LONDON FIRE BRIGADE

LFC 25-005

Salix Public Sector De-Carbonisation Scheme 4 (PSDS) – De-carbonising Ten Fire Stations

Report to:	Date:
Investment & Finance Board	19 December 2024
Commissioner's Board	8 January 2025
Deputy Mayor's Fire Board	21 January 2025

Report by:

Paul Cook – Head of Carbon Reduction

Report classification:
For decision

For publication

Values met

Service
Teamwork
Equity
Courage
Learning

PART ONE
Non-confidential facts and advice to the decision-maker

Executive Summary

This report provides an overview of the London Fire Brigade (LFB) Salix funding bid. The LFB Property department have applied for The Public Sector Decarbonisation Scheme (PSDS) 4A Grant Funding in order to undertake works to decarbonise ten fire stations. The PSDS supports the aim of reducing emissions from public sector buildings by 75% by 2037, compared to a 2017 baseline, as set out in the 2021 LFB carbon net zero strategy and in accordance with programme eight of 2023 Community Risk Management Plan (CRMP). This funding also supports the Greater London Authority (GLA) target to functional bodies to lead by example and become carbon net zero by 2030.

Salix funding is a grant and therefore does not have to be paid back, the match funding provided by London Fire Commissioner (LFC) will be secured from 20-year capital plan which has a budget allocated from 2026/27 for carbon reduction works. This removes the need for finding alternative borrowing sources. The project milestones must be achieved within the specified timeframes. The timeframe for spending this grant would be a two-year project beginning in 2025 and due for completion in 2027.

Recommended decisions

For the London Fire Commissioner (LFC)
The London Fire Commissioner approves/agrees:

1. To provide and allocate the LFC contribution costs required from the LFB capital programme, to benefit carbon reduction projects at ten LFC fire stations.
2. To adhere to the terms and conditions of the Salix 4A grant fund. (as outlined in Appendix 1, Appendix 2 and Appendix 3).
3. The LFC agrees to delegate all procurement activity for the programme listed in Part 2 to the Assistant Director of Property and Technical Support Services (TSS) once capital expenditure has been approved.

1. Introduction and Background

1.1. Salix PSDS 4A funding is awarded to public sector organisations to de-carbonise heating systems which additionally includes fabric improvements and de-carbonising by removing all fossil fuel powered boiler plants with electric heat pumps. Applicants are expected to provide a minimum of 12% of the total project cost.

1.2. The funding is now divided into soft sector caps and LFC are within the **other** group alongside other emergency services.

1.3. LFB were successful in applying for Salix PSDS 3C in 2024 and have received grant funding under 'LFC 23-111Y Salix PSDS 3C funding'. This project (Salix PSDS 4A)

will run concurrently with PSDS 3C however each project will be in different phase with 4A in design whilst 3C will be delivery.

1.4. The Greater London Authority (GLA) via PUMA (environment action group pre-meeting) and Environment Action Group (ENVIG) have been instrumental in ensuring all functional bodies apply for grant funding to assist with finances towards achieving carbon net zero by 2030.

1.5. The applications LFB have submitted are for ten fire stations that have end of life heating boilers and will benefit from the inclusion of fabric improvement.

1.6. One of the ten fire stations applied for is Mitcham Fire Station which is a Public Finance Initiative (PFI) site. LFB property department has carried out extensive engagement with the PFI contractor to ensure the HDP's are of mutual benefit, by providing low carbon technologies which are 300% efficient, require less annual maintenance and do not pollute the environment with carbon emissions. These advantages would meet the requirements of the service level agreements within the PFI contract. The project at this site will be managed by the PFI contractor and will be administered differently whilst continuing to follow the procurement regulations. This requirement will take place using a contract variation which will be put into place following a successful offer of grant funding.

1.7. The ten LFB fire stations were selected primarily due to the end-of-life requirements of existing gas-powered boilers as the primary carbon emission plant. Additionally, the project must be begun and completed within 24 months and currently the staffing resourcing meets this requirement.

1.8. All ten sites will have an Air Source Heat Pump (ASHP), hybrid boiler system installed and will benefit from cavity wall insulation, smart energy use (Building Management System (BMS)) strategy and draught prevention proofing, all of which are designed to increase thermal efficiency and reduce the carbon emissions to zero (which is in line with the GLA target of carbon net zero by 2030). At most of the sites listed cavity wall insulation is in place.

Sites included in the application and works required.

Station	Heating	BMS	Additional measures included
Biggin Hill	ASHP	Yes	Yes
Clapham	ASHP	Yes	Yes
Deptford	ASHP	Yes	Yes
Hendon	ASHP	Yes	Yes
Holloway	ASHP	Yes	Yes
Ruislip	ASHP	Yes	Yes
Tooting	ASHP	Yes	Yes
Wandsworth	ASHP	Yes	Yes
Wallington	ASHP	Yes	Yes
Mitcham	ASHP	No	Yes

1.9 Where required LFB have already engaged with the Distribution Network Operator (DNO) for an electrical power upgrade. The engagement is preliminary and will require making formal once we have confirmation of successful applications.

1.10 The grant is provided to LFC and requires regular reporting directly back to Salix via a weekly telephone call and a monthly submission of project timelines and invoice submissions. This paper seeks the required governance that Salix makes as a condition of offering the grant to LFC.

1.11 This heat de-carbonisation project would form part of the LFC adoption of programme eight of the CRMP.

1.12 LFB have carried out and one completed Salix PSDS grant funded heat de-carbonisation project PSDS 3B (LFC 0776) and the lessons learned from this project will be adopted into this project to ensure soft landings, completion on time and successful completion.

2. Financial consideration

2.1 The spend and grant funding for each site is detailed in part 2 of this report.

2.2 LFC has contracted Ricardo Energy consulting to prepare and assist LFB with submission of Salix PSDS 4A bid. They were chosen because Ricardo Energy are one of the organisations that carry out technical audits of Salix PSDS applications and have previously provided insight and a very high technical knowledge within depth insight. The contract was awarded using a procurement led framework award.

2.3 The finance from LFC is considered a funding match as Salix funding finances the gap between replacing like for like (gas boilers) with electrically powered heat pump technology. The additional finance for increasing the insulation is as part of the lower heat output of heat pump technology. The LFC funding portion will be funded from the LFB forward capital programme utilising funding already included carbon reduction projects.

2.4 The ten properties will benefit from lower utility use, the buildings will be more efficient and require less energy to heat. In addition, heat pump technology is three times more efficient than a gas-powered heating system. Upon completion of each heat decarbonisation plan (HDP per station) the gas metered supply will be capped and this will provide a reduction in utilities bills to offset the increased cost of electricity per kWH. Presently electricity is 4 times more expensive than gas, however removal will mean the gas standing charge (approximately £2,500 per annum) will cease. The move away from scope one (Fossil fuel) emissions to scope two (renewable energy) emissions will result in a higher cost due to the comparison between gas and electricity.

3. Delivery

3.1 Salix will carry out a feasibility study and check that the project can be delivered within the timeframe. Salix will then appoint a technical manager to ensure the project meets the specifications and delivers the carbon reduction targets.

3.2 The Heat De-Carbonisation Plans (HDP) will require a full technical design to be carried out to take the design to the Royal Institute of Building Surveyors (RIBA) to design stage four. This is the stage immediately prior to beginning on site. LFC will contract and employ a design team/organisation to submit full and final designs to RIBA stage 4. This will be administered using a framework approved by LFC.

3.3 Following development of the scheme design by the appointed consultant, the procurement process to appoint the successful contractor shall be undertaken in

accordance with the LFC's Scheme of Governance in particular Part 3 – Standing Order for Procurement and in compliance with Public Procurement Regulations 2015 amended to Procurement act 2023, as applicable.

3.4 LFB will submit all relevant documentation to the Salix administrator to ensure correct and submission of funding draw down.

3.5 The delivery of the project to retrofit the ten buildings will be managed by the LFB Property Group (Capital Delivery Team) and will follow the standard project delivery mechanisms. In addition, further support from the carbon reduction team will provide resource to manage the Distribution Network Operator ((DNO)– Electrical power supplier) upgrade and reporting to Salix. There are no additional staffing costs arising from the proposed decision.

3.6 On completion of the works and defects liability period, the maintenance and servicing of all new low carbon technologies installed will be passed to LFB hard services provider following a soft landings handover process.

3.7 The ten projects must be completed before 31st March 2027 and invoiced before that date. However, in extenuating circumstances an extension may be granted.

4 Values Comments

4.1 The LFC notes the Fire Standards Board requirements around adopting and embedding the Core Code of Ethics at an individual and corporate level. Following extensive engagement, the LFC has introduced Brigade values which build on and do not detract from the Code of Ethics.

4.2 This report recommends accepting the grant funding from Salix and DESNZ. This would provide LFC with 10 further fire stations that are decarbonised. Following the Mayor's commitment to be carbon net zero by 2030.

4.3 The Brigade values that this decision will follow are:

- Service: we put the public first – The LFC will make an example which Londoners can follow to achieve decarbonised premises and provide cleaner air. The use of advanced low carbon technologies will make an example which can be followed by Londoners to achieve carbon net zero. Locally skills and trades will be required to service and maintain the new low carbon technology which will provide benefit to the London economy.
- Teamwork: we work together and include everyone – During the project LFC project team will ensure that the concerns and questions of all occupiers and users of the building are understood and responded to in a positive manner. The disruption will be minimised during the entire project and the soft landings process will ensure the building is handed over at the end to meet the requirements of all users.
- Equity: we treat everyone fairly according to their needs – The project will provide low carbon technologies that will benefit all users of the LFC estate. The low carbon emissions will provide a cleaner and greener environment which will be to the advantage of everybody.
- Courage: we step up to the challenge – The project to de-carbonise 10 fire stations has many challenges which the capital project team and carbon reduction team will meet to overcome and provide technology answers which deliver 10 fire stations that

do not emit more carbon than can be offset. The experience will provide lessons that can be adopted on future decarbonisation projects.

- Learning: we listen so that we can improve – The installation of low carbon technologies will provide answers to questions that are currently not always fully understood and this project will demonstrate LFC capital project team have listened to the concerns of occupants regarding low carbon technologies and demonstrated these new technologies are fit for purpose and provide a cleaner and greener alternative to burning fossil fuels.

5 Equality comments

5.1 The LFC is required to have due regard to the Public Sector Equality Duty (section 149 of the Equality Act 2010) when taking decisions. This in broad terms involves understanding the potential impact of policy and decisions on different people, taking this into account and then evidencing how decisions were reached.

5.2 It is important to note that consideration of the Public Sector Equality Duty is not a one-off task. The duty must be fulfilled before taking a decision, at the time of taking a decision, and after the decision has been taken.

5.3 The protected characteristics are as follows; age, disability, gender reassignment, pregnancy and maternity, marriage and civil partnership (but only in respect of the requirements to have due regard to the need to eliminate discrimination), race (ethnic or national origins, colour or nationality), religion or belief (including lack of belief), sex, and sexual orientation.

5.4 The Public Sector Equality Duty requires decision-takers in the exercise of all their functions, to have due regard to the need to:

5.6 Eliminate discrimination, harassment and victimisation and other prohibited conduct.

5.7 Advance equality of opportunity between people who share a relevant protected characteristic and persons who do not share it.

5.8 Foster good relations between people who share a relevant protected characteristic and persons who do not share it.

5.9 Having due regard to the need to advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to:

5.10 Remove or minimise disadvantages suffered by persons who share a relevant protected characteristic where those disadvantages are connected to that characteristic.

5.11 Take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it.

5.12 Encourage persons who share a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low.

5.13 The steps involved in meeting the needs of disabled persons that are different from the needs of persons who are not disabled include, in particular, steps to take account of disabled persons' disabilities.

5.14 Having due regard to the need to foster good relations between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to:

- tackle prejudice
- promote understanding

5.15 An EIA was completed. This confirmed that the Carbon Net Zero programme 2023 has low impact on equalities and may have the potential to improve the LFB estate to make it more inclusive. In addition, an EIA will be completed on each major project within the Carbon Zero Programme.

6. Other considerations

Workforce comments

6.1 The Carbon Zero delivery programme provides a detailed programme of work for the LFB project team. No impact on the workforce is anticipated. The trade unions will be provided with this report.

Sustainability comments

6.2 This report outlines LFC's carbon net zero proposals, in accordance with the 2030 net zero targets set by the GLA. It sets out the requirements for staff engagement and training, taking into account current and proposed carbon impact training. Where new policies and/or corporate projects may arise, they are subject to the Brigade's Sustainable Development Impact Assessment (SDIA) process. An SDIA has been completed and approved.

Procurement comments

6.3 Any procurement activity required under this LFC paper for the delivery of the identified Salix projects will be undertaken in accordance with the LFC's Scheme of Governance in particular Part 3 – Standing Order for Procurement and in compliance with Public Procurement Regulations 2015, as applicable.

6.4 Review of the various routes to market will be supported by Procurement to ensure consideration of effective competition and identification of best-fit contractor options. Routes to market will include the review of applicable public sector frameworks and other compliant market engagement options. Any final contract award(s) shall be made to the most economically advantageous tender against pre-defined quality/technical and price criteria. Any awarded contract(s) shall include a range of performance incentive measures to ensure the works are effectively delivered to defined cost and quality requirements.

Communications comments

6.5 The Carbon Zero strategy may be published in the public domain, following the precedent of sharing the GLA strategy. Communication regarding the Strategy will be undertaken at both organisation and station level regarding the projects that will be undertaken using the existing project communication channels. The consultation process for specific property projects follows the preparation of the Project Brief/Requirements and Project Initiation Document (PID) with the stakeholders. Engagements maintained through site meetings to enable staff participation throughout project delivery. The handover of project to the facility management team is embedded in the ways of working in the property function.

7. Financial comments

7.1 If the grant bid was successful, this would have capital financing cost savings as there would no longer be a requirement to fund these particular schemes through

external borrowing which we would usually carry out with the Public Works Loans Board (PWLB). The current interest rates of this type of borrowing are in the region of 4.5% per annum over the life of the asset.

8. Legal comments

8.1 Under section 9 of the Policing and Crime Act 2017, the London Fire Commissioner ("LFC") is established as a corporation sole with the Mayor appointing the occupant of that office. Under section 327D of the GLA Act 1999, as amended by the Policing and Crime Act 2017, the Mayor may issue to the LFC specific or general directions as to the manner in which the holder of that office is to exercise his or her functions.

8.2 Section 1 of the Fire and Rescue Services Act 2004 states that the LFC is the fire and rescue authority for Greater London.

8.3 The LFC is also a 'best value' authority under the Local Government Act 1999 and must make arrangements to secure continuous improvement in the way in which its functions are exercised, having regard to a combination of economy, efficiency and effectiveness.

8.4 Under section 351A of the GLA Act 1999 the Mayor is required to prepare and publish a London Environment Strategy. Under s373 of the GLA Act 1999 the Commissioner must have regard to the London Environment Strategy while exercising any function.

8.5 One of the core principles of the London Environment Strategy is that the Mayor and the GLA Group, including LFC, should lead by example in tackling environmental challenges and for London to become a zero carbon city by 2050.

8.6 The arrangements proposed is consistent with the LFC's power under section 7 and 5A of the Fire and Rescue Services Act 2004 to make provision for firefighting, specifically in this case fire stations, and do anything it considers appropriate for the purposes of the carrying out of any of its functions including providing heating and working towards the Mayor's environmental strategy, including net zero targets.

8.7 By direction dated 1 April 2018, the Mayor set out those matters, for which the Commissioner would require the prior approval of either the Mayor or the Deputy Mayor, Planning, Regeneration and the Fire Service (the "Deputy Mayor"). Paragraph (b) of Part 2 of said direction requires the Commissioner to seek the prior approval of the Deputy Mayor before "[a] commitment to expenditure (capital or revenue) of £150,000 or above as identified in accordance with normal accounting practices… ". The expenditure discussed in this report and Part 2 therefore requires the approval of the Deputy Mayor.

List of appendices

Appendix	Title	Protective Marking
1.	https://www.salixfinance.co.uk/schemes/phase-3c-public-sector-decarbonisation-scheme	No
2.	https://www.salixfinance.co.uk/sites/default/files/2023-09/Phase%203c%20Public%20Sector%20Decarbonisation%20Scheme%20Guidance%20Notes%20v1.1%20Client%20Facing.pdf	No
3.	https://www.salixfinance.co.uk/sites/default/files/2023-09/Phase%203c%20Public%20Sector%20Decarbonisation%20Scheme%20Guidance%20Notes%20v1.1%20Client%20Facing.pdf	No
4.	Equality Impact Assessment	No
5.	Sustainable Development Impact Assessment	No

Part two confidentiality

Only the facts or advice considered to be exempt from disclosure under the FOI (Freedom of Information) Act should be in the separate Part Two form, together with the legal rationale for non-publication.

Is there a Part Two form: YES

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Equality Impact Assessment (EIA) Form

The **purpose** of an EIA is to give **as much information as possible** about potential equality impacts, to demonstrate we meet our **legal duties** under the Equality Act 2010.

Please read the EIA Guidance on Hotwire before completing this form.

Once you open the template please save it on your OneDrive or SharePoint site. Do not open the template, fill it in and then click Save as this will override the template on Hotwire.

1. What is the name of the policy, project, decision or activity?
LFC Carbon reduction project Salix PSDS 4A

*Overall Equality Impact of this policy, project, decision or activity (**see instructions at end of EIA to complete**):*

High		Medium		Low	
					✓

2. Contact details	
Name of EIA author	Paul Cook
Department and Team	TSS, Fleet and property. Carbon Reduction Team
Date of EIA	25th November 2024

3. Aim and Purpose	
What is the aim and purpose of the policy, project, decision or activity?	To understand the impact of LFC using Salix funding as part of the PSDS (Public Sector Decarbonisation Scheme) to retrofit 10 fire stations to be carbon reduction. Project include heating system, and draught exclusion systems

Who is affected by this work (all staff, specific department, wider communities?)	*All staff and visitors.*

4. Equality considerations: the EIA must be based on evidence and information.	
What consultation has taken place to support you to predict the equality impacts of this work?	*The PSDS funding is an avenue to gain funding for previously agreed carbon reduction project retrofits at fire stations*

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5. Assessing Equality Impacts			
Use this section to record the impact this policy, project, decision or activity might have on people who have characteristics which are protected by the Equality Act.			
Protected Characteristic	Impact: positive, neutral or adverse	Reason for the impact	What information have you used to come to this conclusion?
Example: Age	*Adverse*	*Moving this service online will adversely affect older people, who are least likely to have access to a computer or smart phone and may not be able to use the new service.*	*GLA Datastore: X% of the London community are aged 70 or over. GLA data shows that only 10% of those over the age of 70 have regular access to a computer or smart phone.*
Age (younger, older or particular age group)	Neutral	*The carbon reduction strategy focuses on removing LFB dependency on fossil fuels, for heating and mobilisation by focusing on providing the same workplace and environment. This is achieved by using technologies that provide a similar environment. The target of becoming carbon reduction reduces the likelihood of climate change which will affect our natural environment and would become a major catastrophe*	UK government Climate change committee reports *Net Zero – UK's contribution to stop global warming; 2/5/2019* *Independent assessment: the UK's net zero strategy; 26/10/2021* *Net Zero – technical report; 2/5/2019*
Disability (physical, sensory, mental health, learning disability, long term illness, hidden)	Neutral	*The carbon reduction project will not affect disability*	UK government Climate change committee report: Sets out less emphasis on behavioural change requirement and LFB have adopted the same rational, therefore effect on people is not envisaged.
Gender reassignment	Neutral	*The carbon reduction will not affect gender re-assignment*	UK government Climate change committee report:

(someone proposing to/undergoing/ undergone a transition from one gender to another)			Sets out less emphasis on behavioural change requirement and LFB have adopted the same rational, therefore effect on people is not envisaged.
Marriage / Civil Partnership (married as well as same-sex couples)	Neutral	*The carbon reduction project will not affect marital status*	UK government Climate change committee report: Sets out less emphasis on behavioural change requirement and LFB have adopted the same rational, therefore effect on people is not envisaged.
Pregnancy and Maternity	Neutral	*The carbon reduction project will not affect pregnancy*	UK government Climate change committee report: Sets out less emphasis on behavioural change requirement and LFB have adopted the same rational, therefore effect on people is not envisaged.
Race (including nationality, colour, national and/or ethnic origins)	Neutral	*The carbon reduction project will not affect race or ethnic origins*	UK government Climate change committee report: Sets out less emphasis on behavioural change requirement and LFB have adopted the same rational, therefore effect on people is not envisaged.
Religion or Belief (people of any religion, or no religion, or people who follow a particular belief (not political)	Neutral	*The carbon reduction project will not affect religion or beliefs*	UK government Climate change committee report: Sets out less emphasis on behavioural change requirement and LFB have adopted the same rational, therefore effect on people is not envisaged.
Sex (men and women)	Neutral	*The carbon reduction project will not affect sex*	UK government Climate change committee report: Sets out less emphasis on behavioural change requirement and LFB have adopted the same rational, therefore effect on people is not envisaged.

Sexual Orientation (straight, bi, gay and lesbian people)	Neutral	*The carbon reduction project will not affect sexual orientation*	UK government Climate change committee report: Sets out less emphasis on behavioural change requirement and LFB have adopted the same rational, therefore effect on people is not envisaged.

6. Impacts outside the Equality Act 2010
What other groups might be affected by this policy, project, decision or activity?
Consider the impact on: carers, parents, non-binary people, people with learning difficulties, neurodiverse people, people with dyslexia, autism, care leavers, ex-offenders, people living in areas of disadvantage, homeless people, people on low income / in poverty.
Carbon reduction will not have any adverse affect on any groups within the equality act 2010

7. Legal duties under the Public Sector Equality Duty (s149 Equality Act 2010)	
How does this work help LFB to:	
Eliminate discrimination?	Not applicable as Carbon reduction should have little to no effect on behavioural change
Advance equality of opportunity between different groups?	Not applicable as Carbon reduction should have little to no effect on behavioural change
Foster good relations between different groups?	Not applicable as Carbon reduction should have little to no effect on behavioural change

8. Mitigating and justifying impacts		
Where an **adverse** impact has been identified, what steps are being taken to **mitigate** it? If you're unable to mitigate it, is it **justified**?		
Characteristic with potential adverse impact (e.g. age, disability)	**Action being taken to mitigate or justify**	**Lead person responsible for action**

Now complete the RAG rating at the top of page 1:

High: as a result of this EIA there is evidence of significant adverse impact. This activity should be stopped until further work is done to mitigate the impact.

