



Strategic Pipeline Proposal Form

About your Proposal

Date of submission	1 March 2024
Proposal title	Heritage heating system decarbonisation guidance
Name of lead organisation	Hull and East Yorkshire Local Enterprise Partnership
Name of proposal lead	Harry Baross
Contact number	07766078789
Contact email	h.baross@heylep.com
Proposal sponsor (a senior officer/director)	Teresa Chalmers
Have you spoken to someone in the Hub about your proposal? Please include name of who you have contacted.	Harry Baross Teresa Chalmers

Type of Proposal (what will you deliver - (e.g. feasibility study, research, programme delivery)	Technical guidance
What strategic priority is this proposal responding to?	Heat Decarbonisation
Where will the proposal be delivered?	Hub-wide
Is this a new or updated proposal (is it already part of the Hub's pipeline)?	New

	Total	Amount requested from Hub
Proposal cost	£70,000	£70,000

Summary of proposed activity. What will you do? 150 words max

Basic heat decarbonisation plans for heritage buildings often suggest putting in a heat pump or joining a heat network with a few upsized radiators, but when looking in detail at potential schematics older heating systems with high temperatures and no modulation often require a complete overhaul.

This activity would develop technical advice on how to approach older heating systems in these transitions, enabling a more targeted approach to heat decarbonization and reducing wasted activity. The right level of guidance could be usefully applied to buildings of different types and ages but similar heating systems, e.g. the approach to a 70s heating system in a 1970s town hall will be similar to a 1970s heating system in an 1800s cathedral. The project would review the types of heating systems in public sector buildings in the region and then develop technical guidance for the most common and challenging, estimated at covering 4-8 system types.

Strategic Fit



How does the proposal support the Hub's Strategic Priorities? 100 words max

Heat decarbonisation is a central Hub Strategic Priority. An understanding of how to work with older heating systems to decarbonise a building has been a major stumbling block in decarbonising numerous buildings in the region, for example the Scarborough Spa, Whitby Pavilion, Hull Guildhall, and Hull Western Library. The technical advice produced in this project would be critical to developing high quality deliverable capital projects to decarbonise such buildings, which is central to the aims of the Hub.

How does the proposal support the core aims/purpose of the Hub? (How does it deliver on the aims of the MOU?) 150 words max

Increase the number, quality, and scale of local Net Zero projects being delivered across the region: a number of net zero projects, e.g. connection of heritage buildings in Hull to the upcoming heat network, are being held up due to limited understanding of older heating systems, and a low understanding risks poor delivery if the projects do take place.

Support a national knowledge transfer programme to improve information sharing, training, and evaluation: The technical guidance produced in this project will be able to be shared with other organisations with older heating systems in the public and private sector, e.g. the NHS, National Trust, National Park Authorities.

What impact will the proposal have on the local Net Zero agenda? (Who are the direct and indirect beneficiaries of the proposal)? 150 words max

The impact of this project is to eliminate the non-value time and cost expended on buildings when undertaking heat decarbonisation plans and further designs of historic buildings, only to find that there are too many obstacles to decarbonisation. The expended cost and effort could be put to better use if there were some clear identifiers and checklists that would indicate an order of magnitude for the ultimate decarbonisation work. This would then set out in high level terms the correct expectation to clients and management teams before futile efforts are undertaken on studies that lead to no decarbonisation work.

There are over 38,000 listed buildings in the North East and Yorkshire region. At a conservative estimate of 1% of these buildings being large non-domestic buildings with antiquated heated systems, this advice would be useful in the decarbonisation journey of over 380 buildings in the region. These buildings are likely to be amongst the highest emitters in the region due to inefficient heating, large sizes, and uninsulated fabric. For public buildings, this would allow the production of high quality Public Sector Decarbonisation Scheme bids.

Direct beneficiaries:

- Local Authorities – net zero, asset, capital teams

Indirect beneficiaries:

- Other public authorities, e.g. NHS and schools
- Private sector companies and charities owning/running heritage buildings, e.g. National Trust
- Historic England



What benefits will the proposal achieve? (What are the main outputs and what are the intended outcomes?) 150 words max

This project will bridge the gap from high level building decarbonisation planning to detailed decarbonisation project planning and funding applications, by producing technical advice on how to approach the decarbonisation of antiquated heating systems, allowing more well thought out and deliverable capital projects to be developed.

