the proposed network they believe would reasonably be required to be surveyed within the 10% up to the £55,000 fee; and
- provide clear and detailed reasons why the balance making up to the 10% (if any) should not be surveyed.

LBS shall, acting reasonably, consider AECOM's proposals and shall make a determination based on AECOM's proposals.

Attachment 2

5. Charges
As set out in the attached Price Schedule.

6. Key Personnel
The Service Provider's Key Personnel is set out in the attached tender response.

[redacted]
Regional Director, Energy, Sustainable Development Group
AECOM
Aldgate Tower
2 Leman Street - London
[redacted]

7. Proposed sub-contractors (if any)
Name and contact details of proposed sub-contractor(s) and details of any proposed sub-contracted work:

- As set out in the attached tender response.
- A sub-contractor to carry out surveys will be appointed by AECOM during delivery of the contract as required.

8. Proposed completion date
March 2020

Decision to award contract

AECOM was appointed to provide London Borough of Sutton with Route Proving and Development of a Design and Capital Costs for the Extension of SDEN Heat Network to Sutton Town Centre procured with a total contract value of £118,225.

Reasons for Decision:
Through a mini-competition undertaken on the GLA's DEEP Framework, the tender was directed to all 13 providers listed in sub-lot (s) insert 1.4 on the framework and was based on 70% quality and 30% price.

From the tenders submitted the winning bid was from AECOM that received the highest score and fully met the tender specification.

ANNEX 2
Model declaration for conflicts of interest[1]

Project Reference: ERDF 2R15S00019
Project Name: Decentralised Energy Enabling Project (DEEP)
I, the undersigned [redacted] being authorised as a responsible person for the above mentioned ESIF Project, declare I am aware of Article 57 of the Financial Regulation, the Procurement Law Guidance note and the requirements of this Conflicts of Interest guidance note.

For the purposes of this declaration, a conflict of interests exists where the impartial and objective exercise of the functions of a financial actor or other person, is compromised for reasons involving family, emotional life, political or national affinity, economic interest[2] or any other shared interest with a recipient.[3]"

I hereby declare that, to my knowledge, I nor anyone working on the Project has any conflict of interests with regard to the operators who have applied to participate in this procurement procedure or submitted a tender for this procurement, whether as individuals or members of a consortium, or the subcontractors proposed.

To the best of my knowledge and belief, there are no facts or circumstances, past or present, or that could arise in the foreseeable future, which might call into question the independence of project staff in the eyes of any party.

I confirm that if I discover or should it become apparent during the course of the procurement process (including performance of or amendment to the contract) that such a conflict exists or has arisen, I will declare it immediately to the Department and if a conflict of interests is found; I or any staff directly affected will cease to take part in the process and all related activities.

I also confirm that I will keep all matters entrusted to me confidential. Specifically, I agree to hold in trust and confidence any information or documents disclosed to me or discovered by me or prepared by me in the course of or as a result of the evaluation and I agree that it will be used only for the purposes of this evaluation and will not be disclosed to any third party.[4]

Signed (date and place): 28th October 2019 at 24 Denmark Road, Carshalton, SM5 2JG

[redacted]

Function: Opportunity Sutton Service Manager

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[1] "Identifying conflicts of interests in public procurement procedures for structural actions: A practical guide for managers", European Commission European Anti-Fraud Office (OLAF), endorsed 12 November 2013, accessible at: http://www.esfondi.lv/upload/02-kohezijas_fonds/Lielie_projekti/EK_vadl_par_interesu_konflikta_identif_publ_iepirk_EN.pdf (pp 27-28)

[2] Contractual relationship or paid or unpaid consultancy currently applicable.

[3] Including voluntary work, member of a board or directive council.

[4] The declaration is personal and does not have any impact on the requirements under the Grant Funding Agreement for Grant Recipients to retain and make all relevant documents available for audit

ANNEX 2
Model declaration for conflicts of interest[1]

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Project Name: Decentralised Energy Enabling Project (DEEP)
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To the best of my knowledge and belief, there are no facts or circumstances, past or present, or that could arise in the foreseeable future, which might call into question the independence of project staff in the eyes of any party.

I confirm that if I discover or should it become apparent during the course of the procurement process (including performance of or amendment to the contract) that such a conflict exists or has arisen, I will declare it immediately to the Department and if a conflict of interests is found, I or any staff directly affected will cease to take part in the process and all related activities.

I also confirm that I will keep all matters entrusted to me confidential. Specifically, I agree to hold in trust and confidence any information or documents disclosed to me or discovered by me or prepared by me in the course of or as a result of the evaluation and I agree that it will be used only for the purposes of this evaluation and will not be disclosed to any third party.[4]

Signed (date and place): 28th October 2019 [redacted]

Name: [redacted]

Function: Project Director

[1] "Identifying conflicts of interests in public procurement procedures for structural actions: A practical guide for managers", European Commission European Anti-Fraud Office (OLAF), endorsed 12 November 2013, accessible at: http://www.esfondi.lv/upload/02-kohezijas_fonds/Lielie_projekti/EK_vadl_par_interesu_konflikta_identif_publ_iepirk_EN.pdf (pp 27-28)
[2] Contractual relationship or paid or unpaid consultancy currently applicable.
[3] Including voluntary work, member of a board or directive council.
[4] The declaration is personal and does not have any impact on the requirements under the Grant Funding Agreement for Grant Recipients to retain and make all relevant documents available for audit