Medium: as a result of this EIA there is potential adverse impact against one or more groups. The risk of impact may be removed or reduced by implementing the actions identified in box 8 above.

Low: as a result of this EIA there are no adverse impacts predicted. No further actions are recommended at this stage.

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Document Control

Signed (lead for EIA / action plan)		Date	
Sign off by Inclusion Team		Date	
Stored by			
Links			
External publication	Are you happy for this EIA to be published externally?	Yes ☐	No ☐ If No state why:

Other impact assessments completed	Yes	No
1. Has an Equalities Impact Assessment been completed?	☒	☐
2. Has a Health, Safety and Wellbeing assessment been completed?	☒	☐

Environmental and carbon Impacts

3. Will this consume any of the following (please tick those that apply and state how and if this would increase or decrease our consumption):

Gas	☐	Electricity	☒	Water	☐
Petrol or diesel	☐	Hazardous chemicals	☐	Other natural resources e.g. timber	☐
Previous annual of fuel usage		kWH	Subsequent annual fuel used		kWH
Energy efficiency improvement	☒	Scope 1 (fossil fuel) to Scope 2 (renewable fuel)	☒		

Comments:

This is for 10 fire stations and therefore the annual gas usage figures would be incorrect as the split will be across all 10. The changes will be for Carbon reductions and move from scope one emissions to scope two emissions at Biggin Hill, Clapham, Deptford, Hendon, Holloway, Ruislip, Tooting, Wandsworth, Wallington and Mitcham fire stations.

4. Will this produce or reduce our production of (please tick those that apply and describe what and how):

Non-hazardous waste	☒	Hazardous waste (see PN 862)	☐	pollutants to air, land or water?	☐

Comments:

This will reduce our carbon emissions. The project includes ASHP at all 10 stations

5. Will this have an effect on the thermal efficiency of our buildings (please tick those that apply) and state the previous and subsequent thermal transmittance (U value)

$$U\ value = \frac{Watts}{square\ Meters}\ K$$

Previous U value		Subsequent U value		Improvement ☒ Regression ☐

Comments:

The U values for all sites will be improved as the project includes Windows, cavity wall insulation, draught exclusion. This will be calculated during the detailed design phase.

6. Will this impact (positively or negatively):	Yes	No
a. Operational/business travel by staff	☐	☒
b. Travel/deliveries by our suppliers	☐	☒
c. Environmental protection at incidents	☐	☒
d. a Site of Special Scientific Interest	☐	☒
e. Gardens or other wildlife at stations/brigade sites (e.g. nesting birds or bats)	☐	☒

Comments:

Roof space will be used for Solar PV installations and this may restrict garden space availability

Procurement	Yes	No
7. Will this result in the purchase of goods, services or works or influence how they are procured?	☒	☐
f. Is this for a purchase of greater than £1m?	☒	☐
g. Will this use/result in a tender for manufactured goods such as electronics, textiles, and building materials?	☒	☐
h. Will this service require low skilled/low paid employees?	☐	☒
i. Will the goods consume utilities or consumables?	☒	☐

j. Does this involve major works taking place? k. If so are BREEAM and Ecological surveys required?	☒ ☐	☐ ☒
l. Will this support future cost avoidance?	☒	☐
m. Could all or part of the purchase be provided by small or local businesses?	☒	☐
n. Could this be delivered by a voluntary/community sector organisation?	☐	☒
o. Has a Request For Tender been submitted to Procurement through hotwire?	☐	☒
Comments: The tender process will be managed following the award of the Salix PSDS 4A grant fund		

For the SD Team to complete:

Policy sustainability risk rating: **Low Risk**

Inputs/outputs/impacts to address in Full SDIA: The project is expected to have no adverse environmental impact. The project will reduce carbon emissions.

This SDIA has been approved by the Sustainable Development Team and reviewed as low risk

Date completed: 03/12/2024

Phase 4 Public Sector Decarbonisation Scheme: Application Form - Guidance

The following section is designed to give some clear guidance on how to fill out the application form for the Phase 4 Public Sector Decarbonisation Scheme (PSDS). If you have any questions regarding the below please contact phase4psdsgrants@salixfinance.co.uk

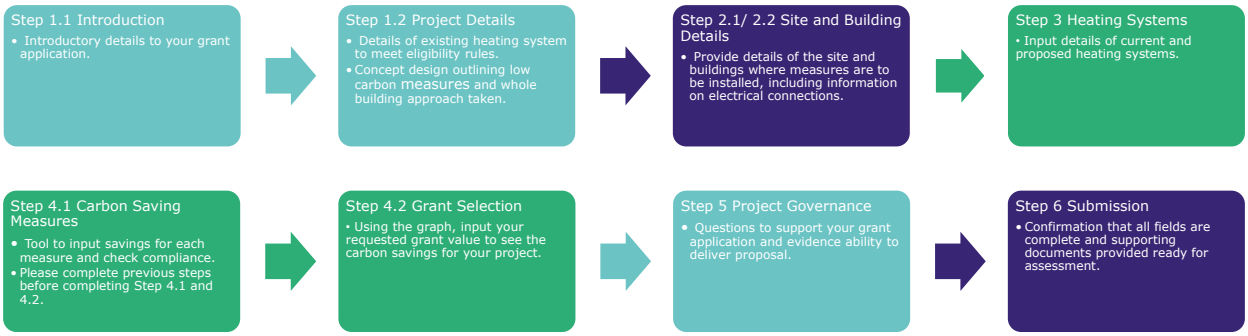
Please open in the **desktop app, enable editing** and **automatically calculate formulas** in order for this tool to fully function. This is a standard requirement when downloading Excel files.

All fields must be filled in to be considered a complete application. Compulsory fields are coloured red and if not completed, your application may not be considered for funding. In the **Page(s)** fields, please input the relevant page numbers of the documents you supply in support of your application.

Do not paste values into cells, or always paste '**as values**', ensuring you are not pasting source formatting. Where the cells are formatted with dropdown lists, please use the dropdown. Please avoid using special characters.

Guidance Index:

Steps for Completing the Application Form



Step 1.1 Introduction

All sections must be completed unless stated otherwise.

Section 1. Introduction
Applicants should complete all fields where applicable.

Consultant definition: An organisation that supports the eligible public body in the creation of the project proposal and writing of the application.

Contractor definition: An organisation that undertakes the works to implement the programme of works.

Section 2. Project Summary
Please use this section to provide a brief introduction to the project. This should be kept up to date with any changes that occur during the assessment and delivery of your project.

Example response:
Green County Council has been awarded £6,500,000 to replace gas boilers with air source heat pumps at the Grade II listed Green Town Hall, Green Library, and four primary schools. A water source heat pump will also be installed at Green Museum, a 200 year old building currently powered by an end of life coal-fired boiler. Solar panels will be installed on the roofs of all buildings being upgraded with low-carbon heating to produce renewable electricity. LED lighting will be installed in the primary schools to improve the energy efficiency of their buildings. This will contribute to the council's ambition to achieve net zero by 2040.

Section 3. Eligibility
Questions 1, 2 and 3 relate to project eligibility

1. Confirm that the building is eligible for grant funding.
Applicants must either own the building that the funding is being used to upgrade or have a long-term lease arrangement.

2. Confirm that proposed measures have not yet started.
This means that any component of works that is included in the grant funding amount cannot start until after funding has been awarded. For example, if the design phase has begun any costs incurred in this design phase would not be eligible for grant funding.

3. Confirm project can complete within grant timeframe.
Applicants should indicate when they wish to complete their projects by, ensuring this is prior to 31 March 2028.

The Planning Year option is to allow applicants to apply for funding at the Phase 4 application window for projects with spend in 2026/27 and/or 2027/28, using 2025/26 as a Planning Year.

- Applicants can apply for funding only in 2026/27 or 2027/28 (with no spend in 2025/26), or both 2026/27 and 2027/28, indicating this in the application form.
- Applicants wishing to have a planning year/s are still subject to all eligibility criteria except for proving that they have their own like-for-like funding.
- Applicants will have until 14 June 2024 to secure the necessary funding to meet the eligibility criteria for the scheme and provide evidence of this funding to Salix.

4. Does the project require any planning consents?
It is important to detail all likely planning permissions that will be required. For example, most air source heat pumps (ASHP) in non-domestic settings could require permission from the local planning authority and evidence to support their application such as acoustic noise surveys. A good application will give commentary on this topic.

5. Have you secured all necessary internal sign off for this project proposal?
Applicants must detail the level of sign off achieved.

6. Does the project include any Private Financial Initiative (PFI) buildings?
Applicants should provide detail on the buildings, any contractual requirements for redundancy and how they have been incorporated into the project delivery plan.

7a. Do you have sufficient financial resources to cover the recipient contribution?
Applicants must confirm they can meet the minimum 12% contribution.

7b. Is the project dependent on any other funding stream(s)?
Please provide context of any further funding that is needed in order for the project to commence, including funding type and value. For example, applicants could use the Condition Improvement Fund (CIF) or private loan to cover the like-for-like for like-for-like replacement costs (recipient contribution).

7c. Further detail on amount of other funding sources needs to be provided here.
This includes whether the funding is secured and when it will be.

Step 1.2 Project Details

The purpose of this step is to show that the project meets eligibility criteria and to show how the like-for-like cost of fossil fuel heating is estimated. It also is important to outline the project proposal, including the 'whole building approach' and the low-carbon heating system(s) that will be used.

Section 1. Existing Heating
The questions below relate to the current fossil fuel system and if any parts of it will be retained.

1. & 2. Confirm the existing heating plant is, or will be, at the end of its useful life at the point of removal.
As for 3c, Phase 4 requires evidence that the existing fossil fuel heating plant is, or will be, at the end of its useful life at the point of removal. Suitable evidence includes clear, high-resolution photographs of the boiler nameplate or a plant service report, either of which must clearly display the year of installation. This must evidence that the existing heating plant is 10 years old or over. Further guidance can be found in Section 4.2.1 of the Phase 4 Guidance notes.

In the case where the plant has reached the end of its useful life sooner than is typically expected (for example, through high operation or poor design), the applicant must set out the rationale and provide evidence to show that this is the case. This evidence will form an essential part of the supporting information. If this evidence is insufficient, as determined by Salix, applications will be returned as 'Requires Improvement' and not approved for PSDS funding.

3. Confirm if the system feeds any additional loads (air handling units/commercial units etc.)
Please provide detail on if any of the fossil fuel plant serve uses other than space heating and/or hot water generation (e.g. kitchens, science laboratories) and if this has been factored into your feasibility study. Upgrading to a low-carbon heating system may require changes to heating coils/plate heat exchangers, so this must be considered for the design of the new system as well as consideration to extra costs this may encounter.

4. Provide commentary on the estimated cost for the conventional fossil fuel replacement (like-for-like costs).
Detail how the like-for-like cost value has been estimated.
Like-for-like Cost Definition
All the costs incurred should the existing heating system be replaced with a typical fossil fuel heating system of the same type and size. In most cases this will be equivalent to the costs of replacing your system with a conventional boiler.

The cost for a like-for-like replacement of the existing fossil fuel system should include the cost of auxiliary works including but not limited to:
- New controls
- Pumps
- Expansion vessels
- Pipework and insulation
- Cost of removing the existing heating system
- Cost for installing the conventional heating system and/or commissioning work.

Where grant funding is being requested for the replacement of fossil fuel domestic hot water systems with low-carbon alternatives, the like-for-like replacement costs of these systems must also be contributed by the applicant.

Section 2. Project Proposal
This section outlines the steps needed for the project proposal and the details that are required.

1. Overview of Measures
A detailed account of all the measures involved in this project will allow Salix to quickly understand the full scope of the project. This must cover the low-carbon heating measures and energy efficiency measures proposed. Any retention of the current heating system should be referenced.

3. Energy Saving Calculations
The response to this question should allow one to easily follow the calculations attached to this application. The logic and assumptions made should be listed. Public sector organisations are expected to confirm their involvement and approval of the proposed energy savings.

5. Options Appraisal
Site specific justifications for the chosen mix of low-carbon heating solutions and building fabric measures is required. All relevant options should be analysed and the criteria for the solution outlined as part of this answer. An understanding of the advantages and disadvantages of each technology should be discussed. Evidence for this section will help inform the assessment of your whole building approach.

6. System Feasibility
The purpose of this section is to demonstrate the suitability of your proposed low-carbon system and readiness for implementation. The written answer should give a clear explanation of the method used to deduce the feasibility of the chosen low-carbon heating. Details on the level of integration of the heating source with the current heating system (pipework & emitters) would demonstrate a good answer to this question. This includes if the low-carbon solution is standalone, cascading low-carbon system, or bivalent.

9. Heat distribution systems and emitters
This section assesses the current heating distribution system and emitters to see whether you have considered necessary modifications to integrate the new low-carbon system. Please ensure to consider the proposed design and associated costs to avoid any unexpected increases to project costs and delays to your programme of works.

Section 3. Whole Building Approach

1. Please specify how your project meets the 'whole building' approach criteria of the scheme.
A good application will consider and evaluate all the factors that contribute to a building's energy consumption to identify the most cost-effective way to achieve significant decarbonisation. For example, investment in improving the insulation levels of the building fabric will reduce the overall size of low-carbon heating plant required, as well as save on fuel bills and increase thermal comfort for occupants. Also, investment in reducing the peak electricity consumption, such as through installation of LED lighting, can reduce the need to upgrade a building's electrical infrastructure to accommodate the installation of a heat pump.

Note - applications can only include energy efficiency measures in buildings where low-carbon heating is also to be installed.

Where applicants are proposing high temperature low-carbon heating systems, without any improvement to building fabric or reduction of flow temperature, applicants need to evidence that this is the only option for this site and that a whole building approach is not possible (see Figure 6 in the PSDS 4 Guidance Notes). If this evidence is not provided, then the 'whole building' approach requirement will not be met, and the application will be deemed incomplete and not suitable for funding.

Section 4. Heat Networks
The purpose of this section is to determine whether you are able to/have considered connecting to a heat network. Applications that are connecting to a heat network are required to answer all questions in this section.

Section 5. Heat Pumps- GSHPs & WSHPs, Cascading Heat Pumps, ASHPs (including Air-to-Air)
Heat pump applications are required to answer the specific questions in this section.

Section 6. Biomass
Applications for biomass boilers are expected to demonstrate they will be operated in such a way as to be sustainable, as well as mitigating unwanted effects on air quality. Applicants are also expected to provide fuel store, delivery and maintenance details.

Section 7. Cremators
For electric cremators to be considered as a low-carbon heating solution, applicants must evidence an end-of-life fossil fuel fired cremator is being decommissioned.

Step 2.1 Site Details

This step encapsulates details for the sites where new measures are being installed on a building-by-building basis (each building must be input on a separate line). All information must be filled out for every building involved in the project.

Details of information required: **Site/Building Type:** The full list of building types can be found at the bottom of this tab. **Region:** Select from the drop down list for the different regions in the UK.

District Network Operation (DNO) Questions: These questions reflect the current and proposed electricity supply per site, as well as the type of electrical connection. It is important to indicate if there has already been contact with your local DNO.

Step 2.2 Building Details

Please complete the table by providing information on all UPRNs, MPRNs and MPANs related to the building(s). Do not place multiple references into one cell, there are multiple columns for each for this reason. Should you have more than 2 UPRNs, 5 MPRNs and 5 MPANs for a building, please contact phase4psdsgrants@salixfinance.co.uk with this information.

you have more than 2 UPRNs, 5 MPRNs and 5 MPANs for a building, please contact phase4psdsgrants@salixfinance.co.uk with this information.

UPRN: This can be found using the link below. A UPRN can be up to 12 digits in length.

MPRN and MPAN: Please provide gas meter number(s) (MPRN - between 6 and 10 digits long) and electricity meter number(s) (MPAN - 21 digits long and begins with 'S', only enter the last 12 or 13 digits for the purpose of this application) where gas boilers are being removed.

Display Energy Certificate (DEC): The DEC shows the energy performance of a building based on actual energy consumption, which is scored (A-G). This can be found using the link below. The DEC unique number should also be provided.

Site life remaining: This is the remaining site life per building.

Gross Internal Area (GIA): Input the total GIA for heated areas of the whole building. Unserviced areas can be omitted.

Existing Fossil Fuel Type: Please choose the relevant fossil fuel from the drop down list. If there are multiple fuels, please select 'mixed' from the list.

Baseline Annual Electricity & Fossil Fuel Consumption (kWh/year): The baseline annual consumption is used to demonstrate the typical or average consumption of energy. This data can be obtained from metered data, the previous year's energy bills and/or the DEC and the evidence must be provided to Salix.

Building Annual Electricity & Fossil Fuel Consumption (kWh/year): This data must be provided to Salix and can be obtained from metered data or the previous financial year's energy bills. Please provide this data in Financial Year 2025/26 format (i.e. April 2025 to March 2026).

Domestic Hot Water (DHW) Demand: Domestic Hot Water demand should be provided in kW with supporting calculations.

Pre and Post Peak Heat Loss (kW): These two values should take into account building condition pre and post fabric improvement. The post improvements building heat loss figure is mandatory to show the appropriate sizing of the proposed system. If a heat loss survey has not yet been conducted, there is a tool available on the Salix website to calculate peak heat loss. Please attach the completed tool or your own heat loss survey as supporting evidence.

Please note that building fabric and energy efficiency improvements should be considered first before sizing your new low-carbon heating system.

Existing Total Cooling Load (kW): Only applies to those including a measure which replaces a current cooling load e.g. Variable Refrigerant Flow (VRF) systems.

Proposed total cooling load [existing + new]: If there is additional cooling load post project, only a proportion of the system replacing existing cooling will be eligible for funding.

Low-carbon Skills Fund (LCSF) Submission ID Code: Any applicants to which it is applicable should provide their LCSF Submission ID Code for Heat Decarbonisation Plans (HDPs).
Find your UPRN
Find your DEC certificate

Step 3 Heating System

Please follow the prompts for each table and use the commentary box where necessary. All fields must be filled in to be considered a complete application. All red cells are compulsory and must be filled in. If any red cells remain, your application will not be marked complete and your application may not be considered for funding.

1. Existing System

In the existing systems table input details of your existing heating system. This will support evidence of end of life criteria, and help demonstrate that the new system is a suitable replacement.

Fossil Fuel System: This will give a numbering for the fossil fuel system inputted allowing you to refer to a specific existing plant elsewhere in your application.

Building: The Site and Building Name columns will correlate to the information input in Step 2.1 Site Details. Please use the dropdown lists. If one fossil fuel system supplies heat to multiple buildings this should be split out onto separate rows.

Make and Model: All applicants must provide the make and model of the existing fossil fuel heating plant. This will be checked against the evidence provided to verify the end-of-life status.
Age (years): Please state the age of each boiler based on year of installation. Input boiler age as a whole number.

Removed or Retained: All applicants must indicate whether the existing heating plant will be removed or retained. End-of-life heating plants which are being replaced by a low-carbon heating system must be removed. Fossil fuel heating systems which are not end of life can be retained, but these cannot be replaced by a low-carbon alternative.

Output load per unit (kW): This will be the same as the boiler rating. If the exact figure is unknown please advise in the commentary.

Number of Duty Units: The number of heating systems that are set as primary heat generator elements of the overall system and that are going to be replaced with the new low-carbon heating system. Back up elements are not to be included.

Efficiency (%): Current efficiency of the boiler. Boiler efficiencies outside of the 75-100% range will require further evidence.

Gross Internal Floor Area of Building (m2): This should only include the heated floor area of the building.

System to supply Space Heating, DHW or both: All applicants must specify the heating loads of the existing heating plant.

Flow Temperature for Space Heating and Hot Water Temperature for DHW: Please provide the existing flow temperature for space heating requirements and the hot water temperature for DHW provision (if applicable).

2-pipe or 4 pipe: Please choose whether the building has a 2 or 4-pipe distribution system.

If one fossil fuel heating plant supplies heating to multiple buildings, split this out into separate rows for each building that it supplies, splitting the load output and like-for-like costs accordingly. Select yes for 'Does Fossil
Like-for-Like Costs: To show that the like-for-like costs has been estimated correctly to include the full cost of installing and commissioning a replacement system on a like for like basis, we ask for a breakdown as follows:
- Removal of Existing Equipment £
- Main Equipment including controls £: to include equipment costs as boiler unit, pumps, controls and expansion vessels.
- Plinth, pipework connections including insulation £
- Installation £
- Commission £
- Cost of fossil fuel replacement system [like-for-like]: Total cost summed from above

Commentary: Space to provide any further explanation against the data points inputted in each row, provide details of where figures are derived from or comment on whether any figure is estimated or accurate.
If the system is any system other than a boiler, please make this clear in the commentary.
Use this area to provide details of buildings if more than one building is served by an existing system.

2. Proposed System

In the proposed system table input details of all the low-carbon heating systems.

Building: As with the existing system table, the Site and Building Name columns will correlate to the information input in Step 2.1 Site Details. Please use the dropdown lists. If a measure applies to multiple buildings please split this out into separate rows. The kW proportion across each building should correlate with the kW heat requirements of the buildings.

Technology Work Type: Applicants should select the low-carbon heating measure they propose to implement in their building from the dropdown list.

Existing System: Please select the correct existing system that the proposed system will be replacing. If the new system is to replace multiple existing systems please enter the existing systems in the commentary.

Make and Model: Applicants are encouraged to provide the make and model of the proposed low-carbon heating measures. Data sheets should be provided where available.

The Seasonal Coefficient of Performance (sCOP) and flow and return temperature should match the chosen specifications. If the project is in early design phases this can be estimated and confirmed during the assessment or as a condition of funding.

Output load per Unit (kW): This will be on the manufacturers data sheet.

Number of Duty Units: The number of units proposed to be set as primary heat generator elements of the low-carbon heating system.

Flow Temperature for Space Heating and Hot Water Temperature for Domestic Hot Water (DHW): Applicants should provide the proposed flow temperature for space heating requirements and the hot water temperature for DHW provision (if applicable).

Refrigerant used: Use the drop down list to select the refrigerant used for the low-carbon heating system chosen. If it is not listed, use the commentary box to provide details.

Heating Solution Configuration: The applicant should indicate whether the low-carbon solution is standalone, a low-carbon cascading solution, or bivalent. If installing a cascading/two-stage low-carbon solution, each component should be split out into separate rows and all corresponding data points must be split out to show what is apportioned to which component.
Heat Emitter Type: Applicants should specify whether the emitter type is radiators, underfloor heating, Air Handling Units (AHUs) or other (if other, please provide commentary).

