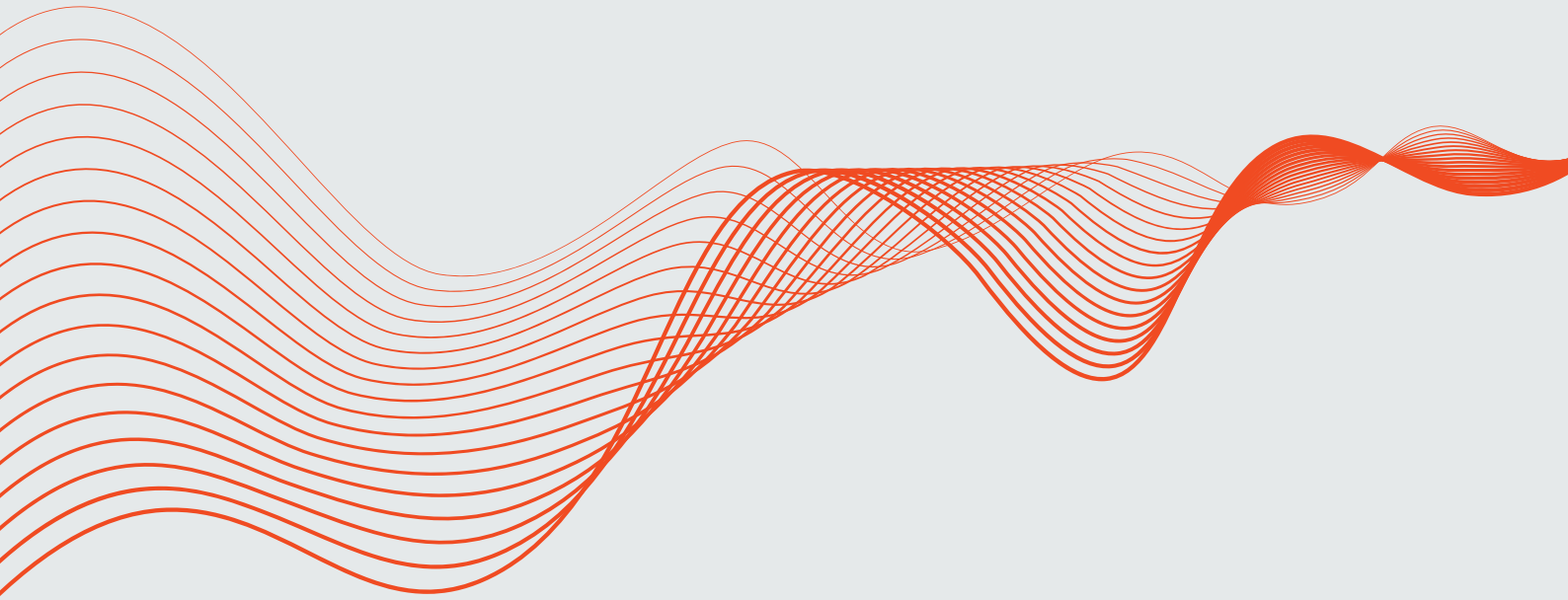
HEAT NETWORKS
INVESTMENT PROJECT

Guidance Note:

Creating a Standardised Due Diligence Set ("SDDS") for Heat Networks



Department for Business, Energy & Industrial Strategy

Triple Point
HEAT NETWORKS
INVESTMENT MANAGEMENT

April 2019

2019

TABLE OF Contents

Background

The Department for Business, Energy and Industrial Strategy ("BEIS") launched the Heat Networks Investment Project ("HNIP") to support the creation of a self-sustaining heat networks market. BEIS subsequently appointed Triple Point Heat Networks Investment Management - a consortium led by Triple Point Investment Management and supported by Aecom, Amberside Advisors, BDO, Ecuity, Gemserv and Lux Nova - to the role of Delivery Partner to implement HNIP.

A critical part of the Delivery Partner's role is to seek to create the right conditions and connections between project sponsors, developers and investors to support market growth. The creation of a standardised due diligence set for heat networks is an important step in this process.

This Guidance Note explains why we have created a standardised due diligence set and sets out the key issues and questions that would typically be included, along with an explanation of the source of the supporting evidence.

WHAT IS A DUE DILIGENCE SET?

Before commercial funders lend to or invest in companies or projects, they carry out due diligence. The aim of due diligence is to provide the lender or investor with a detailed understanding of the company or project and, specifically, to help them identify the key risks to their loan not being repaid as expected or their investment not generating the expected returns (or even being lost).

The type of due diligence that funders carry out depends on the form of funding being provided.

For example:

- corporate lenders focus primarily on the credit quality of the companies they are lending to;
- leasing companies (lessors) look at the credit quality of the companies they are leasing the assets to (lessees) and the likely market value of the assets in the event that the lessees are no longer able to pay the lease payments;
- project finance lenders and investors in projects look at the overall credit quality of the projects they are lending to/investing in and their ability to generate returns. This requires due diligence on, amongst other things:
  - the technical deliverability of the project
  - the commercial and financial robustness of the project, and
  - the credit quality of the companies delivering the project and the project's end customers.

