HARROGATE TOWN COUNCIL

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GB ENERGY COMMUNITY FUND
STAGE 1 FEASIBILITY STUDY

HARROGATE TOWN DISTRICT HEATING PROJECT
INVITATION TO TENDER

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1. Introduction & Background to the Tender

The Local Area Energy Plan for Harrogate and The Dales has identified potential for district heating in the 'Central Civic and Commercial' area of Harrogate.
In addition, Harrogate Town Council has identified three areas of 'Priority Residential' housing, based on the respective Local Indices of Multiple Deprivation, as priorities for deployment of district heating as a decarbonisation technology.
There is some experience of district heating as a technology in Harrogate Town, with an existing 'Civic Centre' network using a heat network to connect an energy centre that deploys gas boilers to major users in the western town centre. Maps of these areas are referenced herein.
For tendering purposes, these should be taken as generic descriptions.

The Feasibility Study project is community-led, in the first instance by Harrogate Town Council.
The output of the services to be procured through this ITT will be the Feasibility Study Report, executive summary, and technical appendix to fully meet the GB Energy Community Fund Stage 1 requirements.
This will evidence the feasibility of, and route map to, achieving the 'Core District Heating Scheme' that creates community benefit and is of a sufficient scale to generate impact and value for money.
It will provide a clear project roadmap for the 'Core District Heating Scheme' and next steps, plus risk assessment.

Local Authorities
The locations are within the jurisdiction of North Yorkshire Council and Harrogate Town Council.

Harrogate Town councillors and council officers are supportive of the District Heating Feasibility Study as a potential key element in the new Council's strategy. They are key stakeholders for this Stage 1 study as the Town Council is the intended applicant to the GB Energy Community Fund.

The relevant councillors of North Yorkshire Council are supportive of the Feasibility Study.

Proposed Stage 1 Feasibility Study Project
This Feasibility Study will determine the viability of developing one or more zero (or low) carbon district heat networks using heat generated by one or more energy centres or other renewable energy sources within Harrogate Town.
The study has a specific focus on technical, commercial and social feasibility and benefits. We are seeking well-informed project concepts that are for community benefit and of a sufficient scale to generate impact and value for money.
The findings of this Feasibility Study are intended to inform other 'mixed economy' district heating projects, thereby expediting and enabling further development of such networks in the UK.

Potential synergies from repurposing the existing gas boiler powered 'Civic Centre' heat network will be assessed.
Potential synergies with existing renewable (air source heat pump) heat sources at the Hospital and the Leisure Centre through linkage to a heat network will also be explored.
Another renewable heat source opportunity to be assessed is the potential use of waste heat from the Yorkshire Water Harrogate North Waste Water Treatment Plant close to one of the Priority Residential areas.
Also to be assessed is the potential of local aquifers and deep geothermal to provide economically viable heat for one or more District Heating scheme options.

GB Energy Community Fund Stage 1 Application
The Town Council is preparing to submit a grant application to GB Energy Community Fund for this Stage 1 Feasibility Study.

On confirmation of receipt of the grant funding by the Town Council, the successful tenderer will be notified.

The successful tenderer will then deliver the Feasibility Study fully meeting the GB Energy Community Fund Stage 1 guidelines, specifically including production of a final report fully complying with the GB Energy Community Energy Fund Feasibility Report Structure.[1]

2. Scope of Work

The appointed consultant will carry out a comprehensive feasibility assessment compliant with the GB Energy Community Fund Stage 1 guidelines.

This will include:

a) Heat Demand Mapping & Network Routing

- Lead on Stakeholder Identification and Stakeholder Engagement, to include identification of local anchor loads and potential distributed heat loads, and engagement with the respective owners, in consultation with Harrogate Town Council.
- Estimation of the number of homes and businesses in the four identified areas and in areas adjacent to them that would form a logical district heating area that could be decarbonised, and their associated heat demand.
- Engagement with Social Housing providers and multi-property private landlords to assess technical compatibility for heating using heat network.
- Engagement with Civic and Commercial building owners to assess technical compatibility for heating using heat network.

