

## **CEO DECISION – CD169**

### **Title: Data Centre Waste Heat Network**

#### **Executive summary**

The Mayor's London Environment Strategy sets out ambitious policies to mitigate climate change impacts and move towards zero-carbon and to complement this, the GLA has launched a Local Energy Accelerator (LEA) Fund, which includes funding to support the planning and delivery of heat network projects.

Data centres are a major user of energy and generator of surplus heat, offering the potential to provide cost-effective, sustainable energy at significant scale. The heat generated by the data centres can potentially be captured and distributed, through a local decentralised network, to new developments and major energy users like the Central Middlesex Hospital. Since the Chair of the Board approved an application to the LEA Fund in June 2021, and delegated authority to the CEO to accept and commit the funding, OPDC has secured £315,000 of funding to test the viability and feasibility of an area wide low carbon heat network. OPDC has entered into a funding agreement with the GLA which includes provision for the GLA to pay OPDC's appointed consultant team directly; no funds will therefore be received by OPDC.

This CD seeks approval for OPDC to procure and enter into a contract with the appointed consultant team, alongside the GLA, to deliver the viability and feasibility study and an outline business case.

#### **Decision**

That the Chief Executive Officer approves:

- OPDC entering into a contract, as the 'contracting authority', alongside the GLA, to deliver the viability and feasibility study for an area wide low carbon heat network, fully funded by the Local Energy Accelerator Fund

#### **Chief Executive Officer**

I do not have any disclosable interest in the proposed Decision. It is consistent with OPDC's priorities and has my approval.

**Signature:**



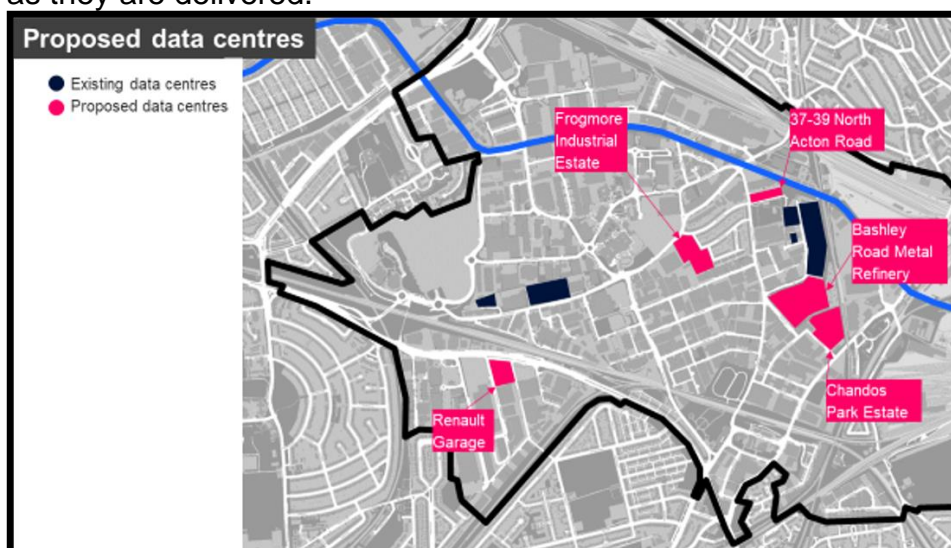
**Date:** 15 September 2021

## PART 1: NON-CONFIDENTIAL FACTS AND ADVICE

### 1 Background and context

#### *Background*

- 1.1 The Mayor's London's Environment Strategy sets out a commitment to tackle climate change and make London a net zero-carbon city. Decarbonising heat generation is one of the most challenging components of the strategy. As one of the Mayor's delivery bodies, OPDC is expected to contribute to the strategy.
- 1.2 OPDC has five existing data centres and five applications for new data centres at different stages of the planning process. These produce significant waste heat that can potentially be used to provide low carbon energy, at scale, for use across the area; for example, they could help heat buildings in the Park Royal industrial estate, the Central Middlesex Hospital and all new homes across the OPDC area as they are delivered.