Due diligence may be carried out by funders themselves. This is usually the case for corporate loans and lease finance, where funders have in-house teams that can assess corporate credit and/or asset residual value risk. However, for project finance, it is unusual for funders to have all the skills necessary to carry out the full range of due diligence required. Instead, project finance funders usually appoint due diligence advisers - specialist professional firms with the skills necessary to carry out the due diligence on their behalf. A due diligence set is the output reports from these advisers.

WHY DO WE WANT TO STANDARDISE DUE DILIGENCE?

Heat networks have, to date, been procured under a variety of commercial and financial models, and schemes have not generally been developed with funders' due diligence requirements in mind. This has not been a problem where projects have been publicly funded or funded on corporate balance sheets. However, for the heat networks market to grow in line with the Government's aspirations, third party commercial funding (including project finance) will need to play an increasingly important role in providing the capital to finance new and expanded networks. We believe that a standardised due diligence set will benefit project sponsors and commercial funders in a number of ways:

- it will help project sponsors to understand the general due diligence requirements of funders at an early stage of project development;
- it will enable project sponsors to demonstrate that their projects meet the minimum requirements for funder due diligence, giving project sponsors greater certainty over what is required to achieve 'bankable/ investable' projects;
- it will provide comfort to lenders and investors that projects are being developed with their due diligence requirements in mind;
- over time, it should reduce the costs of preparing/ undertaking project due diligence and improve investor confidence in the sector.

This Standardised Due Diligence Set guidance does not form part of the HNIP application guidance and is not required for an HNIP application. It is aimed at providing heat network sponsors and developers with a better understanding of the type of technical, legal and financial due diligence that project finance lenders and investors typically focus on. Where applicants are seeking to raise third party funding, this guidance may be relevant to understanding the due diligence requirements of lenders and investors, and, thereby, being able to demonstrate as part of their application that they are able to meet those requirements.

The guidance is not intended to be all-encompassing as, by their nature, no two heat networks projects are identical, and lenders and investors may have different appetites for certain project types as well as different sensitivities to certain risks.

Technical

Project finance funders typically appoint a technical professional services firm (technical adviser) to carry out technical due diligence on a project. The technical adviser will review the construction and operational aspects of the project and provide a report to funders detailing their findings. The technical adviser will need to satisfy themselves on a number of issues/questions – the list below is typical for a heat network project.

GENERAL DESIGN

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
Has the project been developed in line with the latest version of the Heat Networks Code of Practice?	A completed compliance checklist relevant to the stage at which the project has reached.
Are all areas of the design developed to a sufficient level of detail to provide the required cost certainty, and de-risk the project delivery? Alternatively, has Design and Build (D&B) contractor offered a firm/fixed price to deliver specified outcomes?	Design drawings, equipment schedules and technical specifications.
Have utility connections been properly considered, notably for electricity import/export and gas, and the extent to which constraints exist?	G59 application (G99 post April '19). Evidence of engagement with the utility provider, with an application for capacity/connection.
Is the design developed in-line with the relevant regulations?	Design drawings, equipment schedules and technical specifications.
Is there an industry-standard energy model which conforms with standard practice and details the anticipated energy flows on at least an hourly basis (this will need to be reconciled with the financial model)?	Energy Model (all main pages to be provided not just model output page). Details on source and quality of data inputs (e.g. half hourly metered/customer gas bills/ benchmarks). List of modelling assumptions.
Have all building connections and corresponding wet system modifications been considered to an appropriate level of detail? Where a private wire network is proposed, have equivalent electrical connection details been developed?	Drawings, schematics and connection specifications, bespoke to each supplied building.
Have network flow and return temperatures been optimally selected accounting for the network and plant performance and the requirements of the buildings connecting into the network?	Report detailing the optimisation of the network flow and return temperature regimes and within dwellings.
What level of de-risking has been carried out on the below ground network for both pipework and cable ducts?	Drawings generated from GPR utility surveys, trial pit results, C2 utility drawings with network route overlaid, route photographs.
Has the design considered operational & commissioning requirements, maintainability, access and egress?	Operations and maintenance strategy bespoke for the project. Design drawings, specifications evidencing that scheme operability has been factored into the design.

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
Are the infrastructure and utilities sized correctly for the anticipated demand and for future growth (these assumptions should be linked to the scenarios in the financial model – it is important that the technical design assumptions align with the investor base case)?	Report on the potential for scheme expansion and the provision for additional capacity within the energy centre (e.g. utilities capacity, plant space) and network.
Has a principle designer been duly appointed under the Construction Design and Management (CDM) Regulations?	Letter of appointment or named authority.
Has a complete and up to date design risk register been produced?	Design risk register up to date and bespoke to the project.
Has an assumptions and constraints register been produced?	Register up to date and bespoke to the project.
Has a fire strategy been developed?	Fire risk assessment/strategy.
What is the commissioning strategy?	A written commissioning strategy, with allowance for seasonal commissioning.
What is the plant replacement and movement strategy?	Consideration on how plant is installed, and eventually replaced at the end of life. Written statement showing the movement of main plant with supplemental drawings.