Cost of the low-carbon Heating Measure(s): This should be broken down into the unit cost, additional measures, and electrical infrastructure. Costs must be evidenced.

The cost of low-carbon heating measures entered in the proposed system table will be used to calculate the marginal cost of low-carbon heating. The marginal costs are the costs that are eligible for the grant, where marginal cost equals:

$$\text{Cost of your low-carbon heating measure} - \text{Cost of conventional fossil fuel replacement [like-for-like]}$$

Evidence to support cost of conventional fossil fuel replacement can include costs obtained from other similar projects, or from reasonable cost estimates from sources such as a quantity surveyor.

Step 4.1 Carbon Saving Measures

Fully complete the two tables to calculate the eligible grant value, and please fill out the previous steps before completing Step 4.1, as this table is reliant on data from them.

The **bespoke carbon factor** should be inputted if the current fuel type is bespoke or the proposal is to transition to a district heating network as part of the project. If not, please leave it blank.
This factor should be calculated in units of kg/kWh. Only direct carbon emissions should be accounted for when calculating this bespoke factor.

If you are adding a new connection to a heat network, evidence and supporting calculations behind this bespoke factor must be provided to support your application. An averaged factor may be used to take into account future decarbonisation of the network, as long as this can be evidenced.
If **building fabric improvements and energy efficiency measures** are included, either those reducing the building's demand for heat or electricity, enter information for each work type required in the first table. The energy values should be sequenced, as described in the following section.

Description of Work	Building	Project Type	Technology - Work Type	Current Energy Type	Fuel Cost (p/kWh)	Annual kWh Pre-Project	Annual kWh Post-Project
Cavity wall insulation	Main Building	Insulation - building fabric	Cavity wall insulation	Gas	6.00	1,567,845	1,486,546

Building: Dropdowns will show the list of buildings selectable, based on your entries in Step 2.2 - so complete that step first please. For measures in multiple buildings, these must be inputted on separate lines.

Fuel Price: Financial savings are not a criteria for assessment in this funding programme, thus for fuel type please input current fuel price (not forecast) to ensure this is consistent.

Project Cost: Total cost of each measure specific to the building. Including, design, equipment, installation, project management, contingency and VAT.

The cells to the right of each table show the calculated values for each work type. The Carbon Cost column shows the cost to save each tonne of direct carbon saved by the measure over its lifetime.

Annual Financial Impact (£)	Payback in Years	Carbon Cost (£/tCO2eLT Direct)	Annual Direct Carbon Savings (tonnes)	Annual Indirect Carbon Savings (tonnes)
£1,462	23.45	128.456	4.45	

For any low-carbon heating measures, enter information for each work type required in the second table. The technology types will be automatically populated from Step 3. Please ensure that the details entered match the corresponding row in Step 3's Proposed Heating System table.

This table cannot be left blank, as the installation of a low-carbon heating system is an eligibility requirement of PSDS.

	Technology - Work Type	Building	Description of Work	Current Energy Type
LC System 1	Connect to onsite heat network	Main Building	Gas boiler replacement with On Site Heat Network	Gas

Current Fuel Cost (p/kWh)	Proposed Fuel	Proposed Fuel Cost (p/kWh)	Current Fuel Displaced (kWh)	Proposed Fuel Consumption (kWh)
6.00	Electricity	30.00	1,821,054	789,567
6.00	Electricity	30.00	853,872	289,651

All low-carbon heating measures should be transitioning from a fossil fuel 'current energy type' to 'proposed fuel': either electricity, bespoke or wood. Both the displaced fossil fuel kWhs 'current fuel displaced' and the estimated kWhs consumption of the low-carbon technology 'proposed fuel consumption' are entered in the same line of the table as shown above. These figures must be evidenced in supporting energy calculations.

A sequenced approach must be taken to input the savings for insulation and low-carbon heating measures. Firstly, each building fabric improvement and/or energy efficiency measure must be phased so that the post kWh links to the next pre kWh. Then, the calculated reduced energy consumption should be used as the 'current fuel displaced' for the low-carbon heating measure, unless not all of the current fossil fuel energy consumption is to be displaced. Sequencing will prevent double counting savings or calculating savings beyond the building usage. If the savings from the energy efficiency measures and low-carbon solutions exceed the building usage, an error message will appear in the compliancy box and at the bottom of the step.

Technology - Work Type	Annual kWhrs Pre-Project	Annual kWhrs Post-Project
Cavity wall insulation	311,800	249,440

→

Technology - Work Type	Current Fuel Displaced (kWhs)	Proposed Fuel Consumption (kWhs)
Air source heat pump (air to water)	249,440	93,758

The table below shows a scenario where the project has not been sequenced and the entered savings exceed the total usage. This table is at the bottom of Step 4.1.

Click here to watch a video on how to sequence properly.

Sequencing Check

Total Existing Annual Fossil Fuel Use kWh	Total Efficiency Savings kWh	Total Current Fuel Displaced kWh	Sequencing Check
3,014,191	261,910	26,408,326	Savings Greater than Total Usage
Data Source:	Step 2.2 - Building Details	Step 4.1 - Building Fabric Improvements and Energy Efficiency Measures	Step 4.1 - Low Carbon Heating	Link to Guidance Tab

Missing information for a work type will be flagged up in the 'Data Entry Check' column. The compliance check cannot be completed until all information is entered.

Annual Indirect Carbon Savings	Data Entry Check
	Check all fields completed correctly

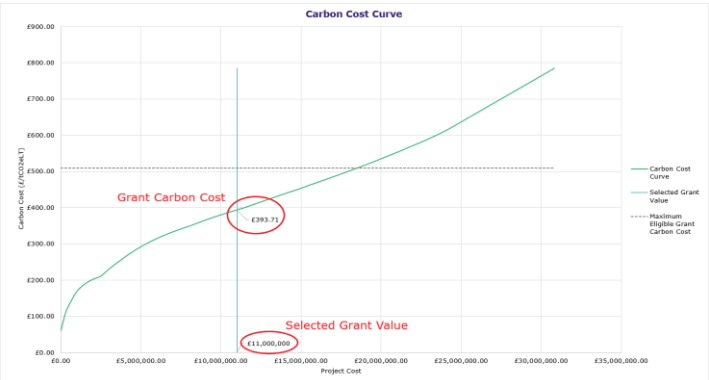
Once all of the required information has been entered correctly, the cells at the top will show the final project figures and whether or not the project is compliant and correctly sequenced.

Step 4.2 Grant Selection

Please enter your selected grant value in the box provided in this section, noting the following, which will help you inform your choice:-

The **Carbon Cost Curve** graph is a visual representation of the relationship between cost and carbon saved in your application. It plots the cumulative cost to save each tonne of direct carbon over the lifetime of the project, starting from measures which are the most carbon cost effective to least carbon cost effective (see further down this page for information about the **Carbon Cost Calculation**). This is the green line. The blue line plots your selected grant value. The intersection of these two lines provides the **Grant Carbon Cost**, which is also calculated in a box above the graph. This is the carbon cost of the selected grant value, and is very important as it is a determinant of the priority of your project in allocating grant funding under Phase 4. This value will change according on the grant value you select.

Example graph, annotated:



This step cannot function until all values and data have been fully input in Step 3: LCHS and Step 4.1. The calculation relies on full, accurate data. If any cells are missing, this step will flag red. If that occurs, please return to the indicated steps and fill in any red highlighted boxes.

When selecting your grant value, please adhere to these requirements:
- The recipient contribution must be a minimum of either 12% of the entire project costs, or the like-for-like contribution (entered in Step 3), whichever is the greater contribution.
- The maximum Grant Carbon Cost is set at £510/tCO_2eLT. Do not select a grant value which results in this value being over £510 - your application will not be considered.

Error messages reflecting the above will pop-up in the compliance box if they are triggered:

Grant Carbon Cost (£/tCO_2eLT)	Compliance
£713.07	Recipient contribution is below the minimum

Compliance
Grant Carbon Cost exceeds maximum value

If these appear, please amend your selected grant value accordingly.

The **Measure Ordering Table** orders all measures in your application according to their carbon cost effectiveness, from lowest carbon cost to greatest. It is this table that creates the carbon cost curve. The yellow data bar indicates the relative carbon cost of each measure. There is no data for you to input here, but any measures that have both a high measure cost and a high carbon cost will be highlighted like the example below. This is designed to assist any efforts to trim your application to improve the overall carbon cost for your project.

Step 5 Project Governance

Section 1. Project cost breakdown
A project cost breakdown needs to be provided for the application as a whole, including VAT (if applicable). Any high/low contingencies need to be supported with commentary.

Internal project management costs cannot be included within the grant funding requested, however any external consultant costs can be included within project delivery costs.

If you are utilising inflation rates to calculate a cost uplift to determine final costings, please explain where you have sourced the inflation figure from and show how it has been factored into your cost calculations.

Do you have reserve financial resources if costs increase during the delivery of this project?
This question is to provide Salix with context around the financial position of the public sector body and whether there are financial resources to cover any increases in project costs.

Section 2. Project Programme
Please input dates of key milestones into the table. Note that these milestones will be oversimplified but a more detailed project programme is expected to be included in supporting information.

You will need to confirm the grant value splits are correct in relation to the milestone dates inputted into the Project Programme table.

Section 3. Procurement process
Detail your plans for procuring the services needed for your project and whether you have carried out, or are in a position to carry out, a tendering process in line with public sector procurement regulations. This section can be used to describe any differences to the project milestone dates should a different procurement process (Design & Build) be used.

Section 4. Energy and Carbon Monitoring Plan Post Completion
Successful applicants are required to provide three years of monthly electricity and any other relevant meter data. Please therefore provide some commentary on how this data will be obtained, reported and analysed. Further guidance can be found in Section 4.4.6 of the Phase 4 Guidance notes.

Section 5. Project Governance
Please detail the project team and their roles in delivering the project including providing an organigram and details on how the team will be resourced. Describe the previous experience of members of the project team within the public sector organisation and previous experience of chosen consultants and contractors. This should include case studies where applicable.

Section 6. Project Risks and Mitigation
Please detail the key deliverability and feasibility risks relevant to this application. Note that a risk register should also be provided.

Section 7. Mitigating Fraud
Please confirm you have checks in place to ensure false representation and failure to disclose information are mitigated against. Confirmation must be provided that, as far as the applicant is aware, there has been no abuse of position in the application process or selection of suppliers. Conflicts of interest must be declared. You will be sent a Signature Document to sign after you have applied through the application Portal.

Section 8. Subsidy Control
In some instances, public sector organisations can operate as enterprises as defined in Section 7(1) of the Subsidy Control Act 2022. Please only complete this section if your organisation is part of a subsidy.

The questions in this section may require an in-depth understanding of the breakdown of the organisation if there is any portion of it being operated as an enterprise. Further information can be found in the links listed at the bottom of the section.

Step 6 Submit Application

This step must be completed to ensure all required information is provided.

Please:
- Confirm the key eligibility and compliancy checks have been met.
- Check the completeness of each step within the application form.
- Check the compliance of Steps 4.1 and 4.2
- Check key application form inputs have been inputted correctly (heat loads, lifetime costs, project costs, sequencing).
- Confirm all UPRN/MPAN/MPRN's have been included for each building.
- List the required supporting information document name and page.
- Tick the final checkbox when all information is complete and accurate.

Consortium Documentation

Applications from consortia are eligible to apply for Phase 4 PSDS if all members of the consortium comply with the organisation and building eligibility criteria. If successful, the lead applicant will need to fill in the Consortium Documentation tab as part of this Application Form.

Additionality Criteria

Projects are also required to meet the criteria of being 'additional'. The criteria that are used to assess whether a project is 'additional', are listed below:

- The measures concerned are not required to be installed by law (including building or health and safety legislation).

Note: For measures that go above and beyond what is required by law, grant funding can be sought for the increased cost.

- The measures are not being installed with a view to commercial gain (other than the reduction of costs through increased energy efficiency).
- Installation of the measures concerned has not begun.
- Funding for the project which is to be supplied by the PSDS (not including the applicant contribution) has not been agreed via another source; and
- Furthermore, other private funding options have been exhausted and/or are not suitable for the application(s) and in Salix's reasonable opinion, the project would not take place without the grant.

Technologies included, and specifically excluded

Technologies included:
Following on from previous phases, Phase 4 splits out low-carbon heating systems – specifically for electric heating – into more specific types. Electric cremators and swimming pool covers are new technologies for Phase 4- please see the Eligible Technologies tab.

Similarly, to Phase 3c, funding from Phase 4 can support enabling measures, such as electrical infrastructure upgrades, energy storage and smart meters. These measures can be included in an application as energy efficiency measures, or included within a low-carbon heating system.

Battery measures can be included where combined with renewables only or when enabling electric heating systems.

Technologies specifically excluded:
As Phase 4 of PSDS is strongly focused on decarbonisation, technologies reliant on the use of fossil fuels are specifically excluded from the scheme. Regardless of an applicant's financial contribution, no fossil fuel technology can be implemented, and the scheme criteria must apply. This includes measures such as gas replacement boilers, combined hybrid heat pumps and combined heat and power technologies that run at least partially on fossil fuels. New boilers funded by the contribution from the applicant will also specifically exclude a project from being eligible.

Carbon Cost Calculation

To ensure PSDS delivers emissions savings in a cost-effective manner, applications with a better carbon cost effectiveness will be prioritised in the allocation of funding under Phase 4. This is a change from previous phases of PSDS.

$$Grant\ Carbon\ Cost = Total\ project\ costs\ of\ all\ direct\ carbon - saving\ measures\ within\ the\ grant\ value$$

The carbon cost effectiveness is determined through the carbon cost calculation, which is calculated based on all measures saving direct carbon. The carbon cost of each individual measure is calculated within this form based on the project costs and the total lifetime carbon saved for each measure. This value, in £/tCO2eLT (cost per tonne of carbon dioxide equivalent emissions over the lifetime of the project), is presented in Steps 4.1 and 4.2 with a yellow data bar.

The Grant Carbon Cost of the application is then calculated in Step 4.2, based on the grant chosen by the applicant in that step. This is the cost of saving each tonne carbon for all measures funded by the grant. Since all measures are ordered from most to least carbon cost effective in Step 4.2, lower selected grant values will tend to have a lower (more effective) Grant Carbon Cost. The upper limit for the Grant Carbon Cost is £510/tCO_2eLT. Note that the Carbon Cost in Phase 4 differs from previous phases of PSDS in that it is calculated only for the grant value, and only for measures that the grant covers.

The new methodology used to inform the Carbon Cost reflects the focus and design of the scheme, accounting for direct emissions savings only. For most public sector organisations, direct emissions primarily arise from burning fossil fuels such as natural gas on site. By excluding indirect emissions savings from the cost/tonne of carbon emissions saved calculation (emissions primarily arising from grid electricity use), applicants are encouraged to take up measures that maximise direct emissions savings as this will drive down a project's £/direct carbon savings. Nonetheless, applicants are still actively encouraged to include measures that reduce indirect carbon, as well as other enabling measures to facilitate a whole building approach to heat decarbonisation and the £510 tCO2eLT limit on the grant is designed to give applicants flexibility to create bundles tailored to the needs of their estates.

$$Grant\ Carbon\ Cost(£/tCO_2eLT) = \frac{Total\ project\ costs\ of\ all\ direct\ carbon\ saving\ measures\ within\ the\ grant\ value\ (£)}{Total\ lifetime\ carbon\ saved\ by\ all\ measures\ within\ the\ grant\ value\ (tCO_2eLT)}$$

Definitions

Lifetime of low-carbon heating measures	The anticipated lifetime of a low-carbon heating technology. The lifetime is used alongside the lifetime of energy efficiency measures to calculate the maximum grant value available (£/tCO_2eLT). It is the lower of either i) The persistence factor for the technology (see Category list for persistence factors), or ii) the site life.
Persistence Factor (PF) Model	The persistence factor is the lifetime of the energy efficiency technology averaged to factor in degradation. The persistence factors for individual technologies employed by Salix are based on those derived by the Carbon Trust. The persistence factor is used in the calculation of cost to save a tonne of CO_2e over the lifetime of an application for energy efficiency measures (£/tCO_2eLT).
Annual Carbon Savings (tCO2e pa)	Predicted tonnes of CO_2e saved per annum.
Grant Carbon Cost (£/tCO2e LT)	The cost effectiveness of an application, calculated by dividing the chosen grant funding (£) by the lifetime direct carbon savings (tonnes of CO_2 equivalent) from measures funded by the grant. The maximum for this value under Phase 4 is £510/tCO_2eLT.
Indirect Carbon	Previously referred to as traded carbon, carbon emissions resulting from power generation off-site by another organisation. For the vast majority of public sector organisations this will primarily be carbon emissions arising from grid electricity use.
Direct Carbon	Previously referred to as non-traded carbon, carbon emissions resulting from combustion of fossil fuels either within an organisation's site boundary or, where heating is provided by district heating, from an off-site energy centre.
Project Site	Project site, typically, is postcode dependent, if buildings are clustered together and share a postcode, this is treated as one site. The criteria for Phase 4 is that low-carbon heating and energy efficiency measures must be implemented within the same building. For example, a hospital site will not be eligible to apply for insulation in building 'A' where the low-carbon heating solution is only heating building 'B'.
UPRN	Unique Property Reference Number

Site Types

Café
Club (not sports)
Cold store
Community centre
Court buildings
Fire + Ambulance station
Health centre
Hospitals NHS
Large distribution warehouse
Leisure centre (with swimming)
Leisure centre (without swimming)
MOD Accommodation
MOD Offices
MOD Storage
Museum, Gallery, Library
Nursery
Nursing home
Offices (public sector)
Police station
Prison
State primary
State secondary
Store
Theatre, Concert hall, Cinema
University Non-residential building
University Residential building
Warehouse
Workshop
Other

Building Types

Canteen
Court house
Emergency services
Entertainment hall
Fire station
Halls of residence
Health centres and clinics
Hospital
Laboratory
Leisure centre
Library
Military base
Museum
Nursing residential homes and hostels
Offices
Official service residence
Other
Parking buildings
Police station
Pre-school facility
Primary school
Prison
Secondary school
Sixth form college
Special school
Sports ground
Storage depot
Town hall
University
Other

*Do **not** paste data into cells, or **always paste 'as values'**, ensuring you are not pasting source formatting. Where the cells are formatted with dropdown lists, please use the dropdown. Please avoid using special characters.*

Step 1.1: Project Introduction

Section 1. Introduction

Project title:	London Fire Brigade Heat Decarb 2024
Official organisation name:	London Fire Commissioner
Submission date:	15/11/24
Design status:	Concept Design (RIBA Stage 2)
Procurement status:	Pre-Tender

Name of consultant organisation	Ricardo AEA Ltd		
Company registration number	8229264		

Name of contractor organisation	n/a		
Company registration number	n/a		
Trade body membership	n/a		

Applications from consortia are eligible to apply for Phase 4 PSDS if all members of the consortium comply with the organisation, project and building eligibility criteria. The grant recipient(s) will need to fill in the Consortium Documentation tab as part of this Application Form. You will also be asked to populate a schedule in your grant offer letter if your application is successful.

Please indicate if you are applying as part of a consortium.

No — Link to Consortium Documentation Step

To be a public authority under the Act, an organisation should meet at least one of the following tests:

a) The organisation is wholly or mainly funded out of public funds
b) The organisation is subject to public authority oversight
Please confirm which one of these is applicable to you.

Wholly or mainly funded out of public funds

Section 2. Project Summary

Please include a short summary of your project
The summary will be published on gov.uk so please use simple, plain English, spell out any abbreviations and keep to a maximum length of six sentences. You can detail:
- The project background, with the possible benefits it will bring
- How the grant will be used - what technologies will be installed?
- Any interesting facts about the buildings or technologies which make the project unique compared to standard public sector buildings. (E.g. listed building, historic sensitive areas/specialist access requirements, vulnerable occupants etc.)

An example response is demonstrated within the Guidance tab. You can also view the project summaries for Phases 1, 2, 3a, 3b and 3c of the Public Sector Decarbonisation Scheme on the scheme's gov.uk page, linked below.

Link to Example Introduction — https://www.gov.uk/government/collections/public-sector-decarbonisation-scheme

The London Fire Brigade has developed a Carbon Net Zero Strategy. It sets out the abiding principles of how the service will meet the GLA target of net zero by 2030.
This heat decarbonisation work supports Part 2 of this strategy by developing the broad heat decarbonisation principles into specific site proposals and implementing them. This will completely remove the use of natural gas in ten fire stations situated across the Greater London area, ranging from listed historic fire houses of the early 1900s to a modern example of post 2000 low energy design.
All sites require 2 heat sources for resilience as an emergency service. Air source heat pump for c80-90% of the load backed up by an electric boiler/immersion heater for the remaining 10-20%.

Section 3. Eligibility

Please answer Yes/No to the following questions, if any require additional commentary please include this in the boxes provided:

Questions 1-3 relate to project eligibility. If you think the answer is "no" to any of these questions please contact phase4psdsgrants@salixfinance.co.uk before submitting as this may mean your project is ineligible for the scheme.

1. Can you confirm your organisation owns or has a lease arrangement for the buildings where you wish to undertake these measures?	Yes
2. Please confirm that installation of the proposed measures has not yet started.	Yes
3a. Please confirm that all the proposed measures will only be worked on during the sequential years that funding is requested, and that all measures will be completed by 31 March 2028.	Yes
3b. Please provide the expected project start date.	01/06/25
3c. Please provide the date of project completion.	31/03/27
3d. If you are applying for funding for a planning year, can you confirm your agreement that spend will only be requested between 1 April 2026 and 31 March 2028? Applicants will have until 14 June 2025 to secure the necessary funding to meet all eligibility criteria, with project completion by 31 March 2028.	N/A
3e. If the option becomes available, would you be able to adapt the project to access funding in Year 2 and/or Year 3? Please refer to Section 1.4 of the Phase 4 Guidance Notes for further details.	Yes - both Year 2 and 3
4. Will planning permission be required for your project?	Yes

Please confirm in the commentary box below whether you have contacted your local planning authority to check if the project requires permissions.

Supporting Document(s) Name n/a — **Page(s)** n/a

Planning required with particular focus on interventions in listed buildings; Deptford, Hendon and Tooting; works have looked not to disturb facade to mitigate risk.
The LFB have obtained necessary consents for similar work in previous year applications, and by keeping to the same broad principles we anticipate that the risk will be minimised; we have included planning engagement into the developed programme.
Concurrent works may well be undertaken (not funded or included within this application) to support fleet decarbonisation and this would form part of wider planning.