- 1.3 The technology is novel in London, where heat from data centres has not been used to supply residential and non-residential development, but it has been adopted in other parts of Europe, including Dublin.
- 1.4 A data centre heat recovery pre-feasibility study was undertaken earlier this year to investigate heat offtake potential and to engage with planning applicants (given that multiple data centre planning applications are now in the planning process). The study concluded that waste heat from the data centres has the potential to meet and exceed all future heat demands of new development in the Western Lands and North Acton sites in the OPDC area. If a scheme can be delivered commercially, it could supply all the Western Land heat demand as well as part of the Park Royal estate.
- 1.5 To take advantage of the live planning applications, work needs to start as soon as possible on a detailed feasibility study. This includes engaging with:
  - The developers of the Frogmore Road Data Centre, with a view to potentially supplying heat to the NHS, which is less than 500m from the proposed data centre.
  - The Chandos Road and Bashley Road data centres, with a view to providing heat to the Western Lands area and North Acton.

### *Procurement approach*

- 1.6 The GLA LEA programme provides expertise and support to organisations to develop clean and locally generated energy projects. The GLA have set up the Decentralised Energy Enabling Project (DEEP) framework to provide consultancy services to grant recipients. In July 2021, OPDC secured £315,000 from the LEA Fund to progress the technical feasibility, financial viability and outline business case for a heat network using heat from data centres.
- 1.7 The LEA has a dedicated Programme Delivery Unit that will support OPDC to engage a consultancy team to deliver the viability and feasibility work using the competitively procured DEEP framework.
- 1.8 OPDC has entered into a funding agreement with the GLA. The GLA support – as set out in the funding agreement is defined as the funding paid by the GLA to the framework consultant for services that benefit the recipient (OPDC); the total support agreed is £315,000.
- 1.9 Whilst OPDC will appoint and hold the contract with the consultant and manage and be responsible for the outputs produced, all invoices will be paid by the GLA up to £315,000 and no money shall be directly received by OPDC. The standard TfL contract will be used, and the consultant will be appointed from the DEEP/LEA framework through a competitive procurement process managed by TfL Procurement, in line with OPDC's Contracts & Funding Code. The project will be a fixed price contract that will not allow cost overruns. If further funding is required, a new CD will be sought.
- 1.10 Procurement will start in September and the target is to appoint a consultant by the end of October. We anticipate phase 1 of the project will take about four months to complete. Phase 2 will be commissioned at the end of this period if the outcomes is positive and will take about six months to complete. If successful, OPDC will procure a development partner to deliver the project.

## **2. The proposal and how it will be delivered**

- 2.1 OPDC has been approached by a major utility company which has identified an opportunity for a joint funding bid for Ofgem's Strategic Innovation Fund (SIF), which was launched on the 31 August 2021. Ofgem has announced a £450 million fund for the development of innovative heat networks and other zero-carbon transition projects. If a joint bid is made and is successful, the LEA scope would change. OPDC is currently exploring this opportunity and would submit a new approval were there a change in strategy. In addition to SIF funding, OPDC will also be exploring other funding options, which may influence phases 2 and 3 of the project
- 2.2 The project seeks to utilise waste heat from data centres to provide existing and new development with zero carbon heat. The scope of works includes development of a detailed feasibility study and outline business case to test whether the project is deliverable. If the study demonstrates that the project is deliverable, further work will be commissioned subject to a separate Board approval to secure funding and to deliver the project.