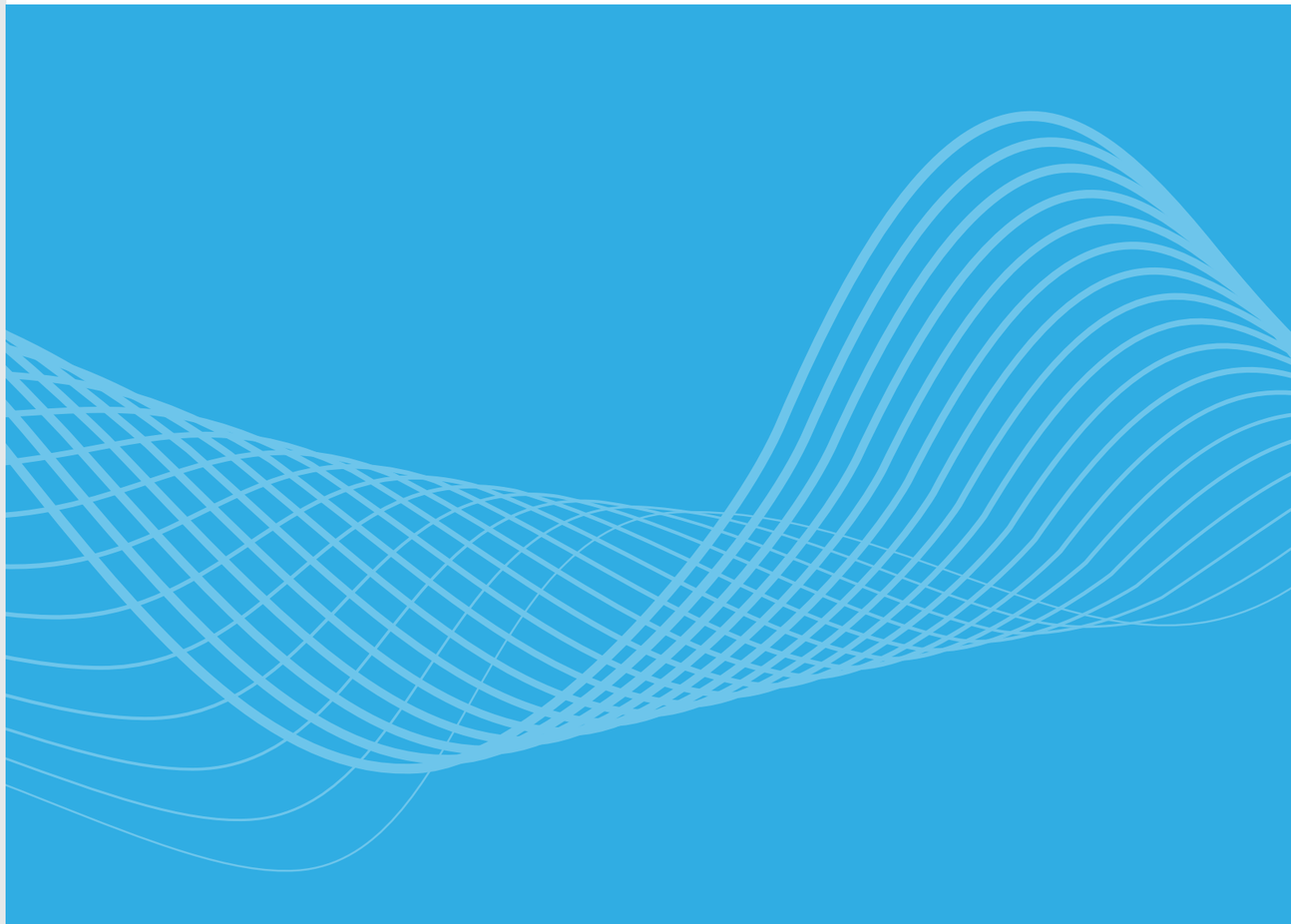
PLANNING, CONSENTS AND PERMITS

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
Is planning permission required for implementation of the project and, if so, has it been granted and what conditions apply to it?	Planning approval highlighting specific conditions and how compliance will be achieved.
Under the energy strategy, within the planning permission, what are the operating parameters for the plant in terms of operating hours, carbon targets, heat dump etc?	Planning - energy statement highlighting any relevant conditions and compliance will be achieved.
Have the necessary Environmental Impact Assessments (EIAs) been carried out?	Relevant environmental statements.
Have noise and air quality assessments been undertaken and implications factored into the design?	Acoustic and air quality report and relevant design information demonstrating how compliance will be achieved.
What utility connections are required for the implementation of the project? Have connection offers been made or agreements been entered into for any import (power, gas, water) and any intended power export (G59 or G99 application)? Have the connection costs been allowed for?	G59 application (G99 post April '19). Quotation from suppliers. Evidence of correspondence with DNO and gas network operators.
Have the necessary highways authority / rail / transport permissions been received for the civil works?	Evidence of correspondence and agreement with the relevant parties.
Where applicable, have permissions from relevant land owners been obtained for the installation of the underground network and what form do the permissions take (for example wayleave or easement)?	Legal documentation detailing type/duration of granted permissions and any attached conditions.
Where ground works are required for abstraction of water or ground source loops, have necessary studies and consents been given?	Hydrogeologist report and relevant Environmental Agency consent (or outline of agreement).
Where local water sources are being utilised have Environment Agency licenses been applied for?	Environmental Agency consent (or outline of agreement).
What other consents and/or permits are required for the works and operations? Have they been secured, or can they be secured within the required timescales?	Relevant consent (or outline agreement).

TECHNOLOGY

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
What technology/technologies are proposed to be utilised in this project?	Technical specifications of the technology/ technologies to be implemented.
At what level of maturity is the technology at? Are there other proven installations of this technology for a similar application?	Where funding for a novel technology, or application of, is being requested examples of any similar applications and any lessons learnt.
Is there a robust supply chain for the chosen technology?	Details on the major suppliers of the required technology, turnover, distribution.
Is there sufficient contractor and Operations and Maintenance (O&M) expertise to deliver and maintain this technology?	O&M Strategy, proposed O&M contractors.
Are the assumptions on the efficiency of the plant and the overall system realistic?	Possible manufacturer data sheets specific to the project operating conditions of the technology.
Can the plant meet the technical requirements, for example required supply temperatures?	Technical specifications.
How has the plant been sized?	Statement of methodology and evidenced in energy model.
Has the technology been optimally sized factoring in its capital costs, expected run hours and carbon savings?	Statement of methodology and evidenced in energy model.
Who is supplying the technology? What is their credit-quality and track record? What warranties are being provided?	Details on the major suppliers of the required technology, turnover and distribution.