5. Have you secured all necessary internal sign off for this project proposal? Yes

Please detail the level of sign off received, and any additional sign off that would be required in the commentary box.

Supporting Document(s) Name n/a **Page(s)** n/a

It is envisaged that Laura Birnbaum - assitant director of property and TSS, and Paul Cook –Head of Carbon Reduction and Milly Osborne – Carbon Reduction Delivery Manager, will manage the HDP process with Andy Roe- London Fire Commissioner (LFC) responsible for final signature and approval. The governance prrocess has been started and will be completed by the end of January, with approval from the LFC

6. Does your project include any Private Finance Initiative (PFI) buildings? Yes

If yes, please provide detail on the buildings, any contractual requirements for redundancy at these sites and how these have been incorporated into the project delivery plan.

Supporting Document(s) Name Mitcham Services Contract.zip **Page(s)** Appendix 10

Mitcham. This applies to one of the buildings in the application; additional time has been specifically included within the programme and procurement planning.
Redundancy requirements are satisfied by having one spare full capacity heat unit. This is provided by the installation of an additional electric boiler, at LFB cost, i.e. not included in this application.

7a. Do you have sufficient financial resources to cover the recipient contribution? Yes

Please provide commentary on how you intend to provide your recipient contribution. Be sure to include confirmation of its status and the availability of the funds.

Commentary

All projects of this nature have a 5% client-side contingency built in as a matter of course with funding source being LFB Capital Budgets.

7b. Please confirm the level of sign off agreed for the recipient contribution. Where multiple options are true, please specify in the commentary. Mayor

Commentary

as above

7c. Is your project dependent on any other external funding source(s) to cover the recipient contribution? No

7d. If yes, please answer the following:

• What value will you likely need to claim from the other funding source(s)? £0.00

• Provide detail on the funding source, including name and the steps required to secure this funding using the table and text box.
Explain here why the other funding source(s) cannot be used to fund the entirety of the project, to ensure you are complying with the additionality criteria for the scheme.

• Specify which measures will be covered by the other external funding and how you have accounted for the carbon savings between the different funding sources. Has it contributed to reduced heat losses?

External Funding Source	Is the funding source secured?	If not, enter date funding will be secured
Condition Improvement Fund	N/A	N/A
Other public grant	N/A	N/A
Crowdfunding	N/A	N/A
UK Infrastructure Bank	N/A	N/A
Other public loan	N/A	N/A
Private grant	N/A	N/A
Private loan	N/A	N/A

Commentary

n/a

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Step 1.2 Project Details

Applications must demonstrate that the low-carbon heating system has been appropriately identified, sized and designed. To demonstrate eligibility and feasibility, you must outline the existing system as well as provide end-of-life (EoL) fossil fuel heating plant evidence. Please also ensure to provide commentary on how you have taken a whole building approach for each building. The section below contains mandatory sections that all applicants need to complete, as well as optional sections based on which low-carbon heating system is being proposed. If your application proposes multiple different systems, the commentary box and supporting information can also be used to address these questions. Please see the website for guidance on: heat pumps, heat networks and biomass boilers, using the link below.

Technical Tools & Resources Link Link to Guidance Tab

Sections	Applicant Applicability
1. Existing heating	Completed by all applicants
2. Project Proposal	
3. Whole Building Approach	
5. Heat Networks	
6. Heat Pumps	Complete the sections relevant to your application
7. Biomass	
8. Cremators	

Section 1. Existing Heating

Applications need to satisfy PSDS Phase 4 eligibility criteria by showing that the existing fossil fuel heating plant is end-of-life and will be replaced with a low-carbon heating system. Failure to provide end-of-life evidence will result in a failed application.

1a. Please confirm you currently have and are using a fossil fuel heating plant, which is coming to the end of its useful life? — Yes

1b. Provide details below of your existing heating plant condition, and whether all or part of it is coming to the end of its useful life.

Please provide clear, high-resolution photographs of the boiler nameplate or a plant service report. These must clearly display the year of installation and evidence the existing heating plant to be 10 years old or more. Further examples of other acceptable forms of EoL evidence can be found in Section 4.2.1 of the Phase 4 Guidance notes.

If there is no visible date on the boiler nameplate, you will need to contact the boiler manufacturer and provide a serial number to confirm the year of installation.

In the case where the plant has reached the end of its useful life sooner than is typically expected (for example, through high operation or poor design), please set out the rationale below and provide evidence to show that this is the case.

Supporting Document(s) Name: HDPs.zip — **Page(s)**: Appendix C

Commentary

Appendix C of each site's HDP includes the evidence of all plant ages
Higher res photos also included if required

2. Will any part of the fossil fuel heating plant be retained? If you are retaining any part of the current fossil fuel heating plant, please provide justification**.** — Yes

Commentary

For application purposes, we have certain plant that is not end of life, will not qualify for PSDS funding and is "retained".
In practice, we expect to strip out all fossil fuel plant as part of works, including gas fired catering equipment, allowing gas meter to be isolated and standing charge to be removed.
The stripout and replacement costs for non-end-of-life plant are NOT included in this application; should they happen, they will be client funded.
Diesel powered backup generator will be retained on site for essential power backup given the buildings host emergency responders.

3. Please confirm whether the system feeds any additional loads (air handling units/commercial units etc.) — No

Please confirm the heating load provided by these additional loads (kW):

Please provide detail on the following within the commentary box:
- Does the fossil fuel plant serve uses other than space heating and/or hot water generation (e.g. kitchens, science laboratories)?
- Is the fossil fuel heating plant used to satisfy heating loads over and above general space heating (e.g. heating of incoming ventilation air, swimming pool water heating)?
- Have you considered the potential changes to the current heating coils/plate heat exchangers to accommodate the new low-carbon heating system?
- Have cost increases been considered, where heating coils may need to be increased in size to accommodate lower flow temperatures?
- Does your feasibility study consider heating coils that may need sufficient space and system compatibility?
- Explain how the additional loads (kW) have been calculated or estimated.

Supporting Document(s) Name: HDPs.zip — **Page(s)**: Section 4

Commentary

Each HDP describes the buildings' services.
All heating boilers serve only space heating plant (radiators, occasional convector or panel) and gas fired hot water heaters serve only showers and other domestic hot water use.
Catering gas has been separated and accounted for.
Exceptions:
- Wandsworth has end of life CHP that provided power generation, which has been accounted for separately.

Refer to calculations.zip where catering and CHP gas use has been undertaken.
Catering has been based on a typical % usage from the average of fire stations that did have sub-metering. CHP has been based on profile adjustment based on observations on likely run hours, system size and operational characteristics.

4. How have you estimated the costs for a conventional fossil fuel replacement system (like-for-like costs)?
Provide all evidence to support the like-for-like costs and break these down into the five components specified in Step 3. — Previous Project

Like-for-like costs are part of Cost Evidence which all applicants are required to provide.

Supporting Document(s) Name: Cost plans.zip — **Page(s)**: All

Commentary

List price per boiler size obtained, and based on previous project experience, a cost for installation added - this has been cross checked with LFB's internal estimates based on frequent upgrade work across their large estate.

5. Please provide schematics of the existing heating system.

If Piping and Instrumentation Diagrams (P&IDs) are unavailable, provide high level illustrations to indicate the current design.

Supporting Document(s) Name	HDPs.zip	**Page(s)**	Appendix B

Section 2. Project Proposal

*Do **not** paste data into cells, or **always paste 'as values'**, ensuring you are not pasting source formatting. Where the cells are formatted with dropdown lists, please use the dropdown. Please avoid using special characters.*

Step 2.1: Site Details

Please use the table below to provide details for all sites included within this application, as well as the electrical connections for each.

- **Information is required for all sites where measures are to be installed. Please use a new row for each separate site.**
- **All fields are compulsory and if not completed, your application may not be considered for funding. Please ensure you fill in all red cells and follow any pop up guidance for each column.**

				Distribution Network Operator (DNO) Questions							
Site Name	**Site Type**	**Region**	**Site Number**	**Type of electrical connection**	**Existing incoming voltage level of the premises (kV)**	**Existing agreed supply capacity/maximum capacity of the premises (kVA)**	**Current typical loading vs your maximum capacity (%)**	**Maximum proposed demand capacity the proposed low carbon solution would draw (kVA)**	**The DNO provider that will be supporting your electrical connection.☐**	**Have you contacted your DNO regarding connection to the local electricity network?**	**If No, please confirm the date you expect to engage with your DNO.**
Biggin Hill Fire Station	Fire + Ambulance station	Greater London	Site 1	Three Phase	0.4	69	24%	89	UK Power Networks	Yes (sent a letter of intent)	
Clapham Fire Station	Fire + Ambulance station	Greater London	Site 2	Three Phase	0.4	138	48%	101	UK Power Networks	Yes (sent a letter of intent)	
Deptford Fire Station	Fire + Ambulance station	Greater London	Site 3	Three Phase	0.4	69	32%	113	UK Power Networks	Yes (sent a letter of intent)	
Hendon Fire Station	Fire + Ambulance station	Greater London	Site 4	Three Phase	0.4	69	34%	97	UK Power Networks	Yes (sent a letter of intent)	
Holloway Fire Station	Fire + Ambulance station	Greater London	Site 5	Three Phase	0.4	69	41%	97	UK Power Networks	Yes (sent a letter of intent)	
Ruislip Fire Station	Fire + Ambulance station	Greater London	Site 6	Three Phase	0.4	69	35%	131	UK Power Networks	Yes (sent a letter of intent)	
Tooting Fire Station	Fire + Ambulance station	Greater London	Site 7	Three Phase	0.4	40	37%	119	UK Power Networks	Yes (sent a letter of intent)	
Wandsworth Fire Station	Fire + Ambulance station	Greater London	Site 8	Three Phase	0.4	69	41%	95	UK Power Networks	Yes (sent a letter of intent)	
Wallington Fire Station	Fire + Ambulance station	Greater London	Site 9	Three Phase	0.4	69	24%	89	UK Power Networks	Yes (sent a letter of intent)	
Mitcham Fire Station	Fire + Ambulance station	Greater London	Site 10	Three Phase	0.4	69	51%	65	UK Power Networks	Yes (sent a letter of intent)	
			Site 11								
			Site 12								
			Site 13								
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			Site 15								
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Step 2.2: Building Details

Please use the table below to provide the building details for all measures included within this application.

• Information is required for all buildings where measures are to be installed.
• All fields are compulsory and if not completed, your application may not be considered for funding. Please ensure to fill in all red cells and follow any pop up guidance for each column.

• Please use a new row for each separate building.
• Please scroll across to the right to provide information on all UPRNs, MPRNs and MPANs. Do not place multiple references into one cell. Contact phase4psdsgrants@salixfinance.co.uk should the columns below not be sufficient to cover all additional UPRNs, MPRNs, and MPANs within your building.

Site Name	Building Name	Building Type	Building Number	Building ID	Postcode	UPRN 1	FY 23/24 Display Energy Certificate Rating (DEC)	Display Energy Certificate Unique Number (DEC)	Building Age (Years)	Building Ownership	Site Life Remaining (years)	Years of Lease Remaining, Including Renewal - if applicable	Expiry Date of Current Lease	Gross Internal Area of Heated Areas (m^2)	Existing Fossil Fuel Type	Baseline Annual Fossil Fuel Use (kWh/year)	Baseline Annual Electricity Use (kWh/year)	Annual (April 2023-March 2024) Fossil Fuel Consumption (kWh/year)	Annual (April 2023-March 2024) Electricity Consumption (kWh/year)	Source of Baseline Energy Data	DHW Demand (kW)
Biggin Hill Fire Station	Biggin Hill Fire Station	Emergency services	Building 1		TN16 3UB	100023390283	D	0198-1214-4832-8092-2802	85	Freehold	30			406	Gas	114,602	30,971	102,958	30,971	Metering	12
Clapham Fire Station	Clapham Fire Station	Emergency services	Building 2		SW4 0JT	100023362689	C	2146-1879-9873-8598-8705	61	Freehold	30			1,689	Gas	160,275	153,357	137,966	153,357	Metering	23
Deptford Fire Station	Deptford Fire Station	Emergency services	Building 3		SE8 5DB	100023282026	C	7528-9414-6042-5192-8202	121	Freehold	30			837	Gas	175,827	37,837	156,822	37,837	Metering	12
Hendon Fire Station	Hendon Fire Station	Emergency services	Building 4		NW4 4BL	200166892	C	4126-4314-9602-3922-9906	110	Freehold	30			797	Gas	182,803	46,569	164,514	46,569	Metering	23
Holloway Fire Station	Holloway Fire Station	Emergency services	Building 5		N7 7QT	5300050556	C	2142-9114-1312-6122-6302	116	Freehold	30			818	Gas	113,310	41,042	101,581	41,042	Metering	18
Ruislip Fire Station	Ruislip Fire Station	Emergency services	Building 6		HA4 7TW	100023034128	D	0225-8203-3144-1696-0314	60	Freehold	30			647	Gas	101,419	50,104	91,784	50,104	Metering	18
Tooting Fire Station	Tooting Fire Station	Emergency services	Building 7		SW17 7SQ	10091983574	C	0227-6273-2114-8794-2864	117	Freehold	30			1,233	Gas	288,463	26,469	257,254	26,469	Metering	23
Wandsworth Fire Station	Wandsworth Fire Station	Emergency services	Building 8		SW18 1RL	10091983586	B	3025-2620-3112-7104-9403	66	Freehold	30			1,312	Gas	160,366	61,987	140,871	61,987	Metering	18
Wallington Fire Station	Wallington Fire Station	Emergency services	Building 9		SM6 8TE	5870093672	C	8826-9129-9510-1801-5483	86	Freehold	30			605	Gas	121,646	41,501	110,389	41,501	Metering	12
Mitcham Fire Station	Mitcham Fire Station	Emergency services	Building 10		CR4 4BJ	48108446	C	1328-2679-6617-8300-1463	9	PFI - Transfer Clause	30			1,257	Gas	146,990	88,158	133,415	88,158	Metering	23
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Step 3: Heating System

Please complete the two tables below for your existing and proposed heating systems.

Section 1. Existing System

- Please use one line per heating plant, please combine into one line if multiple boilers of the same model and age are to be removed.
- If systems contain different models or ages, please separate them. Please input fossil fuel heating plants that are to be retained, setting the like-for-like costs as zero.
- If one fossil-fuel heating plant supplies heating to multiple buildings, split this out into separate rows for each building that it supplies, splitting the load output and like-for-like costs accordingly.

Select Yes for 'Does Fossil Fuel Heating Plant form part of a Multi-Building System?'.

- The default assumption is that each fossil fuelled heating plant is a boiler, if it is any other equipment please specify (e.g. CHP) in commentary.

Existing Heating System																		Like-for-like Costs (Mandatory Contribution)					Total	
Fossil Fuel System	Site Name	Building Name	Make	Model	Age of System (years)	Is Unit to be Removed or Retained?	Output Load Per Unit (kW)	Number of Duty Units	Total Output Load (kW)	Current Seasonal Efficiency (%)	Gross Internal Area of Heated Area (m2)	System to Supply Space Heating, DHW or Both	Existing Flow Temperature for Space Heating (ºC)	Hot Water Temperature DHW (ºC)	1/2/4-pipe Distribution System	Does Fossil Fuel Heating Plant form part of a Multi-Building System?	Confirm Provision of EoL Evidence	Removal of Existing Equipment £	Main Equipment Including Controls £	Plinth, Pipework Connections Insulation £	Installation £	Commissioning £	Cost of Fossil Fuel Replacement System [like-for-like]	Commentary Detail system type e.g. boiler, CHP. Add comment if the existing heating system fed multiple buildings Detail proportion of building heating demand met by system %
FF System 1	Biggin Hill Fire Station	Biggin Hill Fire Station	Vaillant	VU GB 656	14	Removed	65	1	65	85%	336	Space Heating	75		2-pipe	No	Yes	£500	£3,186	£0	£2,500	£500	£6,686	Compensated radiator circuit
FF System 2	Biggin Hill Fire Station	Biggin Hill Fire Station	Vaillant	VU GB 656	12	Removed	65	1	65	85%	336	Space Heating	75		2-pipe	No	Yes	£500	£3,186	£0	£2,500	£500	£6,686	Compensated radiator circuit
FF System 3	Biggin Hill Fire Station	Biggin Hill Fire Station	AO Smith	BFC 28	8	Retained	29	1	29	90%	336	DHW		60	2-pipe	No	N/A - retained	£0	£0	£0	£0	£0		Replacement not included within funding application due to age - applicant covered works as building will be fully electrified
FF System 4	Biggin Hill Fire Station	Biggin Hill Fire Station	Reznor Unit Heater	UDSA	14	Removed	18	1	18	85%	70	Space Heating				No	Yes	£500	£2,749	£0	£2,500	£500	£6,249	Direct fired air heater to appliance bay, heated to 5 degC only, so more limited use than original design
FF System 5	Clapham Fire Station	Clapham Fire Station	Potterton	Paramount 2 40	16	Removed	38	3	114	90%	1,429	Space Heating	70		2-pipe	No	Yes	£500	£6,373	£0	£2,500	£500	£9,873	Compensated radiator circuit
FF System 6	Clapham Fire Station	Clapham Fire Station	Senertec	Micro gas CHP	16	Removed	12.5	2	25	50%	1429	Space Heating and DHW	80	60	2-pipe	No	Yes	£500	£0	£0	£0	£0	£500	CHP - no run hours in last year - not fundamentally needed for space heat generation, so stripout only included
FF System 7	Clapham Fire Station	Clapham Fire Station	Reznor Unit Heater	UDSA	15	Removed	29	2	58	85%	260	Space Heating				No	Yes	£500	£3,708	£0	£2,500	£500	£7,208	Direct fired air heater to appliance bay, heated to 5 degC only, so more limited use than original design
FF System 8	Deptford Fire Station	Deptford Fire Station	AO Smith	UB70	10	Removed	60	1	60	90%	744	Space Heating	68		2-pipe	No	Yes	£500	£3,186	£0	£2,500	£500	£6,686	
FF System 9	Deptford Fire Station	Deptford Fire Station	AO Smith	BFC 28	7	Retained	29	1	29	90%	744	DHW		60	2-pipe	No	N/A - retained	£0	£0	£0	£0	£0		Replacement not included within funding application due to age - applicant covered works as building will be fully electrified
FF System 10	Deptford Fire Station	Deptford Fire Station	Reznor Unit Heater	UDSA	8	Retained	18	1	18	85%	93	Space Heating				No	N/A - retained	£0	£0	£0	£0	£0		Replacement not included within funding application due to age - applicant covered works as building will be fully electrified
FF System 11	Hendon Fire Station	Hendon Fire Station	Hamworthy	Variheat	12	Removed	95	1	95	85%	797	Space Heating	60		2-pipe	No	Yes	£500	£4,226	£0	£2,500	£500	£7,726	Compensated radiator circuit
FF System 12	Hendon Fire Station	Hendon Fire Station	AO Smith	BFC 50	12	Removed	47	1	47	90%	797	DHW		60	2-pipe	No	Yes	£500	£7,953	£0	£2,500	£500	£11,453	
FF System 13	Holloway Fire Station	Holloway Fire Station	Potterton	Paramount 3 40	14	Removed	38	2	76	90%	619	Space Heating	70		2-pipe	No	Yes	£500	£3,595	£0	£2,500	£500	£7,095	
FF System 14	Holloway Fire Station	Holloway Fire Station	AO Smith	BFC 28	16	Removed	29	1	29	90%	619	DHW		60	2-pipe	No	Yes	£500	£7,157	£0	£2,500	£500	£10,657	
FF System 15	Holloway Fire Station	Holloway Fire Station	Reznor Unit Heater	UDSA	6	Retained	41	1	41	85%	199	Space Heating				No	N/A - retained	£0	£0	£0	£0	£0		Replacement not included within funding application due to age - applicant covered works as building will be fully electrified
FF System 16	Ruislip Fire Station	Ruislip Fire Station	Remeha	Quinta Pro 65	14	Removed	62	2	124	85%	497	Space Heating	70		2-pipe	No	Yes	£500	£6,373	£0	£2,500	£500	£9,873	Compensated radiator circuit
FF System 17	Ruislip Fire Station	Ruislip Fire Station	AO Smith	BFC 50	13	Removed	47	1	47	90%	497	DHW		60	2-pipe	No	Yes	£500	£7,953	£0	£2,500	£500	£11,453	
FF System 18	Ruislip Fire Station	Ruislip Fire Station	Ambirad Unit Heater	UDSA	20	Removed	25	1	25	85%	60	Space Heating				No	Yes	£500	£2,880	£0	£2,500	£500	£6,380	Unit off due to changes to area
FF System 19	Ruislip Fire Station	Ruislip Fire Station	Potterton	System 12	14	Removed	12	1	12	85%	60	Space Heating	70		2-pipe	No	Yes	£500	£687	£0	£2,500	£500	£4,187	Compensated radiator circuit
FF System 20	Ruislip Fire Station	Ruislip Fire Station	Reznor Unit Heater	UESA	13	Removed	51	1	51	85%	150	Space Heating				No	Yes	£500	£3,708	£0	£2,500	£500	£7,208	Direct fired air heater to appliance bay, heated to 5 degC only, so more limited use than original design
FF System 21	Tooting Fire Station	Tooting Fire Station	Hamworthy	Variheat	18	Removed	70	2	140	85%	1,025	Space Heating	60		2-pipe	No	Yes	£500	£7,190	£0	£2,500	£500	£10,690	Compensated radiator circuit
FF System 22	Tooting Fire Station	Tooting Fire Station	AO Smith	BFC 60	21	Removed	57	1	57	85%	1025	DHW		60	2-pipe	No	Yes	£500	£7,953	£0	£2,500	£500	£11,453	
FF System 23	Tooting Fire Station	Tooting Fire Station	Reznor Unit Heater	UDSA	18	Removed	18	3	54	85%	208	Space Heating				No	Yes	£500	£8,246	£0	£2,500	£500	£11,746	Direct fired air heater to appliance bay, heated to 5 degC only, so more limited use than original design
FF System 24	Wandsworth Fire Station	Wandsworth Fire Station	Potterton	Paramount 3 40	15	Removed	38	3	114	85%	1,034	Space Heating	70		2-pipe	No	Yes	£500	£3,186	£0	£2,500	£500	£6,686	Compensated radiator circuit
FF System 25	Wandsworth Fire Station	Wandsworth Fire Station	AO Smith	BFC 60	13	Removed	57	1	57	90%	1034	DHW			2-pipe	No	Yes	£500	£7,953	£0	£2,500	£500	£11,453	
FF System 26	Wandsworth Fire Station	Wandsworth Fire Station	Senertec	Micro gas CHP	16	Removed	12.5	2	25	50%	1034	Space Heating and DHW	80	60	2-pipe	No	Yes	£500	£40,000	£0	£3,000	£1,000	£44,500	CHP - but did run in last year - incuded in replacement costs
FF System 27	Wandsworth Fire Station	Wandsworth Fire Station	Reznor Unit Heater	UDSA	13	Removed	29	2	58	85%	278	Space Heating				No	Yes	£500	£3,708	£0	£2,500	£500	£7,208	Direct fired air heater to appliance bay, heated to 5 degC only, so more limited use than original design
FF System 28	Wallington Fire Station	Wallington Fire Station	AO Smith	UB 10	10	Removed	91	1	91	90%	505	Space Heating	65			No	Yes	£500	£5,099	£0	£2,500	£500	£8,599	Compensated radiator circuit
FF System 29	Wallington Fire Station	Wallington Fire Station	AO Smith	BFC 60	21	Removed	57	1	57	90%	505	DHW		60		No	Yes	£500	£7,953	£0	£2,500	£500	£11,453	
FF System 30	Wallington Fire Station	Wallington Fire Station	Ambirad Unit Heater	UDSA	21	Removed	25	1	25	85%	100	Space Heating				No	Yes	£500	£2,880	£0	£2,500	£500	£6,380	Direct fired air heater to appliance bay, heated to 5 degC only, so more limited use than original design
FF System 31	Wallington Fire Station	Wallington Fire Station	Baxi	424 Combi	3	Retained	24	1	24	85%	50	Space Heating and DHW	80	60		No	N/A - retained	£0	£0	£0	£0	£0		Replacement not included within funding application due to age - applicant covered works as building will be fully electrified
FF System 32	Mitcham Fire Station	Mitcham Fire Station	Evomax	Evomax 80	12	Removed	80	2	160	90%	1257	Space Heating and DHW	70	60	2-pipe	No	Yes	£500	£7,190	£0	£2,500	£500	£10,690	
FF System 33	Mitcham Fire Station	Mitcham Fire Station	Energimizer CHP	Smartblock 75	12	Removed	22	1	22	60%	1257	Space Heating and DHW	70	60	2-pipe	No	Yes	£500	£0	£0	£0	£0	£500	CHP - no run hours in last year - not fundamentally needed for space heat generation, so stripout only included
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Total																							£261,278	

Section 2. Proposed System

- Provide detail of your proposed system. Please note that building fabric and energy efficiency improvements should be considered first before sizing your new low carbon heating system.
- If a low carbon solution is to provide heating to multiple buildings, the data should be split into separate rows with the sizing and costs split appropriately.
- Each component in a cascading/two-stage low carbon solution should be in separate rows. Further guidance can be found in under Step 3 in the Guidance tab.