Outputs:

- Review of 30-50 local authority older building heating systems across the region
- Development of a simplified system for old buildings that identifies and categorises building types and heating system types to unify and consolidate an approach towards heat decarbonisation
- Review of challenges identified in building type and heating system type categories
- Methodology defined and tools produced for heat decarbonisation of the categorised heating systems, emitters and building types that has a user friendly approach (estimated 4-8 categories)
- Public facing webinar to outline findings and advice

Outcomes:

- Greater understanding of heritage heating decarbonisation
- Greater number and quality of heritage decarbonisation projects

Potential added value outputs if within budget:

- Exemplar heat decarbonisation plan for c.3 buildings of different categories
- Produce a heat decarbonisation plan specification for future tenders

Value for Money

	Capital	Revenue
Total proposal cost		£80k
Funding requested from the Hub		£80k
Proposal sponsor funding		
Other public (please state source below)		
Other private (please state source below)		
Other (please state source below)		

Additional information on funding, including source of funding	<p>Although there is no match associated with this request, it is expected that the project will be instrumental in developing decarbonisation projects for PSDS or other funding streams which will include substantial match funding from local authorities.</p> <p>Following a review of previous Low Carbon Skills Fund guidance, it has been determined that this project would not qualify for this funding pot if future rounds maintain similar requirements as the work is not specific to given buildings.</p>
How have the costs been estimated?	Discussions with Eddisons, who are reputable consultants with a track record of delivering retrofit



	<p>for heritage buildings including with the National Trust, have produced an estimated cost of £80k when looking at 50 buildings to be reviewed and including the potential additional outputs.</p> <p>Discussions with D3Associates, who reputable consultants with a track record of delivering retrofit for churches and public sector historical buildings including Hull City Hall, estimated a cost of £77.7k.</p> <p>A recent Hull City Council project with similar scope for assessing solar rooftop viability and process for 40 buildings had a cost of c.£75k.</p>
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Proposal Need

Why is the proposal required? What evidence is there of demand? Max 150 words	
<p>In Hull, and across Yorkshire and the North East, we have identified that there are significant knowledge gaps in understanding how to approach the decarbonisation of older heating systems, particularly in heritage buildings. While a basic heat decarbonisation plan may suggest putting in a heat pump or joining a heat network with upsized radiators, looking in detail at potential schematics the antiquated heating systems with high temperatures and no modulation often require a complete overhaul, taking us back to square one on planning how to adjust the building, resulting in wasted time and money.</p> <p>The identified solution to this knowledge gap is technical advice on how approach older heating systems in these transitions – a half-way between high level decarbonisation planning and detailed site schematics. The right level of guidance could be usefully applied to buildings of different types and ages but similar heating systems, e.g. a 70s heating system in a 1970s town hall will be similar enough to a 1970s heating system in a 1800s cathedral for the advice to be applied to both.</p> <p>Examples of where this knowledge gap has prevented decarbonisation works include Scarborough Spa, Whitby Pavilion, Hull Guildhall, and Hull Western Library.</p>	

Please summarise all the options considered for achieving your proposal goals with an outline of impact. This should include realistic scenarios in which there is no intervention at all (do nothing) and no Hub involvement. Max 100 words each	
1	Do Nothing – No action is taken to fill the knowledge gap, decarbonisation projects are developed without complete understanding of heating systems using existing local authority knowledge and skills, posing risks that work and money is wasted when heating uncertainties derail project plans.
2	Individual site heating assessments through LCSF or other funding – sites highlighted as having decarbonisation potential have decarbonisation plans developed through the Low Carbon Skills Fund or other funding pots, which include technical advice on adapting the



	heating system. This would likely result in repeated work for buildings with similar heating systems, thus limiting value for money. This would likely cost c.£5k per building (experience of similar project costs).
3	HEY project – sites are reviewed and technical advice produced based on buildings in the HEY area, producing advice on a series of heating systems that are likely to be applicable to a good number of heritage buildings across the NEY region, but may miss some types of heating system not found in the HEY area. This would likely cost c.65k (estimate from conversation with Eddisons and D3Associates)
4	NEY project - sites are reviewed and technical advice produced based on buildings in the NEY area, producing advice on a series of heating systems that are likely to be applicable to a large number of heritage buildings across the NEY region, with input from all areas as to which types should be focussed upon. This would likely cost c.80k (estimate from conversation with Eddisons and D3Associates)
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What is the preferred option and why? What are the advantages of the chosen option over and above the alternative scenarios? Max 150 words

Option 4 is the preferred option.

There is significant opportunity for value for money by producing technical advice applicable to numerous buildings rather than relying on individual building decarbonisation plans (as in Option 2) – approximately 16 detailed decarbonisation plans can be delivered for £80k, in comparison to advice applicable to 380 buildings. There will be minimal additional work and costs (c.£15k) to expand the project from the HEY area (Option 3) to the NEY area (Option 4), but the additional geography is likely to identify additional heating systems to review that will have benefit across the whole region.