Is the plant capable of managing peak loads and back-up? If not, what peak/backup provision is allowed for?	Statement of proposal evidenced in energy model.
What the supply risks and what are the options for managing these?	Statement of proposal.
What is the expected service life of the selected technology at the temperatures and pressures being proposed? Has provision been made for future-proofing of the network through provision to install low carbon technology at a later stage?	Statement of proposal evidenced through energy model and design drawings. Model results for the 'future' low carbon technology and the route map to delivery.

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
Has the material selection of pipework and ancillary equipment been appropriately made factoring in the, temperature, pressure, water quality etc. requirements?	Equipment schedules and technical specifications.
Has a controls philosophy been included? If so, what is it?	Controls philosophy and schematic.
How is the fuel supply being sourced; will it be of sufficient quality to meet plant operation requirements (e.g. water saturation of biomass)?	Statement of proposal.



PRIMARY DISTRIBUTION SYSTEM

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
What are the expected primary losses from the distribution system? What are the contractual obligations on the installer to ensure that the 'as built' losses reflect the anticipated design losses?	Heat loss calculation for the proposed network including all branches up to individual customer connections. Stated Key Performance Indicator (KPI) for network performance that is revised through the design stages and measurable at the time of project completion.
What series of insulation is proposed for the underground network?	Technical specifications.
Is there adequate leak monitoring in place?	Technical specifications.
Have adequate isolation points been allowed for to ensure the network can be adequately maintained?	Network design drawings and technical specifications.
What provision has been made for the future expansion of the network?	Evidence of sizing considerations and future designed provisions for connections.

SECONDARY (BUILDING) DISTRIBUTION SYSTEM

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
What are the customer obligations for water quality on the customer side of the heat exchanger (particularly relevant for bulk supply)?	Technical specification detailing the minimum standards for building connections.
Is the installed or proposed pipework suitable for the pressure, flow rate and temperature requirements when connecting to the district heat network?	Survey details from each existing building connection, noting the suitability of connecting to the network and identifying any remedial works that require to be carried out.
New build only - what are the anticipated secondary losses from the distribution system and are there contractual obligations on the installer to ensure that the as built losses reflect the anticipated design losses?	Heat loss calculation for the proposed building distribution system. Stated KPI for network performance that is revised through the design stages and measurable at the time of project completion.

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
What commissioning of the secondary side systems will be carried out to ensure that the anticipated flow/return temperatures are realised?	Where applicable - commissioning strategy for achieving network design/flow temperatures.
What is the proposed metering and billing strategy, and does it comply with the necessary regulations?	Statement on proposed strategy for metering and billing.
Where Heat Interface Units (HIUs) are being proposed, have the necessary spatial and access requirements been considered?	Statement of design intent. Drawings and technical specifications.