New Low Carbon Heating System										Space Heating				DHW						Low Carbon Heating Costs					
Low Carbon System	Site Name	Building Name	Technology - Work Type	Existing System to be Replaced	Make	Model	sCOP	Output Load Per Unit (kW thermal)	No. of Units	Total Output Load (kW thermal)	Proposed vs Existing System Load	Flow Temperature (°C)	Return Temperature (°C)	Temperature (if applicable) °C	Refrigerant (Heat Pumps only)	Does Low Carbon Heating System form part of a Multi-Building System?	Heating System Configuration	System to Supply Space Heating, DHW or Both	Heating Emitter Type	Equipment Cost only £	Installation and Comissioning £	Additional Measures e.g. Emitters, Distribution £	Electrical Infrastructure £	Total Cost of Low Carbon Heating Measure	Commentary Add any additional commentary here, including detail about any two-stage heat pumps, and for refrigerants for which phase-out is imminent. If DHW is not supplied by the low carbon system, how will this be provided?
LC System 1	Biggin Hill Fire Station	Biggin Hill Fire Station	Air source heat pump (air to water)	FF System 1	Mitsubishi	MEHP-iS-G07 0051	2.39	50	1	50	77%	65	55		R32	No	Bivalent (Hybrid)	Space Heating	Radiators	35800	£155,734	£500	£47,000	£239,034	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 2	Biggin Hill Fire Station	Biggin Hill Fire Station	Electric heater	FF System 4	Flexheat	Industrial electric fan heater.	1.00	6	1	6	33%				Other (specify in commentary)	No	Standalone	Space Heating	other	1669	£2,465	£0	£1,000	£5,134	Replaces appliance bay unit heater
LC System 3	Clapham Fire Station	Clapham Fire Station	Air source heat pump (air to water)	FF System 5	Mitsubishi	MEHP-iS-G07 0051	2.30	50	1	50	44%	65	55		R32	No	Bivalent (Hybrid)	Space Heating	Radiators	35800	£278,771	£1,500	£237,000	£553,071	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 4	Clapham Fire Station	Clapham Fire Station	Electric heater	FF System 7	Flexheat	Industrial electric fan heater.	1.00	6	2	12	21%				Other (specify in commentary)	No	Standalone	Space Heating	other	3338	£4,310	£0	£1,000	£8,648	Replaces appliance bay unit heater
LC System 5	Deptford Fire Station	Deptford Fire Station	Air source heat pump (air to water)	FF System 8	Mitsubishi	MEHP-iS-G07 0061	2.46	60	1	60	100%	65	55		R32	No	Bivalent (Hybrid)	Space Heating	Radiators	36800	£186,318	£4,500	£49,000	£276,618	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 6																								£0	Line blank
LC System 7	Hendon Fire Station	Hendon Fire Station	Air source heat pump (air to water)	FF System 11	Mitsubishi	MEHP-iS-G07 0051	2.82	50	1	50	53%	65	55		R32	No	Bivalent (Hybrid)	Space Heating	Radiators	36600	£125,444	£9,500	£40,948	£212,493	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 8	Hendon Fire Station	Hendon Fire Station	Air source heat pump (air to water)	FF System 12	Mitsubishi	Ecodan PUZ-WZ80VAA(-BS)	2.00	8	1	8	17%			60	R290 (propane)	No	Bivalent (Hybrid)	DHW	other	9015	£20,071	£0	£6,552	£35,638	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 9	Holloway Fire Station	Holloway Fire Station	Air source heat pump (air to water)	FF System 13	Mitsubishi	MEHP-iS-G07 0051	2.31	50	1	50	66%	65	55		R32	No	Bivalent (Hybrid)	Space Heating	Radiators	36600	£166,913	£500	£46,324	£250,337	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 10	Holloway Fire Station	Holloway Fire Station	Air source heat pump (air to water)	FF System 14	Mitsubishi	Ecodan PUZ-WZ80VAA(-BS)	2.00	8	1	8	28%			60	R290 (propane)	No	Bivalent (Hybrid)	DHW	other	8955	£22,255	£0	£6,176	£37,387	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 11	Ruislip Fire Station	Ruislip Fire Station	Air source heat pump (air to water)	FF System 16	Mitsubishi	MEHP-iS-G07 0051	2.28	50	1	50	40%	65	55		R32	No	Bivalent (Hybrid)	Space Heating	Radiators	36600	£148,423	£5,000	£42,241	£232,265	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 12	Ruislip Fire Station	Ruislip Fire Station	Air source heat pump (air to water)	FF System 17	Mitsubishi	Ecodan PUZ-WZ80VAA(-BS)	2.00	8	1	8	17%			60	R290 (propane)	No	Bivalent (Hybrid)	DHW	other	9015	£23,748	£0	£6,759	£39,521	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 13	Ruislip Fire Station	Ruislip Fire Station	Electric boiler	FF System 19	Flexheat	FHEL14 Touch Display Series	1.00	14	1	14	113%	70	60		Other (specify in commentary)	No	Standalone	Space Heating	other	1279	£2,880	£0	£0	£4,159	Electric Boiler to provide space heating single for Ruislip Rear Building, of which load is not included in low-carbon system
LC System 14	Ruislip Fire Station	Ruislip Fire Station	Electric heater	FF System 18	Flexheat	Industrial electric fan heater.	1.00	6	2	12	48%				Other (specify in commentary)	No	Standalone	Space Heating	other	3338	£4,310	£0	£1,000	£8,648	Replaces appliance bay unit heater

LC System 15	Tooting Fire Station	Tooting Fire Station	Air source heat pump (air to water)	FF System 21	Mitsubishi	MEHP-iS-G07 0061	2.67	60	1	60	43%	60	50		R32	No	Bivalent (Hybrid)	Space Heating	Radiators	39600	£185,749	£4,500	£57,794	£287,643	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 16	Tooting Fire Station	Tooting Fire Station	Air source heat pump (air to water)	FF System 22	Mitsubishi	Ecodan PUZ-WZ80VAA(-BS)	2.00	8	1	8	14%			60	R290 (propane)	No	Bivalent (Hybrid)	DHW	other	9015	£24,767	£0	£7,706	£41,487	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 17	Tooting Fire Station	Tooting Fire Station	Electric heater	FF System 23	Flexheat	Industrial electric fan heater.	1.00	6	1	6	11%				Other (specify in commentary)	No	Standalone	Space Heating	other	5007	£6,154	£0	£1,000	£12,161	Replaces appliance bay unit heater
LC System 18	Wandsworth Fire Station	Wandsworth Fire Station	Air source heat pump (air to water)	FF System 24	Mitsubishi	MEHP-iS-G07 0051	2.61	50	1	50	44%	65	55		R32	No	Bivalent (Hybrid)	Space Heating	Radiators	36600	£195,685	£2,000	£50,431	£284,716	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 19	Wandsworth Fire Station	Wandsworth Fire Station	Air source heat pump (air to water)	FF System 25	Mitsubishi	Ecodan PUZ-WZ80VAA(-BS)	2.00	8	1	8	14%			60	R290 (propane)	No	Bivalent (Hybrid)	DHW	other	9555	£31,310	£0	£8,069	£48,934	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 20	Wandsworth Fire Station	Wandsworth Fire Station	Electric heater	FF System 27	Flexheat	Industrial electric fan heater.	1.00	6	2	12	21%				Other (specify in commentary)	No	Standalone	Space Heating	other	5007	£6,154	£0	£1,000	£12,161	Replaces appliance bay unit heater
LC System 21	Wallington Fire Station	Wallington Fire Station	Air source heat pump (air to water)	FF System 28	Mitsubishi	MEHP-iS-G07 0051	2.78	50	1	50	55%	65	55		R32	No	Bivalent (Hybrid)	Space Heating	Radiators	36600	£180,282	£500	£40,948	£258,330	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 22	Wallington Fire Station	Wallington Fire Station	Air source heat pump (air to water)	FF System 29	Mitsubishi	Ecodan PUZ-WZ80VAA(-BS)	2.00	8	1	8	14%			60	R290 (propane)	No	Bivalent (Hybrid)	DHW	other	9015	£28,845	£0	£6,552	£44,412	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 23	Wallington Fire Station	Wallington Fire Station	Electric heater	FF System 30	Flowair	Industrial electric fan heater.	1.00	6	1	6	24%				Other (specify in commentary)	No	Standalone	Space Heating	other	1669	£2,465	£0	£1,000	£5,134	Replaces appliance bay unit heater
LC System 24	Mitcham Fire Station	Mitcham Fire Station	Air source heat pump (air to water)	FF System 32	Mitsubishi	MEHP-iS-G07 0051	2.37	50	1	50	31%	65	55	60	R32	No	Bivalent (Hybrid)	Both	Radiators	41971	£175,284	£1,000	£35,000	£253,255	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
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Step 4.1

*Do **not** paste data into cells, or **always paste 'as values'**, ensuring you are not pasting source formatting. Where the cells are formatted with dropdown lists, please use the dropdown. Please avoid using special characters.*

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Step 3: Heating System

Please complete the two tables below for your existing and proposed heating systems.

Section 1. Existing System

- Please use one line per heating plant, please combine into one line if multiple boilers of the same model and age are to be removed.
- If systems contain different models or ages, please separate them. Please input fossil fuel heating plants that are to be retained, setting the like-for-like costs as zero.
- If one fossil-fuel heating plant supplies heating to multiple buildings, split this out into separate rows for each building that it supplies, splitting the load output and like-for-like costs accordingly.

Select Yes for 'Does Fossil Fuel Heating Plant form part of a Multi-Building System?'.

- The default assumption is that each fossil fuelled heating plant is a boiler, if it is any other equipment please specify (e.g. CHP) in commentary.

Existing Heating System																		Like-for-like Costs (Mandatory Contribution)					Total	
Fossil Fuel System	Site Name	Building Name	Make	Model	Age of System (years)	Is Unit to be Removed or Retained?	Output Load Per Unit (kW)	Number of Duty Units	Total Output Load (kW)	Current Seasonal Efficiency (%)	Gross Internal Area of Heated Area (m2)	System to Supply Space Heating, DHW or Both	Existing Flow Temperature for Space Heating (°C)	Hot Water Temperature DHW (°C)	1/2/4-pipe Distribution System	Does Fossil Fuel Heating Plant form part of a Multi-Building System?	Confirm Provision of EoL Evidence	Removal of Existing Equipment £	Main Equipment Including Controls £	Plinth, Pipework Connections Insulation £	Installation £	Commissioning £	Cost of Fossil Fuel Replacement System [like-for-like]	Commentary Detail system type e.g. boiler, CHP. Add comment if the existing heating system fed multiple buildings Detail proportion of building heating demand met by system %
FF System 1	Biggin Hill Fire Station	Biggin Hill Fire Station	Vaillant	VU GB 656	14	Removed	65	1	65	85%	336	Space Heating	75	🟥	2-pipe	No	Yes	£500	£3,186	£0	£2,500	£500	£6,686	Compensated radiator circuit
FF System 2	Biggin Hill Fire Station	Biggin Hill Fire Station	Vaillant	VU GB 656	12	Removed	65	1	65	85%	336	Space Heating	75	🟥	2-pipe	No	Yes	£500	£3,186	£0	£2,500	£500	£6,686	Compensated radiator circuit
FF System 3	Biggin Hill Fire Station	Biggin Hill Fire Station	AO Smith	BFC 28	8	Retained	29	1	29	90%	336	DHW	🟥	60	2-pipe	No	N/A - retained	£0	£0	£0	£0	£0	🟥	Replacement not included within funding application due to age - applicant covered works as building will be fully electrified
FF System 4	Biggin Hill Fire Station	Biggin Hill Fire Station	Reznor Unit Heater	UDSA	14	Removed	18	1	18	85%	70	Space Heating	🟥	🟥	🟥	No	Yes	£500	£2,749	£0	£2,500	£500	£6,249	Direct fired air heater to appliance bay, heated to 5 degC only, so more limited use than original design
FF System 5	Clapham Fire Station	Clapham Fire Station	Potterton	Paramount 2 40	16	Removed	38	3	114	90%	1,429	Space Heating	70	🟥	2-pipe	No	Yes	£500	£6,373	£0	£2,500	£500	£9,873	Compensated radiator circuit
FF System 6	Clapham Fire Station	Clapham Fire Station	Senertec	Micro gas CHP	16	Removed	12.5	2	25	50%	1429	Space Heating and DHW	80	60	2-pipe	No	Yes	£500	£0	£0	£0	£0	£500	CHP - no run hours in last year - not fundamentally needed for space heat generation, so stripout only included
FF System 7	Clapham Fire Station	Clapham Fire Station	Reznor Unit Heater	UDSA	15	Removed	29	2	58	85%	260	Space Heating	🟥	🟥	🟥	No	Yes	£500	£3,708	£0	£2,500	£500	£7,208	Direct fired air heater to appliance bay, heated to 5 degC only, so more limited use than original design
FF System 8	Deptford Fire Station	Deptford Fire Station	AO Smith	UB70	10	Removed	60	1	60	90%	744	Space Heating	68	🟥	2-pipe	No	Yes	£500	£3,186	£0	£2,500	£500	£6,686	
FF System 9	Deptford Fire Station	Deptford Fire Station	AO Smith	BFC 28	7	Retained	29	1	29	90%	744	DHW	🟥	60	2-pipe	No	N/A - retained	£0	£0	£0	£0	£0	🟥	Replacement not included within funding application due to age - applicant covered works as building will be fully electrified
FF System 10	Deptford Fire Station	Deptford Fire Station	Reznor Unit Heater	UDSA	8	Retained	18	1	18	85%	93	Space Heating	🟥	🟥	🟥	No	N/A - retained	£0	£0	£0	£0	£0	🟥	Replacement not included within funding application due to age - applicant covered works as building will be fully electrified
FF System 11	Hendon Fire Station	Hendon Fire Station	Hamworthy	Variheat	12	Removed	95	1	95	85%	797	Space Heating	60	🟥	2-pipe	No	Yes	£500	£4,226	£0	£2,500	£500	£7,726	Compensated radiator circuit
FF System 12	Hendon Fire Station	Hendon Fire Station	AO Smith	BFC 50	12	Removed	47	1	47	90%	797	DHW	🟥	60	2-pipe	No	Yes	£500	£7,953	£0	£2,500	£500	£11,453	
FF System 13	Holloway Fire Station	Holloway Fire Station	Potterton	Paramount 3 40	14	Removed	38	2	76	90%	619	Space Heating	70	🟥	2-pipe	No	Yes	£500	£3,595	£0	£2,500	£500	£7,095	
FF System 14	Holloway Fire Station	Holloway Fire Station	AO Smith	BFC 28	16	Removed	29	1	29	90%	619	DHW	🟥	60	2-pipe	No	Yes	£500	£7,157	£0	£2,500	£500	£10,657	
FF System 15	Holloway Fire Station	Holloway Fire Station	Reznor Unit Heater	UDSA	6	Retained	41	1	41	85%	199	Space Heating	🟥	🟥	🟥	No	N/A - retained	£0	£0	£0	£0	£0	🟥	Replacement not included within funding application due to age - applicant covered works as building will be fully electrified
FF System 16	Ruislip Fire Station	Ruislip Fire Station	Remeha	Quinta Pro 65	14	Removed	62	2	124	85%	497	Space Heating	70	🟥	2-pipe	No	Yes	£500	£6,373	£0	£2,500	£500	£9,873	Compensated radiator circuit
FF System 17	Ruislip Fire Station	Ruislip Fire Station	AO Smith	BFC 50	13	Removed	47	1	47	90%	497	DHW	🟥	60	2-pipe	No	Yes	£500	£7,953	£0	£2,500	£500	£11,453	
FF System 18	Ruislip Fire Station	Ruislip Fire Station	Ambirad Unit Heater	UDSA	20	Removed	25	1	25	85%	60	Space Heating	🟥	🟥	🟥	No	Yes	£500	£2,880	£0	£2,500	£500	£6,380	Unit off due to changes to area
FF System 19	Ruislip Fire Station	Ruislip Fire Station	Potterton	System 12	14	Removed	12	1	12	85%	60	Space Heating	70	🟥	2-pipe	No	Yes	£500	£687	£0	£2,500	£500	£4,187	Compensated radiator circuit
FF System 20	Ruislip Fire Station	Ruislip Fire Station	Reznor Unit Heater	UESA	13	Removed	51	1	51	85%	150	Space Heating	🟥	🟥	🟥	No	Yes	£500	£3,708	£0	£2,500	£500	£7,208	Direct fired air heater to appliance bay, heated to 5 degC only, so more limited use than original design
FF System 21	Tooting Fire Station	Tooting Fire Station	Hamworthy	Variheat	18	Removed	70	2	140	85%	1,025	Space Heating	60	🟥	2-pipe	No	Yes	£500	£7,190	£0	£2,500	£500	£10,690	Compensated radiator circuit
FF System 22	Tooting Fire Station	Tooting Fire Station	AO Smith	BFC 60	21	Removed	57	1	57	85%	1025	DHW	🟥	60	2-pipe	No	Yes	£500	£7,953	£0	£2,500	£500	£11,453	
FF System 23	Tooting Fire Station	Tooting Fire Station	Reznor Unit Heater	UDSA	18	Removed	18	3	54	85%	208	Space Heating	🟥	🟥	🟥	No	Yes	£500	£8,246	£0	£2,500	£500	£11,746	Direct fired air heater to appliance bay, heated to 5 degC only, so more limited use than original design
FF System 24	Wandsworth Fire Station	Wandsworth Fire Station	Potterton	Paramount 3 40	15	Removed	38	3	114	85%	1,034	Space Heating	70	🟥	2-pipe	No	Yes	£500	£3,186	£0	£2,500	£500	£6,686	Compensated radiator circuit
FF System 25	Wandsworth Fire Station	Wandsworth Fire Station	AO Smith	BFC 60	13	Removed	57	1	57	90%	1034	DHW	🟥	🟥	2-pipe	No	Yes	£500	£7,953	£0	£2,500	£500	£11,453	
FF System 26	Wandsworth Fire Station	Wandsworth Fire Station	Senertec	Micro gas CHP	16	Removed	12.5	2	25	50%	1034	Space Heating and DHW	80	60	2-pipe	No	Yes	£500	£40,000	£0	£3,000	£1,000	£44,500	CHP - but did run in last year - incuded in replacement costs
FF System 27	Wandsworth Fire Station	Wandsworth Fire Station	Reznor Unit Heater	UDSA	13	Removed	29	2	58	85%	278	Space Heating	🟥	🟥	🟥	No	Yes	£500	£3,708	£0	£2,500	£500	£7,208	Direct fired air heater to appliance bay, heated to 5 degC only, so more limited use than original design
FF System 28	Wallington Fire Station	Wallington Fire Station	AO Smith	UB 10	10	Removed	91	1	91	90%	505	Space Heating	65	🟥	🟥	No	Yes	£500	£5,099	£0	£2,500	£500	£8,599	Compensated radiator circuit
FF System 29	Wallington Fire Station	Wallington Fire Station	AO Smith	BFC 60	21	Removed	57	1	57	90%	505	DHW	🟥	60	🟥	No	Yes	£500	£7,953	£0	£2,500	£500	£11,453	
FF System 30	Wallington Fire Station	Wallington Fire Station	Ambirad Unit Heater	UDSA	21	Removed	25	1	25	85%	100	Space Heating	🟥	🟥	🟥	No	Yes	£500	£2,880	£0	£2,500	£500	£6,380	Direct fired air heater to appliance bay, heated to 5 degC only, so more limited use than original design
FF System 31	Wallington Fire Station	Wallington Fire Station	Baxi	424 Combi	3	Retained	24	1	24	85%	50	Space Heating and DHW	80	60	🟥	No	N/A - retained	£0	£0	£0	£0	£0	🟥	Replacement not included within funding application due to age - applicant covered works as building will be fully electrified
FF System 32	Mitcham Fire Station	Mitcham Fire Station	Evomax	Evomax 80	12	Removed	80	2	160	90%	1257	Space Heating and DHW	70	60	2-pipe	No	Yes	£500	£7,190	£0	£2,500	£500	£10,690	
FF System 33	Mitcham Fire Station	Mitcham Fire Station	Energimizer CHP	Smartblock 75	12	Removed	22	1	22	60%	1257	Space Heating and DHW	70	60	2-pipe	No	Yes	£500	£0	£0	£0	£0	£500	CHP - no run hours in last year - not fundamentally needed for space heat generation, so stripout only included
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Total																							£261,278	

Section 2. Proposed System

- Provide detail of your proposed system. Please note that building fabric and energy efficiency improvements should be considered first before sizing your new low carbon heating system.
- If a low carbon solution is to provide heating to multiple buildings, the data should be split into separate rows with the sizing and costs split appropriately.
- Each component in a cascading/two-stage low carbon solution should be in separate rows. Further guidance can be found in under Step 3 in the Guidance tab.