[1] CEF-Feasibility-Report-Structure-NEY.docx

- Identification of practical routing options for heat pipework and district network design.

b) Heat Source Evaluation

- Lead on Stakeholder Identification and Stakeholder Engagement, to include identification of local heat sources and engagement with the respective owners, in consultation with Harrogate Town Council.
- Heat capacity and technical compatibility checks with existing waste heat source at the Harrogate North Waste Water Treatment Plant via discussion with Yorkshire Water management and exchange of technical data.
- Technical characterisation of the waste heat from the Yorkshire Water Harrogate North Waste Water Treatment Plant: its temperature range, seasonal availability, and long-term continuity, which is critical for viability given the likely 50+ year lifespan of a heat network.
- Heat capacity and technical compatibility checks with existing and planned energy centres at Leisure Centre and Hospital via discussion with their management and exchange of technical data.
- Technical characterisation of surplus heat from, and spare capacity of, the Hospital and Leisure Centre energy centres: its temperature range, seasonal availability, and long-term continuity, which is critical for viability given the likely 50+ year lifespan of a heat network.
- Technical assessment of requirements for replacement by renewable heat source of gas boilers for the existing (limited range) Central Civic heat network to meet its off-takers' requirements.
- Technical assessment of heat capacity and compatibility of alternative renewable heat sources, including deep geothermal and local aquifers, as viable heat sources for District Heating.
- Options appraisal for large-scale heat storage to bridge supply interruptions from external heat sources.

c) Optioneering

Examination of network configuration options, including:

- Residential heat networks individually, identifying scale-up opportunities adjacent to the identified Priority Residential Areas that would form a logical district heating area and potential for adding non-residential demand (e.g .commercial buildings and operations, care homes).
- Centralised (e.g., heat pump at the energy centres, insulated pipes) versus decentralised (heat pumps at customer premises, lightly insulated or uninsulated pipes) approaches.
- Consideration of linking and phasing of district heating developments, including build-out from the Central Civic and Commercial Area or build-in from the Priority Residential heat networks, or other approaches.
- Identify and set out the technical, financial and commercial basis for a selection of a 'Core District Heating Scheme' for development of district heating in Harrogate Town.
- Assessment of capital and operational costs for transporting heat between the potential heat networks.
- Initial grid capacity checks and constraints (via discussion with the local distribution network operator).
- Qualitative and quantitative evaluation of options, and the 'Core Scheme' identified, with clear recommendations.
- Provision of a clear project roadmap and timeline, with next steps and risk assessment.

d) Community Benefits

- High-level assessment of social impacts, specifically on fuel poverty households, local investment opportunities, and broader benefits.
- Support for community engagement activities as required.

e) High-level Financial, Environmental and Economic Analysis

- Development of capital and operational expenditure estimates for shortlisted options.
- Develop an assessment of the economic benefits for shortlisted options and quantify compared with the “do nothing” approach.
- Develop an assessment of the environmental benefits and quantify in terms of CO2e savings and air quality impacts compared with the “do nothing” approach.
- Develop an assessment of the economic and user experience comparisons between the most viable options and a 'do nothing' scenario for homeowners.
- Identification of potential funding sources, including grants, loans, and community share offers that would satisfy the GB Energy Community Fund Stage 2 eligibility criteria.
- Use of base economic modelling to optimise project design and schedule; this will inform further modelling at Stage Two.

f) Outputs and Recommendations

- Full Feasibility Study Report, executive summary, and technical appendix to fully meet the GB Energy Community Fund Stage 1 requirements.[2]
- Demonstration of the feasibility of and route map to achieving the ‘Core District Heating Scheme’ that creates community benefit and is of a sufficient scale to generate impact and value for money
- Provision of a clear project roadmap for the ‘Core District Heating Scheme’ and next steps, plus risk assessment.
- Outline of planning requirements.
- Scoping of need for permits, licences and consents
- Landowner agreement (Heads of Terms)
- Finance and business model development
- Initial appraisal of grid capacity impacts and any restrictions.
- Case study using the specified template.
- Presentation of findings to the project team and stakeholders.

g) Financial and Business Model

- Simple economic model showing possible internal rates of return (IRR) for a range of tariffs, civic and commercial off-takers costs, resident costs, and capital/operational cost estimates for each option. Previous reports from district heating projects may be referenced as supporting material.
- Finance and business model development for the recommended ‘Core Scheme’.

[2] CEF-Feasibility-Report-Structure-NEY.docx

h) Community/Stakeholder Engagement

- Lead on Stakeholder Identification and Stakeholder Engagement, to include identification of large heat users and local heat sources, and engagement with the respective owners, in consultation with Harrogate Town Council.