COMMERCIAL

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
Is a fuel contract in place and for what duration?	Contract or heads of terms.
What pricing mechanism will be used to establish retail heat price? Does this use only published and externally verifiable indices? Is the heat price a function of costs as well as comparator pricing and indexation?	Costing methodology and contracts.
How realistic are the electricity price assumptions?	List of assumptions and basis for calculation.
Will there be a private wire agreement? Is there a minimum supply requirement or minimum off-take on the private wire arrangement?	Contract or heads of terms.
What is the cash flow forecast?	Cash flow forecast over a minimum of 25 years.
What guarantees will there be for heat take?	Contract or heads of terms.
Are there multiple off-takers of heat?	Contract or heads of terms.

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
Have the stakeholders been signed up and what is the status of the legal agreements (e.g. heads of terms, full contracts)?	Summary of connection statuses. Contract if in place, or heads of terms.
If not, then what is the risk profile for the project?	Risk profile and amended cash flow.
If there's an additional cost of production due to this short fall, how is this funded?	Costed Risk schedule with mitigation.
What are the minimum and maximum heat take requirements (e.g. take or pay with a ceiling)?	Contract or heads of terms.
What heat supply obligations does the supplier have (e.g. delivery speed obligations, minimum temperature etc.)?	Contract or heads of terms.
Will heat supply agreements be developed for all connections? Will different customers have different terms?	Contract or heads of terms.
Are there any penalties for loss of supply being imposed by any of the takers of heat?	Contract or heads of terms.
What, if any, customer charter will this scheme use? Will it sign up to the Heat Trust?	Contract or heads of terms.
What happens if a heat customer fails to pay (fines, disconnection etc)? Who takes bad debt risk and what assumptions have been made for bad debt?	Contract and risk schedule with mitigation.
What guarantees, if any, will there be to ensure low return temperatures?	Monitoring / maintenance activities, alongside mitigation methodology, which must be in the contact.
Does this project impact on any other contractual arrangements the stakeholders may have?	Identification through Costed Risk register.
Are developer(s), or other significant stakeholders, in procurement for an energy solution which would impact the network, including energy efficiency or other demand reduction measures?	Identification through Costed Risk register.

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
Have planned energy efficiency measures of proposed off-takers been included in the financial model?	Where applicable - commissioning strategy for achieving network design/flow temperatures.
What are realistic downside scenarios – cost overruns, delays, revenue shortfalls e.g. due to demand, voids, bad debts etc? Who takes risk relating to delays to the development build out programme (for new build schemes)?	Statement on proposed strategy for metering and billing.
What contingency costs have been factored in?	Statement of design intent. Drawings and technical specifications.
Does the commercial model include all plant and O&M envisaged from the design?	Capex model / cash flow and basis for pricing.
Does the commercial model factor all of the site activities required to deliver the energy centre and or network?	Capex model.

PROCUREMENT

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
Has the contractor submitted a price? Has it been validated by a Quantity Surveyor (QS)? What is the mark up included by the contractor for overhead and profit, risk premium and contingency?	QS report and tender evaluation alongside capex model.
Did the project go out for competitive tender and can compliance with EU (or relevant) procurement rules be demonstrated?	Procurement statement.
Is there a pre-construction information pack?	Pre-construction information pack.
Who is carrying out the works, and do they have a track record in successfully constructing (and if D&B designing) heat networks?	Tender selection criteria and information on contractor and their sub-contractors.
What is the financial standing/ credit assessment of the Design & Build contractor? Is a guarantor required? What security is being provided?	Audited accounts, parent company guarantee, insurances.
Does the construction subcontractor have the skills and resources available for the size, type and length of project?	Tender selection criteria and information on contractor and their sub-contractors – including prior experience.
What is the construction subcontractor's supply chain strategy? Have key subcontractors and suppliers been identified and have contracts been agreed?	Construction methodology from contractor.
Has the subcontractor had the opportunity to propose any value engineering?	Construction methodology from contractor.
Has subcontractor had the opportunity to clarify the scope of works, and have any exclusions been agreed and confirmed?	Post tender return queries.
Has a principle contractor been duly appointed under the CDM regulations?	Construction methodology from contractor and details of the Project Director, including their qualifications.
Have key performance requirements been incorporated into the construction subcontract (for example, on system performance)?	Construction methodology from contractor and details of the Project Director, including their qualifications.
Has a period of 'soft landings' been allowed for? If so, what is this duration and what input will the contractor have?	Construction contract – and relevant KPIs.