New Low Carbon Heating System										Space Heating				DHW						Low Carbon Heating Costs					
Low Carbon System	Site Name	Building Name	Technology - Work Type	Existing System to be Replaced	Make	Model	sCOP	Output Load Per Unit (kW thermal)	No. of Units	Total Output Load (kW thermal)	Proposed vs Existing System Load	Flow Temperature (°C)	Return Temperature (°C)	Temperature (if applicable) °C	Refrigerant (Heat Pumps only)	Does Low Carbon Heating System form part of a Multi-Building System?	Heating System Configuration	System to Supply Space Heating, DHW or Both	Heating Emitter Type	Equipment Cost only £	Installation and Comissioning £	Additional Measures e.g. Emitters, Distribution £	Electrical Infrastructure £	Total Cost of Low Carbon Heating Measure	Commentary Add any additional commentary here, including detail about any two-stage heat pumps, and for refrigerants for which phase-out is imminent. If DHW is not supplied by the low carbon system, how will this be provided?
LC System 1	Biggin Hill Fire Station	Biggin Hill Fire Station	Air source heat pump (air to water)	FF System 1	Mitsubishi	MEHP-iS-G07 0051	2.39	50	1	50	77%	65	55	🟥	R32	No	Bivalent (Hybrid)	Space Heating	Radiators	35800	£155,734	£500	£47,000	£239,034	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 2	Biggin Hill Fire Station	Biggin Hill Fire Station	Electric heater	FF System 4	Flexheat	Industrial electric fan heater	1.00	6	1	6	33%		🟥	🟥	Other (specify in commentary)	No	Standalone	Space Heating	other	1669	£2,465	£0	£1,000	£5,134	Replaces appliance bay unit heater
LC System 3	Clapham Fire Station	Clapham Fire Station	Air source heat pump (air to water)	FF System 5	Mitsubishi	MEHP-iS-G07 0051	2.30	50	1	50	44%	65	55	🟥	R32	No	Bivalent (Hybrid)	Space Heating	Radiators	35800	£278,771	£1,500	£237,000	£553,071	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 4	Clapham Fire Station	Clapham Fire Station	Electric heater	FF System 7	Flexheat	Industrial electric fan heater	1.00	6	2	12	21%		🟥	🟥	Other (specify in commentary)	No	Standalone	Space Heating	other	3338	£4,310	£0	£1,000	£8,648	Replaces appliance bay unit heater
LC System 5	Deptford Fire Station	Deptford Fire Station	Air source heat pump (air to water)	FF System 8	Mitsubishi	MEHP-iS-G07 0061	2.46	60	1	60	100%	65	55	🟥	R32	No	Bivalent (Hybrid)	Space Heating	Radiators	36800	£186,318	£4,500	£49,000	£276,618	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 6																								£0	Line blank
LC System 7	Hendon Fire Station	Hendon Fire Station	Air source heat pump (air to water)	FF System 11	Mitsubishi	MEHP-iS-G07 0051	2.82	50	1	50	53%	65	55	🟥	R32	No	Bivalent (Hybrid)	Space Heating	Radiators	36600	£125,444	£9,500	£40,948	£212,493	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 8	Hendon Fire Station	Hendon Fire Station	Air source heat pump (air to water)	FF System 12	Mitsubishi	Ecodan PUZ-WZ80VAA(-BS)	2.00	8	1	8	17%		🟥	60	R290 (propane)	No	Bivalent (Hybrid)	DHW	other	9015	£20,071	£0	£6,552	£35,638	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 9	Holloway Fire Station	Holloway Fire Station	Air source heat pump (air to water)	FF System 13	Mitsubishi	MEHP-iS-G07 0051	2.31	50	1	50	66%	65	55	🟥	R32	No	Bivalent (Hybrid)	Space Heating	Radiators	36600	£166,913	£500	£46,324	£250,337	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 10	Holloway Fire Station	Holloway Fire Station	Air source heat pump (air to water)	FF System 14	Mitsubishi	Ecodan PUZ-WZ80VAA(-BS)	2.00	8	1	8	28%		🟥	60	R290 (propane)	No	Bivalent (Hybrid)	DHW	other	8955	£22,255	£0	£6,176	£37,387	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 11	Ruislip Fire Station	Ruislip Fire Station	Air source heat pump (air to water)	FF System 16	Mitsubishi	MEHP-iS-G07 0051	2.28	50	1	50	40%	65	55	🟥	R32	No	Bivalent (Hybrid)	Space Heating	Radiators	36600	£148,423	£5,000	£42,241	£232,265	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 12	Ruislip Fire Station	Ruislip Fire Station	Air source heat pump (air to water)	FF System 17	Mitsubishi	Ecodan PUZ-WZ80VAA(-BS)	2.00	8	1	8	17%		🟥	60	R290 (propane)	No	Bivalent (Hybrid)	DHW	other	9015	£23,748	£0	£6,759	£39,521	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 13	Ruislip Fire Station	Ruislip Fire Station	Electric boiler	FF System 19	Flexheat	FHEL14 Touch Display Series	1.00	14	1	14	113%	70	60	🟥	Other (specify in commentary)	No	Standalone	Space Heating	other	1279	£2,880	£0	£0	£4,159	Electric Boiler to provide space heating single for Ruislip Rear Building, of which load is not included in low-carbon system
LC System 14	Ruislip Fire Station	Ruislip Fire Station	Electric heater	FF System 18	Flexheat	Industrial electric fan heater	1.00	6	2	12	48%		🟥	🟥	Other (specify in commentary)	No	Standalone	Space Heating	other	3338	£4,310	£0	£1,000	£8,648	Replaces appliance bay unit heater
LC System 15	Tooting Fire Station	Tooting Fire Station	Air source heat pump (air to water)	FF System 21	Mitsubishi	MEHP-iS-G07 0061	2.67	60	1	60	43%	60	50	🟥	R32	No	Bivalent (Hybrid)	Space Heating	Radiators	39600	£185,749	£4,500	£57,794	£287,643	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 16	Tooting Fire Station	Tooting Fire Station	Air source heat pump (air to water)	FF System 22	Mitsubishi	Ecodan PUZ-WZ80VAA(-BS)	2.00	8	1	8	14%		🟥	60	R290 (propane)	No	Bivalent (Hybrid)	DHW	other	9015	£24,767	£0	£7,706	£41,487	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 17	Tooting Fire Station	Tooting Fire Station	Electric heater	FF System 23	Flexheat	Industrial electric fan heater	1.00	6	1	6	11%		🟥	🟥	Other (specify in commentary)	No	Standalone	Space Heating	other	5007	£6,154	£0	£1,000	£12,161	Replaces appliance bay unit heater
LC System 18	Wandsworth Fire Station	Wandsworth Fire Station	Air source heat pump (air to water)	FF System 24	Mitsubishi	MEHP-iS-G07 0051	2.61	50	1	50	44%	65	55	🟥	R32	No	Bivalent (Hybrid)	Space Heating	Radiators	36600	£195,685	£2,000	£50,431	£284,716	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 19	Wandsworth Fire Station	Wandsworth Fire Station	Air source heat pump (air to water)	FF System 25	Mitsubishi	Ecodan PUZ-WZ80VAA(-BS)	2.00	8	1	8	14%		🟥	60	R290 (propane)	No	Bivalent (Hybrid)	DHW	other	9555	£31,310	£0	£8,069	£48,934	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 20	Wandsworth Fire Station	Wandsworth Fire Station	Electric heater	FF System 27	Flexheat	Industrial electric fan heater.	1.00	6	2	12	21%		🟥	🟥	Other (specify in commentary)	No	Standalone	Space Heating	other	5007	£6,154	£0	£1,000	£12,161	Replaces appliance bay unit heater
LC System 21	Wallington Fire Station	Wallington Fire Station	Air source heat pump (air to water)	FF System 28	Mitsubishi	MEHP-iS-G07 0051	2.78	50	1	50	55%	65	55	🟥	R32	No	Bivalent (Hybrid)	Space Heating	Radiators	36600	£180,282	£500	£40,948	£258,330	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 22	Wallington Fire Station	Wallington Fire Station	Air source heat pump (air to water)	FF System 29	Mitsubishi	Ecodan PUZ-WZ80VAA(-BS)	2.00	8	1	8	14%		🟥	60	R290 (propane)	No	Bivalent (Hybrid)	DHW	other	9015	£28,845	£0	£6,552	£44,412	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 23	Wallington Fire Station	Wallington Fire Station	Electric heater	FF System 30	Flowair	Industrial electric fan heater	1.00	6	1	6	24%		🟥	🟥	Other (specify in commentary)	No	Standalone	Space Heating	other	1669	£2,465	£0	£1,000	£5,134	Replaces appliance bay unit heater
LC System 24	Mitcham Fire Station	Mitcham Fire Station	Air source heat pump (air to water)	FF System 32	Mitsubishi	MEHP-iS-G07 0051	2.37	50	1	50	31%	65	55	60	R32	No	Bivalent (Hybrid)	Both	Radiators	41971	£175,284	£1,000	£35,000	£253,255	System is provided with resiliance / peak lopping by electric boiler, costs not included in this application.
LC System 25																								£0	
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Total																								£3,151,184	

Step 4.1: Carbon Saving Measures

Complete the two tables below by entering all proposed carbon saving measures. Please fill out the previous Steps before completing Step 4.1, as this table is reliant on data from them.

Design Status	Procurement Status
Concept Design (RIBA Stage 2)	Pre-Tender

Technology Type	Project Value Split (£)	Like-for-like Replacement Costs (£)	Minimum Recipient Contribution as % of project value	Total Project Value (£)	Minimum Recipient Contribution (£)
Energy Efficiency	£165,776	N/A	12%	£3,316,960	**£398,035**
Low Carbon Heating	£3,151,184	£261,278			

Annual Energy Bill Savings	Payback in years
-£57,193	-58.00

Bespoke Carbon Factor 1 (kg/kWh)	Bespoke Carbon Factor 2 (kg/kWh)

Compliance
Compliant

Building Fabric Improvements and Energy Efficiency Measures

Please input all building fabric improvements, energy efficiency and enabling measures on separate rows.

	Description of Work	Building	Project Type	Technology - Work Type	Current Energy Type	Fuel Cost (p/kWh)	Annual kWh Pre-Project	Annual kWh Post-Project	Annual kWh Savings	% kWh Savings	Project Cost	Annual Financial Impact (£)	Payback in Years	Carbon Cost (£/tCO2eLT Direct)	Annual Direct Carbon Savings (tonnes)	Annual Indirect Carbon Savings (tonnes)	Data Entry Check
EE 1	Loft insulation	Hendon Fire Station	Insulation - building fabric	Loft insulation	Gas	6.00	182,803	175,756	7,047.00	4%	£13,513	£423	31.96	£389.03	1.29		OK
EE 2	Natural ventilation optimisation using CO2 controls	Mitcham Fire Station	Insulation - draught proofing	Insulation - draught proofing	Gas	6.00	146,990	121,925	25,065.00	17%	£40,044	£1,504	26.63	£299.19	4.58		OK
EE 3	Catering electrification	Biggin Hill Fire Station	Industrial Equipment	Energy efficient convection-oven	Gas	6.00	114,602	107,395	7,207.00	6%	£8,150	£432	18.85	£206.48	1.32		OK
EE 4	Catering electrification	Clapham Fire Station	Industrial Equipment	Energy efficient convection-oven	Gas	6.00	160,275	150,617	9,657.60	6%	£21,088	£579	36.39	£398.69	1.76		OK
EE 5	Catering electrification	Deptford Fire Station	Industrial Equipment	Energy efficient convection-oven	Gas	6.00	175,827	164,849	10,977.57	6%	£11,244	£659	17.07	£187.02	2.00		OK
EE 6	Catering electrification	Hendon Fire Station	Industrial Equipment	Energy efficient convection-oven	Gas	6.00	175,756	164,240	11,515.99	7%	£11,244	£691	16.27	£178.27	2.10		OK
EE 7	Catering electrification	Holloway Fire Station	Industrial Equipment	Energy efficient convection-oven	Gas	6.00	113,310	106,199	7,110.65	6%	£11,244	£427	26.35	£288.72	1.30		OK
EE 8	Catering electrification	Ruislip Fire Station	Industrial Equipment	Energy efficient convection-oven	Gas	6.00	101,419	94,994	6,424.86	6%	£11,244	£385	29.17	£319.54	1.17		OK
EE 9	Catering electrification	Tooting Fire Station	Industrial Equipment	Energy efficient convection-oven	Gas	6.00	288,463	270,455	18,007.80	6%	£11,244	£1,080	10.41	£114.01	3.29		OK
EE 10	Catering electrification	Wandsworth Fire Station	Industrial Equipment	Energy efficient convection-oven	Gas	6.00	160,366	150,505	9,861.00	6%	£15,519	£592	26.23	£287.35	1.80		OK
EE 11	Catering electrification	Wallington Fire Station	Industrial Equipment	Energy efficient convection-oven	Gas	6.00	121,646	113,919	7,727.00	6%	£11,244	£464	24.25	£265.69	1.41		OK
EE 12										0%							
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Low Carbon Heating

Current fuel displaced should not exceed the final fuel consumption after the above building fabric improvements and energy efficiency measures have been considered.

Please note for cascading systems: If proposing a cascading system, please split the energy displaced and consumed (kWh) appropriately between them. Do not simply enter '0' or token values, as this will affect the accuracy of the calculated Grant Carbon Cost in Step 4.2.

	Technology - Work Type	Building	Description of Work	Current Energy Type	Current Fuel Cost (p/kWh)	Proposed Fuel	Proposed Fuel Cost (p/kWh)	Current Fuel Displaced (kWh)	Proposed Fuel Consumption (kWh)	Project Cost	Annual Financial Impact (£)	Payback in Years	£/tCO2e LT	Annual Direct Carbon Savings (tonnes)	Annual Indirect Carbon Savings (tonnes)	Data Entry Check
LC System 1	Air source heat pump (air to water)	Biggin Hill Fire Station	ASHP replaces 2 x boilers on radiator circuit	Gas	6.00	Electricity	29.00	78,493	26,678	£239,034	-£3,027		£834.06	14.33	-1.16	OK
LC System 2	Electric heater	Biggin Hill Fire Station	Electric heater replaces gas fired unit in appliance bay to maintain frost protecion at 5 degC	Gas	6.00	Electricity	29.00	123	105	£5,134	-£23		£22,862.78	0.02	0.00	OK
LC System 3	Air source heat pump (air to water)	Clapham Fire Station	ASHP replaces 3 x boilers on radiator circuit	Gas	6.00	Electricity	29.00	149,723	56,926	£553,071	-£7,525		£1,011.72	27.33	-1.24	OK
LC System 4	Electric heater	Clapham Fire Station	Electric heater replaces gas fired unit in appliance bay to maintain frost protecion at 5 degC	Gas	6.00	Electricity	29.00	894	760	£8,648	-£167		£5,300.68	0.16	-0.03	OK
LC System 5	Air source heat pump (air to water)	Deptford Fire Station	ASHP replaces boiler on radiator circuit	Gas	6.00	Electricity	29.00	127,109	45,731	£276,618	-£5,636		£596.04	23.20	-1.00	OK
LC System 6										£0						
LC System 7	Air source heat pump (air to water)	Hendon Fire Station	ASHP replaces boiler on radiator circuit	Gas	6.00	Electricity	29.00	113,840	33,169	£212,493	-£2,788		£511.23	20.78	-0.72	OK
LC System 8	Air source heat pump (air to water)	Hendon Fire Station	ASHP replaces direct fired gas water heater	Gas	6.00	Electricity	29.00	50,400	21,396	£35,638	-£3,181		£193.66	9.20	-0.47	OK
LC System 9	Air source heat pump (air to water)	Holloway Fire Station	ASHP replaces 2 x boilers on radiator circuit	Gas	6.00	Electricity	29.00	76,518	28,520	£250,337	-£3,680		£896.04	13.97	-0.62	OK
LC System 10	Air source heat pump (air to water)	Holloway Fire Station	ASHP replaces direct fired gas water heater	Gas	6.00	Electricity	29.00	27,012	12,142	£37,387	-£1,900		£379.07	4.93	-0.27	OK
LC System 11	Air source heat pump (air to water)	Ruislip Fire Station	ASHP replaces 2 x boilers on radiator circuit	Gas	6.00	Electricity	29.00	56,747	21,764	£232,265	-£2,907		£1,121.01	10.36	-0.48	OK

LC System 12	Air source heat pump (air to water)	Ruislip Fire Station	ASHP replaces direct fired gas water heater	Gas	6.00	Electricity	29.00	31,897	14,338	£39,521	-£2,244	£339.35	5.82	-0.31	OK
LC System 13	Electric boiler	Ruislip Fire Station	Electric boilers replaces small gas system boiler in former appliance bay	Gas	6.00	Electricity	29.00	3,541	3,010	£4,159	-£660	£321.68	0.65	-0.07	OK
LC System 14	Electric heater	Ruislip Fire Station	Electric heater replaces gas fired unit in appliance bay to maintain frost protecion at 5 degC	Gas	6.00	Electricity	29.00	2,809	2,388	£8,648	-£524	£1,686.32	0.51	-0.08	OK
LC System 15	Air source heat pump (air to water)	Tooting Fire Station	ASHP replaces 2 x boilers on radiator circuit	Gas	6.00	Electricity	29.00	206,596	64,330	£287,643	-£6,260	£381.33	37.72	-1.40	OK
LC System 16	Air source heat pump (air to water)	Tooting Fire Station	ASHP replaces direct fired gas water heater	Gas	6.00	Electricity	29.00	63,516	26,965	£41,487	-£4,009	£178.89	11.60	-0.59	OK
LC System 17	Electric heater	Tooting Fire Station	Electric heater replaces gas fired unit in appliance bay to maintain frost protecion at 5 degC	Gas	6.00	Electricity	29.00	343	291	£12,161	-£64	£19,434.04	0.06	-0.01	OK
LC System 18	Air source heat pump (air to water)	Wandsworth Fire Station	ASHP replaces 3 x boilers on radiator circuit	Gas	6.00	Electricity	29.00	104,973	43,865	£284,716	-£6,423	£742.85	19.16	-0.96	OK
LC System 19	Air source heat pump (air to water)	Wandsworth Fire Station	ASHP replaces direct fired gas water heater	Gas	6.00	Electricity	29.00	44,662	20,076	£48,934	-£3,142	£300.08	8.15	-0.44	OK
LC System 20	Electric heater	Wandsworth Fire Station	Electric heater replaces gas fired unit in appliance bay to maintain frost protecion at 5 degC	Gas	6.00	Electricity	29.00	870	740	£12,161	-£162	£7,657.01	0.16	-0.03	OK
LC System 21	Air source heat pump (air to water)	Wallington Fire Station	ASHP replaces boiler on radiator circuit	Gas	6.00	Electricity	29.00	74,994	23,350	£258,330	-£2,272	£943.44	13.69	-0.51	OK
LC System 22	Air source heat pump (air to water)	Wallington Fire Station	ASHP replaces direct fired gas water heater	Gas	6.00	Electricity	29.00	37,919	17,045	£44,412	-£2,668	£320.78	6.92	-0.37	OK
LC System 23	Electric heater	Wallington Fire Station	Electric heater replaces gas fired unit in appliance bay to maintain frost protecion at 5 degC	Gas	6.00	Electricity	29.00	1,005	855	£5,134	-£188	£2,796.94	0.18	-0.03	OK
LC System 24	Air source heat pump (air to water)	Mitcham Fire Station	ASHP replaces 2 x gas boilers feeding common header	Gas	6.00	Electricity	29.00	121,925	42,398	£253,255	-£4,980	£568.90	22.26	-0.93	OK
LC System 25										£0					
LC System 26										£0					
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	1,565,699	120,601	1,375,909	Savings Sequenced Correctly
Data Source:	Step 2.2 - Building Details	Step 4.1 - Building Fabric Improvements and Energy Efficiency Measures	Step 4.1 - Low Carbon Heating	Link to Guidance Tab

Step 4.2: Grant Selection

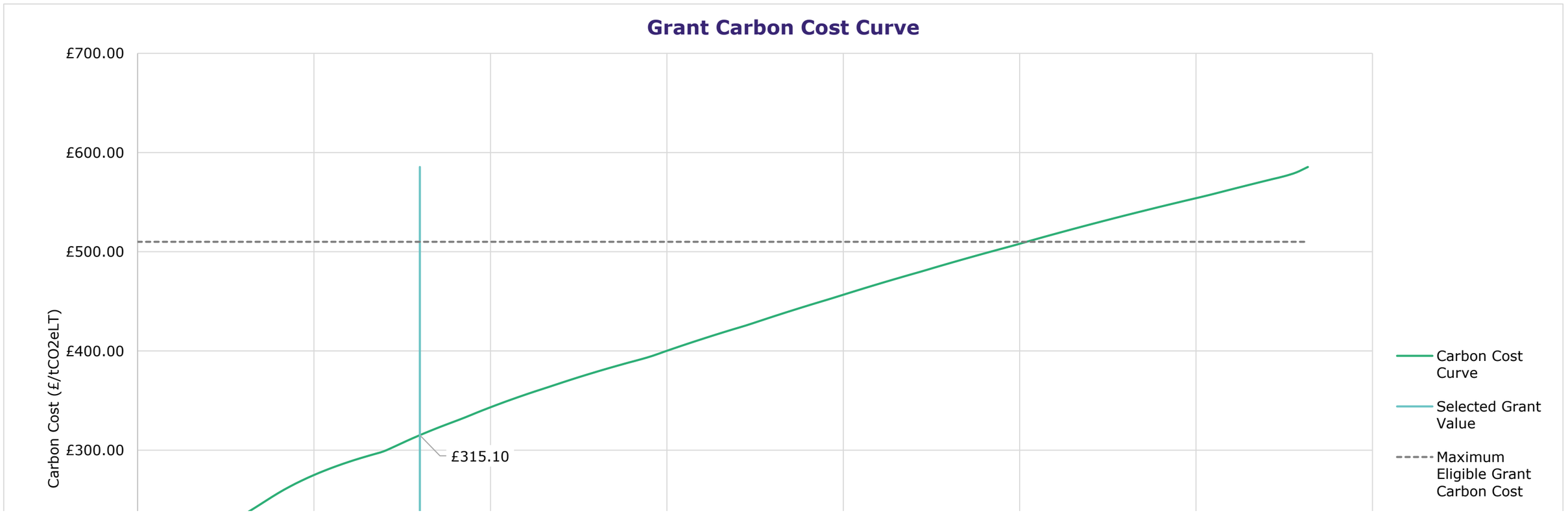
Section 1. Carbon Cost Curve

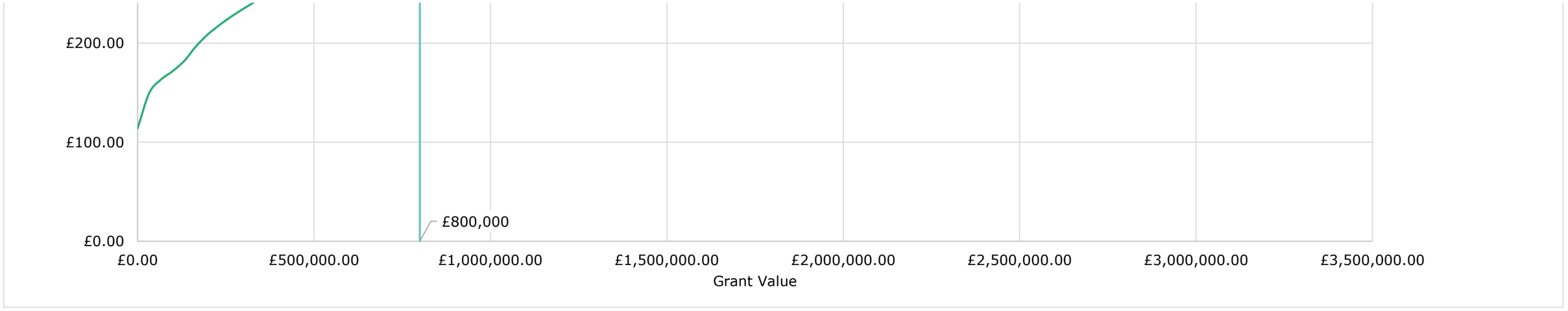
Please enter your selected grant value to the nearest pound in the box below, referring to the Carbon Cost graph to assist your selection. This step relies on all measures being fully inputted into Step 3 and Step 4.1.