Delivery of the proposal

Who will deliver the proposal? Max 50 words

HEYLEP/Hull City Council

Project to be managed by Hub’s HEY regional PM with support from the HCC Capital projects team, with a steering group developed to include relevant Hub officers and officers working on building decarbonisation across

Are any other organisations involved? If so, what is the nature of their involvement? Max 150 words

All Hub partners and local authorities in the region will be invited to contribute to the project by joining the steering group and/or sharing building information.
The project will be delivered by procured consultants.

Please outline your plan for mobilisation – you should indicate if you already have resources in place to deliver or your plan for securing them. Max 200 words

The core Project Team has been established including the Hub’s regional PM, HCC Capital Projects Officer, and HCC Climate Change Manager.

Upon successful project proposal, the Team will develop a tender specification for external consultants to deliver the project and obtain all relevant approvals. Initial soft market testing is being conducted in February and March to begin specification development; a final specification will be developed by end of April. The Project Team is well versed in internal approval processes.



The Team will work with HCC Procurement to identify the best route to market, which may be use of the Technical Assistance Framework to enable rapid commencement. Consultants are expected to be in place by the end of June.

A steering group will be established in July to oversee the project and assist the Project Team, determined through an open ask to colleagues through Hub networks and utilising existing relationships from NEYPED activity. The Steering group will meet as needed, at approximately 6 week intervals.

Initial scoping activity, including site visits, will be conducted by the consultants over July, August, and September. Technical advice will be developed over September, October, and November. A public facing webinar will take place in November. Outputs will be reviewed and finalised in November and December. If required, some aspects may be accelerated to fit with PSDS timelines. A 3 month contingency window exists to ensure delivery inside the financial year.

Please briefly detail any relevant preparatory work already completed. Max 150 words

The project will build upon work undertaken in NEYPED and NEYPED+ to identify priority buildings for heat decarbonisation, including identification of challenges.

Hull City Council are preparing a piece of work to deliver 13 PAS2038 decarbonisation reports for 13 buildings; care will be taken to ensure the works delivered in this project reflect on the learnings of this and are additive rather than duplicative to this separate work.

What is the timeframe for developing the proposal? Aside from securing a funding commitment from the Hub, when would the proposal be 'ready to go'?

Ready to start	June 2024
Outputs could be delivered by	December 2024 (partial outputs may be delivered by October for use for PSDS applications)
Benefits could be realised by	December 2024 (October 2024 if partial outputs are ready to use for PSDS application)
Duration of proposal	7 months

What are the key dependencies for the proposal's start/end dates? Max 50 words each

Dependency	Detail
Procurement processes to be complete	<p>Initial soft market testing is being conducted in February and March to begin specification development; a final specification will be developed by end of April. The Project Team is well versed in internal approval processes.</p> <p>The Team will work with HCC Procurement to identify the best route to market, which may be use of the Technical Assistance Framework to enable rapid commencement. Consultants are expected to be in place by the end of June.</p>



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OFFICIAL

Stakeholder engagement/Steering Group formation	A steering group will be established in July to oversee the project and assist the Project Team, determined through an open ask to colleagues through Hub networks and utilising existing relationships from NEYPED activity.

	Date (if known)	Details
Proposal cannot start before		Project requires the procurement of external consultants through HCC's procurement processes, or use of the Technical Assistance Framework, as detailed above.
Proposal must be completed by	March 2025	Project to be completed within the 24/25 financial year

Please attach a separate risk assessment and briefly explain below any significant risks/barriers to delivery and how these will be mitigated. Max 200 words

See attached risk assessment.

The most significant risk to successful delivery is the procurement of an external consultant to deliver the project. The procurement process must ensure that a suitably skilled consultancy can be found within budget to deliver the work and must be conducted in a timely manner to enable project completion before end of the financial year.

Early soft market testing is taking place with experienced consultants including Eddisons, D3 Associates, Align Property Partners, and Sustenic, which have shown high levels of interest in the project and have produced cost estimates in line with the project budget. The Technical Assistance Framework may also be used for this project if required. This engagement provides confidence that suitable consultants will bid to undertake the work and that timelines can be met.

The three month contingency built into the project timeline can be utilised to reshape the specification and undergo another round of procurement if the initial round of procurement is unsuccessful.

Health and safety risks associated with examining heating systems will also be closely monitored during the project delivery, with health and safety protocols a key consideration in procurement evaluation.