CONSTRUCTION PHASE

Construction Programme

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
Is the construction programme deliverable, how much float is included?	Project specific construction programme.
Is there project-on-project risk – e.g. where the project is reliant on a new development which could be delayed?	Project programme that highlights key milestones outside of the project that must be hit to meet targeted delivery dates. Bilateral heads of terms, where applicable.
What are the critical path items for the construction programme? Can elements of the programme be rescheduled without impacting the critical path?	Project specific construction programme with critical path highlighted.
What are the key construction programme dependencies and are they within the sponsor's/subcontractor's control?	Identification of all key project milestones and their action owner.
Are there interfaces with other parties (such as the operator) and how are these being dealt with (e.g. through an interface agreement)?	External interface management plan/interface agreement.
Have long lead items been factored into the procurement and construction programme?	Project specific construction programme detailing lead in times for major plant items.
What (if any) phasing plans are there? How does this impact the overall project and cashflow?	Phasing plan and cashflow forecast.

Construction Costs

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
Are the construction cost allowances realistic and within industry norms?	Capex and tender evaluation report.
Is the elemental breakdown of costs realistic?	Capex and tender evaluation report.
Is the profile of spend realistic and does it match the work in the ground?	Capex and tender evaluation report.
Are the overheads and profits a reasonable percentage of the project value?	Capex and tender evaluation report.
Are costs indexed and, if so, how?	Capex and tender evaluation report.
Have the project risks been costed? If so, what is this cost and how has it been apportioned?	Costed risk register from contractor.

Construction Risk

OUTPUT	EVIDENCE
Has the risk register been reviewed and mitigations costed?	Costed risk register from contractor.
Have ground condition surveys been carried out? What are the residual risks?	Ground condition and Ground Penetrating Radar (GPR) report. Costed risk register.
Have connection surveys been carried out? What are the residual risks?	Costed risk register from contractor.
Have environmental surveys (air, noise etc) been carried out? What are the residual risks?	Costed risk register from contractor.
Have the project risks been costed? If so, what is this cost and how has it been apportioned?	Costed risk register from contractor.

Commissioning and Handover

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
Has the plant been commissioned? If not, then what is the commissioning and witnessing plan?	Commissioning strategy. Programme allowance for project commissioning.
Has seasonal commissioning been allowed for?	Commissioning strategy. Evidence of allowance for seasonal commissioning.
Has factory acceptance testing (FAT) of major plant and equipment been allowed for?	Detail of FAT's to be carried out and programme allowance.
If phased what provision has been made for commissioning at the end of each build-out/ occupancy phase?	Project programme to show phased commissioning after connection of each phase.
How will the network heat losses be ascertained and checked against the stated design losses?	Strategy for checking performance KPI's.
Has a period of 'soft landings' been allowed for?	Construction contract – allowance for post occupancy evaluation/ soft landings.

OPERATIONS AND POST OCCUPANCY

Operational Costs

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
Are the operational cost allowances realistic and within industry norms?	Opex breakdown, assumptions and benchmarks.
Are the lifecycle/capital replacement costs and programme realistic and within industry norms? How are they being funded?	Opex breakdown, assumptions and benchmarks.
How will the asset be managed to ensure the optimal financial performance and how will the operator be incentivised?	Post occupancy evaluation/ soft landings/ monitoring/ metering strategy.
Who is responsible for business rates and has an adequate provision been made?	Post construction strategy / Delivery vehicle governance and decision-making process.

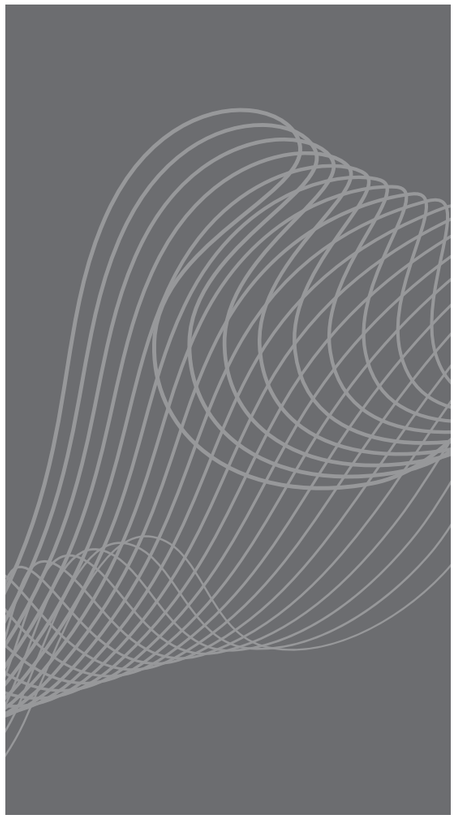
Contracting Parties and Supply Chain

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
Who is going to operate the heat network?	O&M contractor information.
Does the operator have the skills and resources required to operate the size and type of project?	Operator experience and resourcing.
What is the operator's supply chain strategy? Have key subcontractors and suppliers been identified and have contracts been agreed?	O&M contractor information, KPIs etc.