- 2.3 A team of consultants with both engineering and commercial/financial capability will be procured. The consultants will investigate all the technical and financial challenges and at the same time start early engagement with potential delivery partners and investors/funders to understand how best to finance and deliver the project.
- 2.4 The contract will cover three inter-related workstreams split across three phases, but OPDC will reserve the right to terminate the contract on completion of each phase if the Board does not approve subsequent phases of work:
- Phase 1: outline feasibility and viability study leading to Board approval and GLA approval to progress
  - Phase 2: detailed business and delivery plan again leading to Board and GLA approval to progress
  - Phase 3: secure funding and procure a development partner to deliver the project.
- 2.5 Phase 1 outline feasibility tasks:
- Techno-economic modelling of heat off-take from the data centres to supply the hospital, Western Lands and North Acton developments including Oaklands and other recently delivered projects that have a planning obligation to connect to a heat network if and when available.
  - Key stakeholder liaison with data centres and existing residential, and non-industrial developments, to secure support in principle.
  - Stakeholder engagement with new developments that are currently in planning (either pre-application or planning application).
  - Development of a commercial and financial model.
  - Early engagement and soft market testing of heat network developers and operators to assess their interest both in funding and operating the scheme.
  - Detailed project development.
- 2.6 Phase 2: detailed business and delivery plan. If phase 1 output are approved by the Board the consultants will continue to phase 2, which includes:
- Detailed financial models
  - Funding proposals
  - Technical design
  - Commercial, legal and governance options,
  - An outline business case.
- 2.7 Phase 3: If phases 1 and 2 demonstrate that the project is deliverable, further work will be commissioned subject to a separate Board approval to secure funding and to deliver the project. This will include:
- Fundraising to cover delivery and CAPEX costs.
  - Procurement of a project partner.

- Procurement of a contractors to deliver the project in partnership with the project partner.

### **3. Objectives and expected outcomes**

- 3.1 The expected outcome is confirmation of the viability and feasibility of an area-wide low carbon heat network. The overarching objective of this project is to support the aspiration to create a world-leading zero carbon development by realising opportunities to supply zero/low carbon heat and hot water and (potentially) cooling to new and existing developments in the Old Oak and Park Royal area.
- 3.2 The project outputs include:
- An outline business case
  - A delivery plan
  - This will lead to further work to secure funding and a development partner to deliver the project

### **4. Strategic fit**

- 4.1 OPDC is committed to delivering high quality and low carbon development and supporting the growth and intensification of Park Royal as set out in: OPDC's 2021-2023 Management Plan, London Plan policies SI2 and SI3, which seek to minimise greenhouse gas emissions and deliver renewable, clean energy infrastructure; the London Environment Strategy; and OPDC's Local Plan, policies EU9 and EU10.
- 4.2 The development of a heat network will help support those objectives by delivering cost-effective, sustainable energy from the surplus heat created by data centres in the area.
- 4.3 In addition, the local generation of clean energy will help reduce air pollution by replacing fossil fuel-based energy with clean energy systems.

### **5. Project governance and assurance**

- 5.1 OPDC's Projects Director will act as the Senior Responsible Officer (SRO) and will oversee the management of the project. They will also be responsible for providing the Senior Management Team (SMT) with regular updates and request steers where necessary to support the progression of the project.
- 5.2 OPDC's Environment and Sustainability Officer will be the Project Lead and will manage the day-to-day activities of the project, along with the support of a Project Support Officer.
- 5.3 Officers will also ensure that the progression of Stages within this commission are first approved by the OPDC Board, provided assurance on its feasibility is suitably demonstrated.
- 5.4 The project is supported by the Project Delivery Unit for the LEA programme who will provide project management resources. The GLA will have an oversight role.

## *Risks and issues*

- 5.5 All relevant risks associated with this project are captured in the below risk table. Risks and issues will be monitored on a separate risk register and issues log, which will be communicated with the SRO on a weekly basis.