Total Project Value (£)	Input Grant Value (£)	Recipient Contribution (£)	Recipient Contribution (%)
£3,316,960	£800,000	£2,516,960	76%

Grant Carbon Cost (£/tCO_2eLT)	Compliance
£315.10	**Compliant**

- The graph below plots the 'Grant Carbon Cost Curve' of your application according to the Carbon Saving Measures you entered in Step 4.1. It is based on ordering all measures that save direct carbon from lowest carbon cost on the left to highest on the right. The grant carbon cost (shown on the y-axis) increases while ascending the ordering of measures.
- The 'Selected Grant Value' Line plots the value you input in the box above.
- The intersection of the two lines shows the 'Grant Carbon Cost' for your selected grant value. This is also shown in the box above.
- The purpose of the graph is to give a visual perspective on how the grant carbon cost is calculated. The grant carbon cost is calculated by dividing the grant value requested by the direct carbon saved by the grant funded measures. By selecting different grant values, the grant carbon cost will change based on the associated direct carbon saved. This is a useful tool to help determine which grant value make the application more carbon cost effective. . It is important to reference the intersection point between the Gran Carbon Cost Curve and the Selected Grant Value line to see what the application's Grant Carbon Cost is. The application is not assessed on the graph, it is mearily an additional tool to help visualise and compare different eligible grant values.





Section 2. Measure Ordering Table

Please review the table below.

This table places all the LC heating systems and EE measures in your project proposal in order of carbon cost effectiveness. The order indicates which measures will be grant funded or recipient funded, based on the selected grant value inputted above. To assist any attempts to improve the overall carbon cost of your project, any measures which have both a high cost and relatively poor carbon cost effectiveness will be highlighted. Measures can be edited in Step 4.1 - Step 4.2 will update automatically. Additional empty rows at the bottom of this table have been formatted white to disappear.

Measures Ordered By Carbon Cost

Measure	Building	Technology - Work Type	Description	Measure Cost	Measure Carbon Saved (tCO_2eLT Direct)	Measure Carbon Cost (£/tCO_2eLT Direct)	Measure funding source
EE 9	Tooting Fire Station	Energy efficient convection-oven	Catering electrification	£11,244	98.62	£114	Grant-funded
EE 6	Hendon Fire Station	Energy efficient convection-oven	Catering electrification	£11,244	63.07	£178	Grant-funded
LC System 16	Tooting Fire Station	Air source heat pump (air to water)	ASHP replaces direct fired gas water heater	£41,487	231.91	£179	Grant-funded
EE 5	Deptford Fire Station	Energy efficient convection-oven	Catering electrification	£11,244	60.12	£187	Grant-funded
LC System 8	Hendon Fire Station	Air source heat pump (air to water)	ASHP replaces direct fired gas water heater	£35,638	184.02	£193.66	Grant-funded
EE 3	Biggin Hill Fire Station	Energy efficient convection-oven	Catering electrification	£8,150	39.47	£206.48	Grant-funded
EE 11	Wallington Fire Station	Energy efficient convection-oven	Catering electrification	£11,244	42.32	£265.69	Grant-funded
EE 10	Wandsworth Fire Station	Energy efficient convection-oven	Catering electrification	£15,519	54.01	£287.35	Grant-funded
EE 7	Holloway Fire Station	Energy efficient convection-oven	Catering electrification	£11,244	38.94	£288.72	Grant-funded
EE 2	Mitcham Fire Station	Insulation - draught proofing	Natural ventilation optimisation using CO2 controls	£40,044	133.84	£299.19	Grant-funded
LC System 19	Wandsworth Fire Station	Air source heat pump (air to water)	ASHP replaces direct fired gas water heater	£48,934	163.07	£300.08	Grant-funded

EE 8	Ruislip Fire Station	Energy efficient convection-oven	Catering electrification	£11,244	35.19	£319.54	Grant-funded
LC System 22	Wallington Fire Station	Air source heat pump (air to water)	ASHP replaces direct fired gas water heater	£44,412	138.45	£320.78	Grant-funded
LC System 13	Ruislip Fire Station	Electric boiler	Electric boilers replaces small gas system boiler in former appliance bay	£4,159	12.93	£321.68	Grant-funded
LC System 12	Ruislip Fire Station	Air source heat pump (air to water)	ASHP replaces direct fired gas water heater	£39,521	116.46	£339.35	Grant-funded
LC System 10	Holloway Fire Station	Air source heat pump (air to water)	ASHP replaces direct fired gas water heater	£37,387	98.63	£379.07	Grant-funded
LC System 15	Tooting Fire Station	Air source heat pump (air to water)	ASHP replaces 2 x boilers on radiator circuit	£287,643	754.32	£381.33	Grant-funded
EE 1	Hendon Fire Station	Loft insulation	Loft insulation	£13,513	34.74	£389.03	Grant-funded
EE 4	Clapham Fire Station	Energy efficient convection-oven	Catering electrification	£21,088	52.89	£398.69	Grant-funded
LC System 7	Hendon Fire Station	Air source heat pump (air to water)	ASHP replaces boiler on radiator circuit	£212,493	415.65	£511.23	Part grant-funded, part recipient-funded
LC System 24	Mitcham Fire Station	Air source heat pump (air to water)	ASHP replaces 2 x gas boilers feeding common header	£253,255	445.17	£568.90	Recipient-funded
LC System 5	Deptford Fire Station	Air source heat pump (air to water)	ASHP replaces boiler on radiator circuit	£276,618	464.10	£596.04	Recipient-funded
LC System 18	Wandsworth Fire Station	Air source heat pump (air to water)	ASHP replaces 3 x boilers on radiator circuit	£284,716	383.27	£742.85	Recipient-funded
LC System 1	Biggin Hill Fire Station	Air source heat pump (air to water)	ASHP replaces 2 x boilers on radiator circuit	£239,034	286.59	£834.06	Recipient-funded
LC System 9	Holloway Fire Station	Air source heat pump (air to water)	ASHP replaces 2 x boilers on radiator circuit	£250,337	279.38	£896.04	Recipient-funded

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Step 5: Project Governance

Section 1. Project Costs

1a. Project Cost Breakdown

If your application is pre-tender, please provide cost estimates, and final costs to be provided when available.

Design and engineering costs (£)	£317,245	10%
Main equipment capital costs (£)	£594,098	18%
Installation and commissioning costs (£)	£1,468,179	44%
Project delivery costs (£) *incl. external management costs*	£403,528	12%
Contingency costs (£)	£533,910	16%
Enabling measure costs (£) *Please list types of enabling measures in Q3*	£0	0%
Can the organisation reclaim VAT?	Yes	
VAT (£) *Only fill in if you cannot claim VAT.*	£0	0%
Total projects costs (from Step 4)	£3,316,960	**100%** **Project cost breakdown does not sum to equal the total project cost stated in Step 4.1**

1b. A comprehensive cost breakdown is required for all applications. These must include a full cost breakdown for all of the low carbon heating systems and energy efficiency measures within each building. Quotations for all technologies are also required.

Supporting Document(s) Cost plans.zip **Page(s)** All

2. How have you estimated the costs for the proposed low carbon heating system(s) and any energy efficiency measures? Other (list in commentary)

Please detail the level of sign off achieved, and any additional sign off that would be required in the commentary box.
Contingency usually ranges between 10% and 20%. If your contingency is outside these bounds, please provide justification:

Commentary

Costs are based on a pre-tender estimate and have 20% contingency applied to them to account for this.

Sign-off in LFB has been achieved by technical assurance and compliance team (LFC internal team). Further sign-off would be required by final design consultant upon grant offer letter and project progression.

3. Please describe how the project costs were deduced, including:

- How the costs are considered to be reasonable and good value for money.
- How the cost breakdown has been estimated.
- Do costs reflect recent changes in demand and price inflations for similar works? Has contingency been built in to account for this?

Commentary

Costs are based on a pre-tender estimate and have 20% contingency applied to them to account for this.

Quotes have been obtained for heat pumps, DNO, electric emitters. These have been supplemented by a line-by-line cost plan using cost estimates per unit / per linear metre / m2 etc as appropriate based on previous projects, adjusted for inflation. Allowances have been made using engineering judgement for elements such as asbestos, where identified as present in surveys.

Lien-by-line breakdown uses standardised headings and then supplemented by site by site design development to add "extra over" items specific to each site's needs.

Measures were assessed to identify which brought value for money – see HDPs for description. Heat pumps sized to ensure maximum value for carbon saving & money, i.e. cheaper electric boilers provided by client own budget for resilience provide the last 10% of energy input, achieving far more beneficial lifecycle cost than a larger heat pump with less full load hours.

4. Do you have reserve financial resources if costs increase during the delivery of this project? Yes

Please provide detail below, including the level of sign off agreed.

Supporting Document(s) Name n/a **Page(s)** n/a

Commentary

LFC have in place for all capital projects a 20% contengincy fund. This can be drawn down without further governance. If costs increase above this a governance application would be required and owing to the London Mayor's CNZ 2030 commitment, the funding would be agreed.

5a. Do you intend to use a Special Purpose Vehicle (SPV) or Subsidiary as defined in the scheme guidance to deliver this project? No

5b. Confirm that any grant payment requested will relate to payment of, and submitted by the public sector organisation and not a subsidiary. Yes

Section 2. Project Programme

1. Key Project Milestones and associated Grant Value.

Please input dates of key milestones into the table below, using the format DD/MM/YYYY. Note that these milestones will be indicative. Key dates can be included in supporting information. These dates must be confirmed prior to Salix issuing a Grant Offer Letter.

Milestone	Completion Date	Days of Contingency included in each step	Grant value associated with completion of milestone
Project Approval	31/05/25	0	£0

Designs Initiated	01/06/25	0	£40,000
Detailed Designs Complete	30/09/25	14	£40,000
Out to Tender	01/10/25	0	£0
Tenders Complete	30/11/25	7	£0
Orders Placed	20/12/25	14	£120,000
Works in Progress on Site	01/03/26	0	£120,000
Complete on Site	15/08/26	14	£456,000
Final Commissioning	30/08/26	7	£24,000
Completion Date (Step 1.1)	31/03/27	56	£800,000

2. Grant Value Split

2a. Please check that the grant value split between each financial year is correct, reflects your funding availability and programme of works . These values cannot be changed once the Grant Offer Letter has been issued.

Financial Year	Grant Split (£)	
Year 1 (FY 2025/26)	**£320,000**	40%
Year 2 (FY 2026/27)	**£480,000**	60%
Year 3 (FY 2027/28)	**£0**	0%
Total Grant Requested (Step 4.2)	**£800,000**	**100%**

2b. For applications in the 'Other' funding pot, how much of the grant do you intend to allocate on schools and on other buildings within your project?

Building Type	Grant Split (£)	
Schools (Education)	£0	0%
Other	£0	0%
Total Grant Requested (Step 4.2)	£800,000	

3. Please provide any commentary on the project delivery timescales.

- Include commentary to demonstrate readiness to deliver the project.
- Comment on what contingency is built into the programme.
- Please provide a full project programme, including steps for on site works.

Ensure you add commentary to Section 3. Procurement Process (Question 4) if the milestones are different to the template above, and are following a Design & Build procurement process.

Supporting Document(s) LFB programme.zip **Page(s)** All

Commentary

We feel the delivery timescales for this project are sufficient to allow us enough time to balance the boiler house works required outside of the heating season with the fact that we must carefully manage the risks such as asbestos, DNO time for electrical upgrade works, as well as any asbestos issues that crop up. There is contingency across the 2 year programme (shown Q1) which helps ensure we have sufficient time to meet our deadlines across our buildings.

We also benefit from having undertaken this PSDS process in the past, and understand the procurement timelines.

We have allowed particular time to allow for negotiation of final details with our PFI contract with Kier for Mitcham, based on discussion with our organisations PFI contract manager. Initial discussions have been positive, allowing us to include Mitcham within the application.

See programme.zip

Section 3. Procurement Process

1. Have you carried out, or are you in a position to carry out, a tendering process in line with public sector procurement regulations? Yes

2. Will you be following a traditional procurement or a Design & Build procurement process? N/A

3. What public sector framework are you intending to use to procure suppliers/service providers?

- Include commentary on why this framework has been chosen? E.g. cost benefits, quality, experience etc.
- Include any plans for procuring the services needed for this project.
- Include any additional costs relating to the procurement process.

Commentary

We have left the approach of traditional / D&B open at the moment to identify what seems to be producing best value – our programme reflects the more onerous traditional approach, but may be bettered if we opt for D&B.

We previously used an NHS based framework to appoint our contractor for PSDS 3c using a traditional design appraoch to RIBA 4.

This remains open to us as an approach, but our procurement team will be exploring alternative options that might deliver better value. This has been allowed in our programme.

Obtaining quality contractors experienced in doing this work is important, and will be balanced against framework % fee and contractor experience with LFBs estate. We leave open the option of undertaking traditional design to RIBA4 prior to tender if it better matches this intent.
The programme has 2 sheets that shows the 2 options; the values in our application are based on the first, traditional.

4. Procurement costs and Project Milestones

- Please detail the procurement costs in relation to the total project value.
- Outline any variations to the project milestone template above. E.g. if using Design & Build and Designs Complete is after Works in Progress on Site, provide commentary.

Commentary

Milestone dates identified above.

In-house procurement will be assisted by design development by consultant, as development approach determined in Q3. This is included in design cost in capex plan.

For higher education projects only, evidence of procurement status needs to be provided.

Supporting Document(s) n/a **Page(s)** n/a

Section 4. Energy and Carbon Monitoring Plan Post Completion

1. Post completion, do you have plans in place for monitoring your project(s)? | Yes

- How will each technology be monitored, at what time frequency and what measurements will be taken?
- Who is responsible for monitoring?
- Who within the public sector organisation has oversight of the implementation of the monitoring plan?
- Do you agree that you will participate and cooperate with those people who are assessing this project from DESNZ?
- If successful, you will be required to provide three years of monthly electricity and any other relevant meter data (e.g. gas).
- If applicable, please state whether the contractor offers Energy Performance Guarantees.

Supporting Document(s) n/a **Page(s)** as below

Commentary

New sub-meters will be utilised where required to establish the actual power consumption / heat production of each stations' heating and HWS centralised systems and to verify the energy usage and COP following implementation of the carbon reduction measures.

LFB propose following the International Performance Measurement and Verification Protocol (IPMVP). In the context of the global energy transition to a low carbon economy, the IPMVP offers a consistent approach to measuring and verifying carbon emissions reduction in a broad range of energy sectors, including different types of facilities as well as renewable energy. This requires a Measurement and Verification Plan to be written, which involves confirming the chosen base year, selecting which of IPMVP options (A-D) are relevant, defining how savings for each opportunity will be measured and details of any adjustments (i.e., weather correction/normalisation of gas data).

2a. Do you give consent to DESNZ and its third party intermediaries having access to your annual smart meter energy consumption data on request via your energy supplier? | Yes

Having access to this data would help us better evaluate the impact of energy efficiency changes you have made as part of PSDS. If you do not have a smart meter, we would advise you to consider getting one to offer a better control of your energy use and to ensure your organisation is accurately billed for the energy it uses.

2b. If yes, please provide the meter reference number(s) that connect to your project in the box below. You can find the reference number(s) on your energy bill. MPAN relates to electricity and MPRN relates to gas.

See building details tab

Section 5. Project Governance

1. Please define the project team and their roles in the delivery of the project, including:

- Name of project sponsor, project manager(s), consultant(s), contractor(s) and senior manager(s).
- Outline the organisation structure in terms of who has the authority to approve the project and any scope changes.
- Has a project execution plan been drawn up to state exactly how the project will be managed?
- Attach a copy of the project organogram (internal and external).
- Please specify the availability of project manager(s) for this project (e.g. number of days per week each project manager has resourced).

Supporting Document(s) HDPs.zip contains org chart **Page(s)** Section 6

Commentary

The sponsor is Laura Birnbaum; Project Manager is Paul Cook;

Consultant support may be provided by Ricardo, pending future procurement exercise.

Contractor is to be determined.

Senior Managers are Laura Birnbaum, Paul Cook, Milly Osborne; George Gray.

Laura has delegated authority to approve the project and any scope changes. Project Manager has full time availability to Project Manage (5 Days p/w covering this and any concurrent close out works from previous PSDS works).

2a. Previous Experience (Internal)

Describe any previous experience that you, and members of the project team, have in managing projects of a similar scale.

- Do you have experience with the proposed measure(s)?
- As applicable, provide any case studies covering size and scope of works.

Supporting Document(s) n/a **Page(s)** n/a

Commentary

We have been successful with two rounds of PSDS funding in the past, with works still ongoing. Works included fabric, energy efficiency, DNO upgrades and heat pump deployment, exactly matching what we are proposing here.

The same team from LFB will be involved, providing us with organisational maturity for the procurement and management of such interventions. This has allowed us the develop with "lessons learned" from previous rounds.

2b. Previous Experience (External)

Describe the previous experience of the chosen consultant and/or contractor and outline the experience they have in designing and delivering projects of a similar scale.

- If a consultant been appointed to develop, design and procure this project, please indicate the areas of consultant involvement.
- Has the public sector organisation worked with this consultant previously?
- Describe previous experience of consultant and contractors, if appointed, with implementing the proposed measure(s) and in managing projects of similar scale. Please be specific, including examples of previous projects or Salix funded projects.
- Detail relevant qualification(s) of consultants & contractors.

Supporting Document(s) n/a **Page(s)** n/a

Commentary

Neither the consultant or contractor has been appointed as yet.
Experience of PSDS and related work will be a vital component of our procurement process, as will the organisations / key individuals relevant qualifications.

We have obtained high quality support via our procurement processes for past rounds, so are confident we will do so again.

Section 6. Project Risks and Mitigation

1a. Please detail any key risks or issues surrounding the feasibility or deliverability of this application. You are expected to describe the remainder of risks likely to affect your project within your risk register.

• In the description, highlight whether this is a potential risk or a current issue.
• Include potential risks of internal resourcing for management of project within timescales.
• Please describe the mitigation measures in place to manage each issue.

Commentary

DNO cost uplift:
Budget DNO quotes have been obtained, and relationship with DNO is good, having been developed on previous works. Nevertheless, remains a risk.

Heat pump lead-in times / cost uplifts:
As the key cost item, market changes can impact programme or cost plan. We have developed understanding of the key attributes required from our equipment (efficiency, size, acoustics, refrigeration type) and are happy to flex to different equipment providers if necessary to avoid being impacted by such risks.

Asbestos

1b. A full risk register must be provided. Please ensure that you use the Salix template, which can be found on the website. Can you confirm that you have completed this document and will be providing it alongside all other supporting information?

Yes

Supporting Document(s) risk register.zip

Section 7. Mitigating fraud

1. Please provide detail on the checks in place to mitigate fraud, including checks to prevent false representation and failure to disclose information.

• Declare any conflicts of interest as part of this application.
• To confirm that there has been no abuse of position in the application process or selection of suppliers, please sign supporting signature document which will be sent to you after your application has been approved for testing.
• Evidence of fraud mitigation needs to be provided as supporting evidence.