Operations and Maintenance Subcontract and Method Statements

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
Does the operator have suitable method statements for operating the plant and network?	Method statements.
Are the designed performance KPIs and expected Service Level Agreements (SLAs) embodied into the O&M contract? What is the service deduction mechanism for poor performance?	List of KPIs and monitoring/reporting process.
What are the terms for contract termination?	Contract or heads of terms.
How is the complaints procedure managed?	Statement of proposed complaints management procedure.
Are there any hand-back requirements for the plant/ system and are these reflected in the O&M subcontract?	O&M subcontract, outline O&M strategy.
Is there a plant replacement strategy?	O&M contractor information and responsibilities.

Legal /commercial



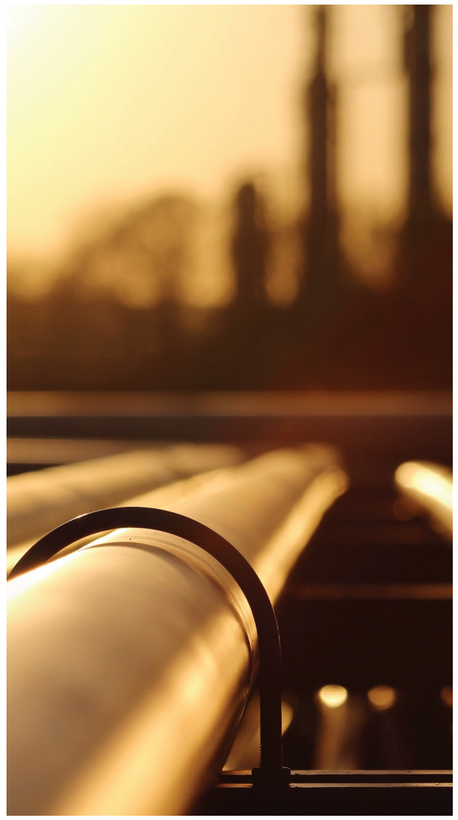
Project finance funders will usually appoint their own legal advisers to carry out due diligence on the project and to draft/negotiate the relevant documents e.g. finance or equity documents. The legal adviser will typically focus on the following issues/questions.

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
Who owns the network assets including generation assets and pipework (e.g. transfer of ownership to the operator versus long term lease)?	Property title documents, leases and easements, any asset transfers or assignment, any use of system arrangements.
What land rights are needed to implement the project and what land rights have already been secured?	Investigation of title covering the entire network.
What is the status of contracts for heat off-take, including anchor loads and additional off-takers?	Evidence of signed contracts or heads of terms.
If the project involves domestic supply connections, have customer supply contracts been drafted compliant with Heat Trust requirements?	Registration with the Heat Trust, sample form of residential supply agreement.
What is the strategy for heat pricing and is all indexation referable and relevant to externally verifiable indices (with allowance for costs of accessing/ publishing these indices as applicable)? What is the contract duration for anchor customers?	Sample form of residential supply agreement and any externally referenced documents produced for the project.
How exposed is the project to commodity price risk – is there a material mismatch between import and export indexation mechanisms?	Contract documents and financial model sensitivities.
What structure is to be used for the procurement of project works, is the applicant undertaking these works itself, is it procuring a third party(ies) to undertake these works or is it granting a concession that includes delivery of these works?	Structuring note, evidence of procurement strategy, evidence of contract procurements or contract awards, evidence of signed contracts.
What structure is to be used for the procurement of operational services (including operation, maintenance, plant replacement, billing, metering, customer services, etc) – is the applicant providing these services itself, is it procuring a third party(ies) to provide these services or it is granting a concession that includes the provision of these services?	Structuring note, evidence of procurement strategy, evidence of contract procurements or contract awards, evidence of signed contracts.

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
Do all works and services contracts (or concession) support a clear understanding of: — the allocation of responsibility as between contractors for undertaking design, build, extension, operation and maintenance of each part of the network and through different phases of the project lifecycle? — the allocation of responsibility for defects in respect of design and build and for failures in respect of operation and maintenance for each part of the network and through different phases of the project lifecycle? — responsibility for obtaining (and risk in not obtaining or delay in obtaining) planning and other consents? — costs risk associated with cost overruns, delays, consenting, phasing and other major risks? — the rights for the counterparties to terminate? — termination liabilities greater than payment for works undertaken and plant/equipment ordered and transferred? — limits of liability?	Forms of contracts being used.
Are all major works and services contracts with strong counterparties and/or supported by performance security (e.g. Parent Company Guarantee (PCG), performance bond, letter of credit, etc as appropriate)?	Evidence of investigation of credit rating and taking of performance security, where appropriate.
What activities are not to be undertaken by contractors?	Evidence of sponsor's own staffing, resourcing strategy and secondment agreements.
What risks associated with design and build, or operation and maintenance, have not been flowed down to contractors?	Forms of contracts being used.