Risk description	Inherent Score	Mitigations	Target Score
Engagement with data centres and developers fails to attract interest in the development of a heat network	Likelihood: 3 Impact: 5 Total: 15	To engage data centres and thoroughly developers and create an attractive proposition and to secure their support through S106 agreements. If this fails, Phase 2 will be abandoned.	Likelihood: 2 Impact: 3 Total: 6
Engagement with the Central Middx Hospital, Oaklands and other development fails to attract their interest in connecting to a heat network	Likelihood: 3 Impact: 5 Total: 15	To engage with development thoroughly partners to create an attractive proposition and to secure their support through written agreement. If this fails, the project will be delayed, and Phase 2 may have to be abandoned.	Likelihood: 2 Impact: 3 Total: 6
Failure to secure funding to support the CAPEX to deliver the project	Likelihood: 3 Impact: 5 Total: 15	There are several funding opportunities including contributions from data centre developers through S106, grant funding from BEIS, Green finance from Private investors. Failure to secure funding will result in Phase 2 being abandoned.	Likelihood: 2 Impact: 3 Total: 6
Failure to secure a delivery partner. OPDC is not able to deliver the project itself and will need an ESCO/IDNO to support the project. The project is innovative, and it may prove hard to secure a partner.	Likelihood: 3 Impact: 5 Total: 15	The project will engage early in the process with potential development partners to gauge their interest and to ensure we understand the terms on which they would be prepared to get involved. If we cannot secure interest, Phase 2 may have to be abandoned.	Likelihood: 2 Impact: 3 Total: 6
The scope and budget may creep during this phase of the project	Likelihood: 3 Impact: 3 Total: 9	Arrange weekly phone calls and fortnightly review meetings with consultants. Set aside contingency to cover any unforeseen costs.	Likelihood: 2 Impact: 2 Total: 4

## **6. Equality comments**

- 6.1 OPDC must have 'due regard' to the need to eliminate unlawful discrimination, harassment and victimisation as well as to the need to advance equality of

opportunity and foster good relations between people who share a protected characteristic and those who do not.<sup>1</sup>

- 6.2 The procurement of this project will be undertaken using the standard TfL process, which factors in the necessary requirements to ensure that all bidders are given equal opportunity to be successful in the commission.
- 6.3 Further, all bidders will be selected from the DEEP frameworks and have been vetted through the selection process to ensure they comply with equality requirements.
- 6.4 The consultants will be asked to do everything possible to ensure there is a diversity within the consultant team.
- 6.5 Consultants will be asked, as part of their bid, how they can support social value within the Old Oak and Park Royal area.
- 6.6 We do not believe that there are any direct adverse impacts. This programme will deliver environmental benefits like reduced air and noise pollution if successful that will benefit local people and workers as well as the wider London environment.

## **7. Other considerations**

### *Communications and engagement*

- 7.1 The consultants will be required to provide a communication plan, with the support of the OPDC Comms team, to determine who they will be engaging with and in what forum, in line with standard procedure.
- 7.2 Where necessary, stakeholder engagement will be supported by OPDC's Comms team to help ensure that the appropriate stakeholders are present and are being communicated to effectively.

### *Sustainability*

- 7.3 Sustainability is the core objective of this project. The outcomes of this work will support the Mayor's sustainability objectives and contribute towards London's zero carbon emissions target as set in the London Plan.

### *Data protection*

- 7.4 OPDC will ensure GDPR compliance is maintained so that all potential personal data is collected in line with national regulations.

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<sup>1</sup> This involves having due regard to: the need to remove or minimise any disadvantage suffered by those who share a protected characteristic or one that is connected to that characteristic; taking steps to meet the different needs of such people; and encouraging them to participate in public life or in any other activity where their participation is disproportionately low. The protected characteristics and groups are: age, disability, gender reassignment, pregnancy and maternity, race, gender, religion or belief, sexual orientation and marriage/ civil partnership status. Compliance with the Equality Act may involve treating people with a protected characteristic more favourably than those without the characteristic. The duty must be exercised with an open mind and at the time a Decision is taken in the exercise of the OPDC's functions.

## **8. Conflicts of interest**

- 8.1 No one involved in the preparation or clearance of this Form, or its substantive proposal, has any conflict of interest.