Commentary

We tender projects through an approved portals, as referenced earlier, and we have pecuniary interest forms filled in for all members of staff.
See policy attached

Step 6: Submit Application

Please check the completeness of your application according to the criteria below. Upload the completed Phase 4 Public Sector Decarbonisation Scheme Application Form and all supporting documentation to the Salix online Application Portal. An application without the mandatory documents will be unable to submit through the portal.

Eligibility Check	
Existing fossil fuel heating system	Yes
Existing heating system at the end of its useful life	Yes
Low carbon heating measure included within the application	Yes

Completeness Check	Percentage Complete
Step 1.1	96%
Step 1.2	100%
Step 2.1	100%
Step 2.2	100%
Step 3	97%
Step 4.1	100%
Step 4.2	100%
Step 5	95%
Application total	**99%**

Compliancy Check	Status	Action Required
Step 4.1	Compliant	None required
Step 4.2	Compliant	None required

Total Existing Annual Fossil Fuel Use kWh	Total Efficiency Savings kWh	Total Step 4.1 Current Fuel Displaced kWh	Sequencing Check	Tick to confirm
1,565,699	120,601	1,375,909	Savings Sequenced Correctly	☑

Data Source: Step 2.1 - Site Details | Step 4.1 - Building Fabric Improvements and Energy Efficiency Measures | Step 4.1 - Low Carbon Heating

Please tick to confirm to the best of your knowledge that the following are accurate		Application Form Input	Tick to confirm
Heat loads	Existing Fossil Fuel Peak Heat Load (kW)	1912 kW	☑
	Post-Improvement Peak Heat Loss Total (kW)	727 kW	☑
	Proposed Low Carbon Heating System Peak Heat Load (kW)	636 kW	☑
Lifetime costs	Estimated Annual Energy Bill Savings	-£57,193	☑
	Estimated Project Payback Period (years)	-58 years	☑
Project costs	Recipient Contribution	£2,516,960	☑
	Total Project Value	£3,316,960	☑
	Grant Value Requested	£800,000	☑

Please tick to confirm to the best of your knowledge that the following have been provided in Step 2.2 and are accurate.	Tick to confirm
UPRNs	☑
MPANs	☑

MPRNs	☑

Mandatory Documents - please tick to confirm these documents have been provided	Supporting Document(s) Name and Page	Tick to confirm
End-of-life boiler evidence	HDPs.zip Appendix C	☑
Cost evidence (itemised cost breakdown and quotations/invoices, capital expenditure)	Cost plans.zip All	☑
Energy saving calculations (unlocked Excel spreadsheet or energy modelling with commentary)	HDPs.zip, calculations.zip As below	☑
Peak heat loss calculations/peak heat demand profile to show that the proposed heating system has been sized correctly	Calculations.zip Fabric calcs	☑
Building energy figures (metered data, historic bills or DEC)	HDPs.zip explains process and cross refers to Calculations.zip where meter data provided. DECs in HDP appendix Section ?	☑
Manufacturer data sheets for Low Carbon Heating Technology	Heat Pumps Data.xls and calculations.xls (where actual performance is calculated from manufacturers data) All	☑
Feasibility study	HDPs.zip Section 5	☑
Options appraisal	Strategy.zip, HDPs.zip As below	☑
Schematics of the existing and proposed heating system	HDPs.zip Appendix B HDPs.zip Appendix B	☑
Detailed risk register	risk register.zip	☑
Project programme	LFB programme.zip All	☑
Counter fraud declaration	policy.zip All	☑
Procurement status evidence (higher education only)	n/a n/a	☑
Governance structure (including internal and external previous experience)	HDPs.zip contains org chart Section 6 n/a n/a n/a n/a	☑

I declare that the information I have given on this form is correct and complete. I understand that if I knowingly provide false information this may result in further action and I may be liable for prosecution and civil recovery proceedings. I consent to the disclosure of information from this form for the purposes of verification of this application and the investigation, prevention, detection and prosecution of fraud.		☑
Name of person completing the form:	Paul Cook	
Tick the box if you consider the form to be complete:		☑

You are ready to submit your application to the portal

Consortium Application Members Information

Please use the table below to provide information on all organisations included in the Consortium.

Organisation Name	Sector	Grant value (£)	Main Contact Name	Email	Address line 1	Address line 2	Postcode	School URN (if applicable)

Examples of Eligible Technologies

The following list includes examples of eligible technologies for Phase 3c Public Sector Decarbonisation Scheme. If you intend to include technologies that do not appear on this list in your application, please discuss with Salix prior to submission.

Project Type	Work Type	Direct Carbon Savings	Indirect Carbon Savings	Lifetime
Low Carbon Heating	Air source heat pump (air to water)	x		**20.00**
	Air source heat pump (air-to-air)	x		**20.00**
	Ground source heat pump	x		**25.00**
	Water source heat pump	x		**25.00**
	Connect to existing district heating	x		**30.00**
	Connect to onsite heat network	x		**30.00**
	Hot water - electric point of use heaters	x		**12.00**
	Solar thermal	x		**25.00**
	Biomass	x		**20.00**
	Electric boiler	x		**20.00**
	Electric heater	x		**10.00**
	Electric cremators	x		**15.00**
	Electric radiant panel heater	x		**20.00**

Project Type	Work Type	Direct Carbon Savings	Indirect Carbon Savings	Persistence Factor
Building Management Systems (BEMS)	BEMS - not remotely managed	x	x	**8.42**
	BEMS - remotely managed	x	x	**8.42**
Cooling	Cooling - control system		x	**6.84**
	Cooling - plant replacement/upgrade		x	**8.21**
	Energy efficient chillers		x	**14.44**
	Free cooling		x	**13.68**
	Replacement of air conditioning with evaporative cooling		x	**13.68**
Energy from Waste	Anaerobic digestion	x	x	**15.20**
	Incineration	x	x	**15.20**
Heating	Heat recovery	x		**10.83**
	Heating - discrete controls	x		**6.84**
	Heating - distribution pipework improvements	x		**25.00**
	Heating - zone control valves	x		**15.00**
	Replace steam calorifier with plate heat exchanger	x		**28.50**
	Steam trap replacements	x		**7.30**
	Thermal stores	x		**20.00**
Hot Water	Flow restrictors	x		**14.00**
	Hot water - distribution improvements	x		**25.00**
	Hot water - efficient showers	x		**8.00**
	Hot water - efficient taps	x		**12.00**
Industrial Equipment	Energy efficient convection-oven	x		**10.30**
	Energy efficient dishwasher	x		**10.80**
	Energy efficient washing machine	x		**20.00**
	Energy Efficient Steriliser	x		**20.00**
Insulation - building fabric	Cavity wall insulation	x		**60.00**
	Double glazing with metal or plastic frames	x		**28.00**
	Dry wall lining	x		**35.00**
	External wall insulation	x		**60.00**
	Loft insulation	x		**27.00**

	Floor insulation - suspended timber floor	x		**30.00**
	Floor insulation - solid floor or other type	x		**30.00**
	Roof insulation	x		**30.00**
	Secondary glazing	x		**7.92**
Insulation - draught proofing	Insulation - draught proofing	x		**29.25**
Insulation - other	Automatic speed doors	x		**15.00**
	Automatic/revolving doors	x		**10.00**
	Draught lobby (external)	x		**29.25**
	Draught lobby (internal)	x		**29.25**
	Radiator reflective foil (external walls)	x		**8.00**
Insulation - pipework	Heating pipework insulation (external)	x		**9.00**
	Heating pipework insulation (internal)	x		**22.50**
LED lighting	LED - new fitting		x	**25.00**
	LED - same fitting		x	**13.00**
Lighting Controls	Lighting - discrete controls		x	**10.00**
	Lighting control system centralised		x	**10.26**
Motor Controls	Fixed speed motor controls	x	x	**11.40**
	Motors - flat belt drives	x	x	**11.40**
	Variable speed drives	x	x	**10.26**
Motor Replacement	Motors - high efficiency	x	x	**15.00**
Renewable Energy	Small hydropower		x	**22.80**
	Solar PV		x	**22.50**
	Wind turbine		x	**17.60**
Time Switches	Time switches	x	x	**6.84**
Transformers	Low loss		x	**30.00**
	Transformer tapping change		x	**30.00**
Ventilation	Fans - air handling unit		x	**23.75**
	Fans - high efficiency		x	**14.25**
	Phase change material		x	**23.75**
	Ultrasonic humidifiers		x	**7.22**
	Ventilation - distribution		x	**30.00**
	Ventilation - presence controls		x	**6.84**

Data Outputs Tab

Tab used for review of key data.

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Step 2.2: Building Data

	Building Name	Building Type	Gross Internal Area of Heated Areas	Existing Annual Fossil Fuel Use (kWh/year)	Fossil Fuel kWh/m2	Electrical Consumption	Electrical kWh/m2
Building 1	Biggin Hill	Emergency	406	114,602	282	30,971	76
Building 2	Clapham	Emergency	1,689	160,275	95	153,357	91
Building 3	Deptford	Emergency	837	175,827	210	37,837	45
Building 4	Hendon Fire	Emergency	797	182,803	229	46,569	58
Building 5	Holloway	Emergency	818	113,310	139	41,042	50
Building 6	Ruislip Fire	Emergency	647	101,419	157	50,104	77
Building 7	Tooting Fire	Emergency	1,233	288,463	234	26,469	21
Building 8	Wandsworth	Emergency	1,312	160,366	122	61,987	47
Building 9	Wallington	Emergency	605	121,646	201	41,501	69
Building 10	Mitcham	Emergency	1,257	146,990	117	88,158	70
Building 11	0						
Building 12	0						
Building 13	0						
Building 14	0						
Building 15	0						
Building 16	0						
Building 17	0						
Building 18	0						
Building 19	0						
Building 20	0						
Building 21	0						
Building 22	0						
Building 23	0						
Building 24	0						
Building 25	0						
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Building 28	0						
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Building 30	0						
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Building 36	0						
Building 37	0						
Building 38	0						
Building 39	0						
Building 40	0						

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Step 3: Heating Systems - Existing System

Fossil Fuel System	Building Name	Age of system (years)	Is unit to be retained or removed?	Total output load (kW)	Cost of fossil fuel replacement system [like for like]	FF £/kW
FF System 1	Biggin Hill Fire S	14	Removed	65	£6,686	£103
FF System 2	Biggin Hill Fire S	12	Removed	65	£6,686	£103
FF System 3	Biggin Hill Fire S	8	Retained	29		
FF System 4	Biggin Hill Fire S	14	Removed	18	£6,249	£347
FF System 5	Clapham Fire S	16	Removed	114	£9,873	£87
FF System 6	Clapham Fire S	16	Removed	25	£500	£20
FF System 7	Clapham Fire S	15	Removed	58	£7,208	£124
FF System 8	Deptford Fire St	10	Removed	60	£6,686	£111
FF System 9	Deptford Fire St	7	Retained	29		
FF System 10	Deptford Fire St	8	Retained	18		
FF System 11	Hendon Fire Sta	12	Removed	95	£7,726	£81
FF System 12	Hendon Fire Sta	12	Removed	47	£11,453	£244
FF System 13	Holloway Fire S	14	Removed	76	£7,095	£93
FF System 14	Holloway Fire S	16	Removed	29	£10,657	£367
FF System 15	Holloway Fire S	6	Retained	41		
FF System 16	Ruislip Fire Stat	14	Removed	124	£9,873	£80
FF System 17	Ruislip Fire Stat	13	Removed	47	£11,453	£244
FF System 18	Ruislip Fire Stat	20	Removed	25	£6,380	£255
FF System 19	Ruislip Fire Stat	14	Removed	12	£4,187	£349
FF System 20	Ruislip Fire Stat	13	Removed	51	£7,208	£141
FF System 21	Tooting Fire Sta	18	Removed	140	£10,690	£76
FF System 22	Tooting Fire Sta	21	Removed	57	£11,453	£201
FF System 23	Tooting Fire Sta	18	Removed	54	£11,746	£218
FF System 24	Wandsworth Fir	15	Removed	114	£6,686	£59
FF System 25	Wandsworth Fir	13	Removed	57	£11,453	£201
FF System 26	Wandsworth Fir	16	Removed	25	£44,500	£1,780
FF System 27	Wandsworth Fir	13	Removed	58	£7,208	£124
FF System 28	Wallington Fire	10	Removed	91	£8,599	£94
FF System 29	Wallington Fire	21	Removed	57	£11,453	£201
FF System 30	Wallington Fire	21	Removed	25	£6,380	£255
FF System 31	Wallington Fire	3	Retained	24		
FF System 32	Mitcham Fire St	12	Removed	160	£10,690	£67
FF System 33	Mitcham Fire St	12	Removed	22	£500	£23
FF System 34						
FF System 35						
FF System 36						
FF System 37						
FF System 38						
FF System 39						
FF System 40						

Step 3: Heating Systems - Low Carbon Solution

Low Carbon System	Technology - Work Type	Existing System to be replaced	Building Name or Number	Total Output Load (kW thermal)	Proposed vs Existing System Load	Total Cost of Low Carbon Heating Measure	LC £/kW	Indicative sCOP
LC System 1	Air source heat	FF System 1	Biggin Hill Fire Station	50	77%	£239,034	£4,781	2.54
LC System 2	Electric heater	FF System 4	Biggin Hill Fire Station	6	33%	£5,134	£856	1.01
LC System 3	Air source heat	FF System 5	Clapham Fire Station	50	44%	£553,071	£11,061	2.27
LC System 4	Electric heater	FF System 7	Clapham Fire Station	12	21%	£8,648	£721	1.01
LC System 5	Air source heat	FF System 8	Deptford Fire Station	60	100%	£276,618	£4,610	2.40
LC System 6								
LC System 7	Air source heat	FF System 11	Hendon Fire Station	50	53%	£212,493	£4,250	2.96
LC System 8	Air source heat	FF System 12	Hendon Fire Station	8	17%	£35,638	£4,455	2.03
LC System 9	Air source heat	FF System 13	Holloway Fire Station	50	66%	£250,337	£5,007	2.31
LC System 10	Air source heat	FF System 14	Holloway Fire Station	8	28%	£37,387	£4,673	1.92
LC System 11	Air source heat	FF System 16	Ruislip Fire Station	50	40%	£232,265	£4,645	2.25
LC System 12	Air source heat	FF System 17	Ruislip Fire Station	8	17%	£39,521	£4,940	1.92
LC System 13	Electric boiler	FF System 19	Ruislip Fire Station	13.5	113%	£4,159	£308	1.01
LC System 14	Electric heater	FF System 18	Ruislip Fire Station	12	48%	£8,648	£721	1.01
LC System 15	Air source heat	FF System 21	Tooting Fire Station	60	43%	£287,643	£4,794	2.77
LC System 16	Air source heat	FF System 22	Tooting Fire Station	8	14%	£41,487	£5,186	2.03
LC System 17	Electric heater	FF System 23	Tooting Fire Station	6	11%	£12,161	£2,027	1.01
LC System 18	Air source heat	FF System 24	Wandsworth Fire	50	44%	£284,716	£5,694	2.06
LC System 19	Air source heat	FF System 25	Wandsworth Fire	8	14%	£48,934	£6,117	1.92
LC System 20	Electric heater	FF System 27	Wandsworth Fire	12	21%	£12,161	£1,013	1.01
LC System 21	Air source heat	FF System 28	Wallington Fire Station	50	55%	£258,330	£5,167	2.77
LC System 22	Air source heat	FF System 29	Wallington Fire Station	8	14%	£44,412	£5,551	1.92
LC System 23	Electric heater	FF System 30	Wallington Fire Station	6	24%	£5,134	£856	1.01
LC System 24	Air source heat	FF System 32	Mitcham Fire Station	50	31%	£253,255	£5,065	2.48
LC System 25								
LC System 26								
LC System 27								
LC System 28								
LC System 29								
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Sequencing Checks

Data Source:

Step 2.2 - Building Data | Step 4.1 - Energy Efficiency Measures | Step 4.1 - Low Carbon Heating

Total Existing Annual Fossil Fuel Use (kWh/year)	Total Efficiency Savings kWh	Total Step 4.1 Current Fuel Displaced kWh	Overall Sequencing Check
1,565,699	120,601	1,375,909	Savings Sequenced Correctly

Building Number	Building Name	Step 2.2 Gas Usage kWh	FF Efficiency Savings kWh	Post Efficiency Savings kWh	Step 4.1 Current Fuel Displaced	Building Sequencing Check
Building 1	Biggin Hill Fire Station	114,602	7,207	107,395	78,616	Savings Sequenced Correctly
Building 2	Clapham Fire Station	160,275	9,658	150,617	150,617	Savings Sequenced Correctly
Building 3	Deptford Fire Station	175,827	10,978	164,849	127,109	Savings Sequenced Correctly
Building 4	Hendon Fire Station	182,803	18,563	164,240	164,240	Savings Sequenced Correctly
Building 5	Holloway Fire Station	113,310	7,111	106,199	103,530	Savings Sequenced Correctly
Building 6	Ruislip Fire Station	101,419	6,425	94,994	94,994	Savings Sequenced Correctly
Building 7	Tooting Fire Station	288,463	18,008	270,455	270,455	Savings Sequenced Correctly
Building 8	Wandsworth Fire Station	160,366	9,861	150,505	150,505	Savings Sequenced Correctly
Building 9	Wallington Fire Station	121,646	7,727	113,919		
Building 10	Mitcham Fire Station	146,990	25,065	121,925		
Building 11	0					
Building 12	0					
Building 13	0					
Building 14	0					
Building 15	0					
Building 16	0					
Building 17	0					
Building 18	0					
Building 19	0					
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Building 50	0					

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CIBSE Guide F	kWh/m2	
Building Type	Good Practice	Typical
Canteen	480	670
Court house	125	194
Emergency services	590	460
Entertainment hall	420	630
Fire station	385	540
Halls of residence	240	290
Health centres and clinics	174	270
Hospital	339	411
Laboratory	110	132
Leisure centre	264	598
Library	113	210
Military base	220	220
Museum	96	142
Nursing residential homes and hostels	492	390
Offices	138	205
Official service residence	114	210
Other	107	107
Parking buildings	0	0
Place of worship	80	150
Police station	295	410
Pre-school facility	113	164
Primary school	113	164
Prison	18861	22034
Secondary school	108	144
Sixth form college	142	187
Special school	142	187
Sports ground	158	343
Storage depot	54	187
Town hall	138	205
University	110	132

Summarised Data Outputs

FF Flow Temperatures deg C	FF Total Size kW	Total FF Pre Improvement Peak Load kW	Total Fossil Fuel Consumption for Heating kWh/yr	Average Boiler Age	FF Average Efficiency	FF kWh/m2	Total Like for Like Replacement Costs
70.8125	1912	182	1,375,909	14	84%	143	£261,278

Average LC Flow and Return Temperatures deg C	LC Total Costs	Total LC Post Improvement Peak Load kW	Total LC Consumption kWh/yr	HP Average sCOP	LC Direct Emission Savings tco2	LC Total Size kW	LC kWh/m2
65, 55	£3,151,184	731	506,840	1.91	251	1912	53

		Year One: Financial Year	Year Two: Financial Year	Year Three: Financial Year	Compliance
Step 1.1 Start Date	01/06/25	Yes	Yes	No	Compliant
Step 1.1 Completion Date	31/03/27				
Step 5. Grant funding splits	£800,000	Yes	Yes	No	Compliant

Indirect subsidy checks

	Any PFI buildings?	Enterprise paying energy bills?	Acting as SPV?
Applicant response	Appendix 10	No	No

Enterprise bill-paying per building

Building Number	Building Name	Sum of annual bill savings expected (entire building)
Error	0	£0.00
Error	0	£0.00
Error	0	£0.00
Error	0	£0.00
Error	0	£0.00

Heat Loss Comparison

Building Number	Building Name	DHW Demand (kW)	Peak Heat Loss - Pre Building Fabric Improvements (kW)	Current Peak Heat Load (kW)	Current Fossil Fuel Plant (kW)	Peak Heat Loss - Post Building Fabric Improvements	Proposed LC Plant (kW)
Building 1	0	12	45	57	0	45	0
Building 2	0	23	99	122	0	99	0
Building 3	0	12	80	92	0	80	0
Building 4	0	23	86	109	0	82	0
Building 5	0	18	52	70	0	52	0
Building 6	0	18	72	90	0	72	0
Building 7	0	23	100	123	0	100	0
Building 8	0	18	75	93	0	75	0
Building 9	0	12	64	76	0	64	0
Building 10	0	23	58	81	0	58	0
Building 11	0	0	0	0	0	0	0
Building 12	0	0	0	0	0	0	0
Building 13	0	0	0	0	0	0	0
Building 14	0	0	0	0	0	0	0
Building 15	0	0	0	0	0	0	0
Building 16	0	0	0	0	0	0	0
Building 17	0	0	0	0	0	0	0
Building 18	0	0	0	0	0	0	0
Building 19	0	0	0	0	0	0	0
Building 20	0	0	0	0	0	0	0
Building 21	0	0	0	0	0	0	0
Building 22	0	0	0	0	0	0	0
Building 23	0	0	0	0	0	0	0
Building 24	0	0	0	0	0	0	0
Building 25	0	0	0	0	0	0	0
Building 26	0	0	0	0	0	0	0
Building 27	0	0	0	0	0	0	0
Building 28	0	0	0	0	0	0	0
Building 29	0	0	0	0	0	0	0
Building 30	0	0	0	0	0	0	0
Building 31	0	0	0	0	0	0	0
Building 32	0	0	0	0	0	0	0
Building 33	0	0	0	0	0	0	0
Building 34	0	0	0	0	0	0	0
Building 35	0	0	0	0	0	0	0
Building 36	0	0	0	0	0	0	0
Building 37	0	0	0	0	0	0	0
Building 38	0	0	0	0	0	0	0
Building 39	0	0	0	0	0	0	0
Building 40	0	0	0	0	0	0	0
Building 41	0	0	0	0	0	0	0
Building 42	0	0	0	0	0	0	0
Building 43	0	0	0	0	0	0	0
Building 44	0	0	0	0	0	0	0
Building 45	0	0	0	0	0	0	0
Building 46	0	0	0	0	0	0	0
Building 47	0	0	0	0	0	0	0
Building 48	0	0	0	0	0	0	0
Building 49	0	0	0	0	0	0	0
Building 50	0	0	0	0	0	0	0
Building 51	0	0	0	0	0	0	0
Building 52	0	0	0	0	0	0	0
Building 53	0	0	0	0	0	0	0

^ Unhide for rows 53-100

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Revision History

Date	Version	Change	By
Aug-24	1.0	Creation of application form.	JF/JN/AG