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
If the project involves grant of a concession, does the concessionaire: — provide finance? — require capital contributions from the applicant? — take all risk in design and build? — take all risk in operation and maintenance? — take risk in connections? — take all volume/demand risk? — take customer payment default risk? — agree to register the scheme with the Heat Trust and at least meet Heat Trust standards?	Forms of concession contract(s) being used.
Where the project involves the purchase of heat from any third-party heat supplier(s): — what is the status of negotiations for heat supply? — does the arrangement address responsibility for undertaking any works of connection and the costs of those works? — does the arrangement require any of the works associated with connection to be undertaken only during heat production plant down-time? — does the arrangement include any compensation payable by either party to the other for delays associated with connection? — does the arrangement impose any take-or-pay obligation on the applicant? — does the arrangement impose any firm volume delivery commitments on the supplier? — how is price for heat (and any other services) set and how is it adjusted?	Evidence of signed contracts or heads of terms, depending on stage of project.
How is the issue of supplier of last resort being addressed?	Structuring diagram, relevant contracts giving effect to supplier of last resort.
What funding has already been secured and how is this being or to be provided to the project, on what terms and does that require security to be taken over shares in an Special Purpose Vehicle (SPV), project assets or revenues?	Copies of existing funding agreements and security documentation.
What is the applicant's strategy to ensure compliance with State Aid rules and is this supported by an appropriate legal opinion?	Legal opinion.

Financial model



Project finance funders typically require a detailed financial model to be produced, showing the cashflows, tax calculations and financial statements over the lifetime of the project. Funders will use the financial model to test the financial robustness of the project to various downside sensitivities – for example, construction delays, an increase in costs and/or a reduction in revenue versus the base case assumptions.

Funders will usually require that the financial model go through an external model audit. The model audit is typically completed close to financial close, once the project contracts, financing agreements and financial model are complete in all material respects.

The purpose of the model audit is to provide funders with reassurance that;

- the model is working as required; that there are no material errors in the calculations,
- the financial aspects of the project contracts are accurately reflected in the model,
- the tax and accounting assumptions are appropriate, and
- the outputs from the model are accurate and reflect the project contracts.

A more detailed description of the model audit outputs is set out below.

ISSUE/QUESTION	EVIDENCE/INFORMATION SOURCE
The model is logically constructed, internally consistent, and materially arithmetically correct such that the results are reliable, accurate, complete and consistent with the assumptions contained in the model.	The model auditor will check the model formulae, including using specialist model audit software.
The model materially achieves its objective of generating statements of profit or loss, cash flow and balance sheet projections for the project on the basis of the operational, financial and economic assumptions set out in the base case.	The model auditor will check that the model generates the financial statements correctly based on the model inputs and assumptions.
The model reflects the definitions stated in the legal agreements, including the funding agreements; the model reflects the interest calculations, repayment profile, reserve account balances, operational debt cover ratios and that any forecast ratio breaches will be adequately reported.	The model auditor will review the funding agreements and check that the model reflects the funding terms accurately. This will typically take place once the funding agreements have been finalised.
The model's costs, revenue, factual, technical and other assumptions are materially consistent with the relevant financial and contractual provisions in the project and finance documents (these will vary from project to project).	The model auditor will review the project contracts and check that the model reflects the financial and contractual provisions accurately. This will typically take place once the project contracts have been finalised.
The accounting assumptions within the model are materially consistent with UK Generally Accepted Accounting Principles (GAAP) / International Financial Reporting Standards (IFRS).	The model auditor will confirm this.
The tax assumptions and outputs are materially consistent with current (and foreseen changes to) UK tax legislation (including VAT and VAT cashflows and timing thereof) and the tax treatment in the model is consistent with the accounting treatment in the model.	The model auditor will confirm this.
The model produces consistent and meaningful results on the agreed funder sensitivities, to ensure that changes to model forecasts accurately reflect changes to input data.	The model auditor will check and confirm the sensitivities.
The calculations of financing outputs such as internal rates of return have been calculated in accordance with the Finance and Equity Documents.	The model auditor will review the funding agreements and check that the model reflects the equity and funding agreements accurately. This will typically take place once the funding agreements have been finalised.

Further information

To register for updates from Triple Point Heat Networks Investment Management and to join the HNIP mailing list contact enquires@tp-heatnetworks.org

HNIP main scheme information

https://www.gov.uk/government/publications/heat-networks-investment-project-hnip-scheme-overview

Throughout the main scheme, Triple Point Heat Networks Investments Management will be hosting a series of stakeholder events and application workshops across England and Wales. The Delivery Partner would also be interested in attending and speaking at relevant events, to register your interest in one of our events or if you are hosting your own event contact Events.Ecuity@tp-heatnetworks.org to discuss these in more detail.

BEIS guidance and scheme background information
https://www.gov.uk/guidance/heat-networks-overview

HNDU support
https://www.gov.uk/guidance/heat-networks-delivery-unit

Heat Networks Delivery Unit
hndu@beis.gov.uk

BEIS Heat Networks Team
heatnetworks@beis.gov.uk

Triple Point Heat Networks Investment Management
enquiries@tp-heatnetworks.org

HEAT NETWORKS
INVESTMENT PROJECT

1 King William Street | London | EC4N 7AF