## **9. Financial comments**

- 9.1 The budgetary impact on OPDC of this work will be nil. The expenditure of up to £315,000 on the consultancy services outlined in section 2 will be grant funded by GLA's LEA fund, which will settle the net value of all invoices (properly drawn up according to terms stipulated in the briefing pack "Decentralised Energy (DE) Framework (for LEA and non-LEA funded services) Reference Number: GLA80814" (p. 55). OPDC – being the 'beneficiary organisation' (i.e. the contracting authority) – will be liable to settle the input VAT, which, being fully recoverable, will have no budget impact provided the process is followed correctly.
- 9.2 Further expenditure and contract variations are subject to the Corporation's decision-making process.

## **10. Legal comments**

- 10.1 The report above indicates that the decision requested of the Chief Executive falls with the OPDC's object of securing the regeneration of the Old Oak and Park Royal area and its powers to do anything it considers appropriate for the purpose of its objects or purposes incidental to those purposes, as set out in the Localism Act 2011.
- 10.2 In taking the decisions requested, the Chief Executive must have due regard to the Public Sector Equality Duty, namely the need to eliminate discrimination, harassment, victimisation and any other conduct prohibited by the Equality Act 2010, and to advance equality of opportunity between persons who share a relevant protected characteristic (race, disability, gender, age, sexual orientation, religion or belief, pregnancy and maternity and gender reassignment) and persons who do not share it and foster good relations between persons who share a relevant protected characteristic and persons who do not share it (section 149 of the Equality Act 2010). To this end, the Chief Executive should have particular regard to section 6 (above) of this report.
- 10.3 Officers have indicated in paragraph 1.9 of this report that the services have been procured in accordance with the OPDC's Contracts and Funding Code and the Public Contracts Regulations 2016. Officers must ensure appropriate documentation is put in place and executed in relation to the appointment before the services are provided.

## **11. Summary timeline**

Activity	Date
Procurement of contract /Grant award	September-October 2021
Announcement of...?	October 2021



Delivery start date	October 2021
Outline feasibility study complete	March 2022
Detailed business case complete	September 2022
Procurement of Development Partner	February 2023

## Background documents

June 2021 CEO report:

<https://www.london.gov.uk/moderngovopdc/documents/s59668/Item%2006%20-%20CEO%20Report.pdf>

London Plan -

[https://www.london.gov.uk/sites/default/files/the\\_london\\_plan\\_2021.pdf](https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf)

London Environment Strategy - <https://www.london.gov.uk/what-we-do/environment/london-environment-strategy>

### PUBLIC ACCESS TO INFORMATION

Information in this Form (Part 1) is subject to the Freedom of Information Act 2000 (FoIA). OPDC aims to publish the Form within three working days of approval.

If immediate publication risks compromising the implementation of the Decision (for example, impacting a procurement process), it can be deferred until a specific date (when it will be published). Deferral periods are kept to the shortest length strictly necessary.

#### Part 1 – Deferral

Publication of this Part 1 is to be deferred: **No**

The deferral is until: N/A

This is because: N/A

#### Part 2 – Confidential information

Only the facts or advice that would be exempt from disclosure under FoIA should be included in or attached to any separate Part 2 Form, together with the rationale for withholding the information at this time.

There is a separate and confidential Part 2 Form: **No**

### DECLARATIONS

**Drafting officer:** Dan Epstein has drafted this Form in accordance with OPDC procedures, including for handling conflicts of interests, and confirm that:



**Advice:** The Finance and Legal teams have commented on the proposal.




## CONFIRMATIONS

**Section 106 funding:** This use of S106 to fund the expenditure proposal was approved via a Section 106 spend proposal form on N/A

**SMT review:** This Decision was circulated to the **Senior Management Team** for review on

### Chief Finance Officer

Financial and legal implications have been appropriately considered in the preparation of this Form.

**Signature:** 

**Date:** 15 September 2021

### Director of Projects, Davena Wilson

I do not have any disclosable interest in the proposed Decision. It is consistent with OPDC's priorities and can be referred to the CEO for final approval.

**Signature:** 

**Date:** 14/09/2021