- Harrogate Town Council will lead community engagement.
  The appointed contractor will provide support by:
  i. Designing energy demand surveys for residents and anchor load businesses.
  ii. Producing brief bi-monthly updates for publication on the Town Council's website.
  iii. Attending kick-off meetings and community engagement events as required.
  iv. Contributing information and slides for engagement activities, ideally attending final presentations in person, or remotely if appropriate.

i) Share learnings

- Prepare materials to share learnings on process and outputs with other communities across the North East and Yorkshire region.
- Present to an online forum arranged by the North East and Yorkshire Net Zero Hub.

3. Site Visits & Communication

Bidders should allow for six site visits: one for project kick-off, four for stakeholder engagement and community events and a final one for stakeholder presentation. All other communication will generally be via email or video call.

Weekly project management update calls should be scheduled, and papers prepared by the consultant and circulated 24 hours in advance of each meeting.

4. Tender Submission Requirements

Bidders must provide the following:

General Information:

- Company name, registered address, office address, registration number.
- Legal status (e.g., sole trader, private limited company, public limited company).
- VAT registration number (if applicable).
- Group structure or parent company, if any.
- Details of all partners for consortium bids.
- Confirmation of insurance: professional indemnity (£2 million), public liability (£5 million), employers' liability (£10 million).
- Lead contact name and details.

Maximum two sides of A4.

Use of sub-contractors:

- Confirmation of any elements of the project where it is proposed that sub-contractors would be used.
- Full details for any subcontractors included in the proposal must be provided in line with those submitted by the main Supplier.

Bidder Experience:

- CVs for all proposed team members.
- Examples of recent district heating projects, with references.
- Examples of projects delivered under GB Energy Community Fund (or its predecessors), with references
- Evidence of bidder organisation's sustainability credentials and environmental performance
- Examples of delivering innovation, as defined by the Energy Systems Catapult, through projects such as this one, with references.

Maximum three sides of A4.

Technical Submission:

- Summary of approach to delivering the required work packages and attention to the options to be assessed and route to recommended 'Core Scheme' for district heating development.
- Description of approach to developing well-informed project concepts that are for community benefit, and of a sufficient scale to generate impact and value for money.
- Description of approach to demonstrating innovation: as defined by Energy Systems Catapult, to innovate net zero through "new technologies, new ways of deploying existing technologies, new business models, new consumer offerings, and new policy, regulation and market design," e.g., using new combinations of technologies to optimise the value of the project.
- Description of approach to demonstrating ambition: to capitalise the district heating scheme commercially to leverage private investment (from a commercial partner or from the community itself).
- Description of technical and financial modelling tools and of access to relevant detailed benchmark data.
- Description of how the economic, environmental and social benefit associated with the project will be quantified.
- Description of project management methodology that will be adopted and the detail of what, how, who, where and when.
- Description of approach to ensure that the cost estimates provided relating to the heat networks and energy sources are timely and accurate.

Maximum four sides of A4.

Commercial Submission:

- Detailed breakdown of resources committed for all proposed activities, specifying individual team members' time on site and time working remotely.
- Detailed breakdown of costs for all proposed activities, including any assumptions such as travel expenses.
- Payment schedule linked to pre-agreed milestones.

Maximum three sides of A4.

5. CFT Evaluation

Submissions will be assessed by the Evaluation Team as follows:

Weighting for each of the Criteria as follows:

Criteria	*Weighting*
Bidder Experience	30%
Technical Proposal	50%
Commercial Proposal	20%

Scoring for each of the Criteria is on a A-E system as follows:

A. Submission missing or fails to meet requirements – scores 0
B. Submission meets some requirements - scores 2
C. Submission substantially meets requirements - scores 6
D. Submission meets all requirements and exceeds some - scores 8
E. Submission significantly exceeds requirements - scores 10

6. CFT Clarifications and Submission

All questions and requests for clarification should be submitted as outlined in the Communications section above.

Questions must be submitted by 12 September 2025, 12:00pm. All non-confidential queries and answers will be shared with parties who have expressed an interest prior to this date.

Bid submission deadline: 19 September 2025, 12:00pm.
The submission address is tenders@harrogatetowncouncil.gov.uk

The Buyer reserves the right to request interviews with potential Suppliers prior to awarding of the Contract.

Selection of preferred Supplier: 25 September 2025

Final award of contract is subject to confirmation that Harrogate Town Council's application to GB Energy Community Fund Stage 1 application has been successful.

Attachment
Harrogate Town District Heating Feasibility Study: Priority district heating areas for assessment

Harrogate Town District Heating Feasibility Study

Priority district heating areas for assessment

Feasibility Study

funding from GB Energy Community Energy Fund

28th August 2025

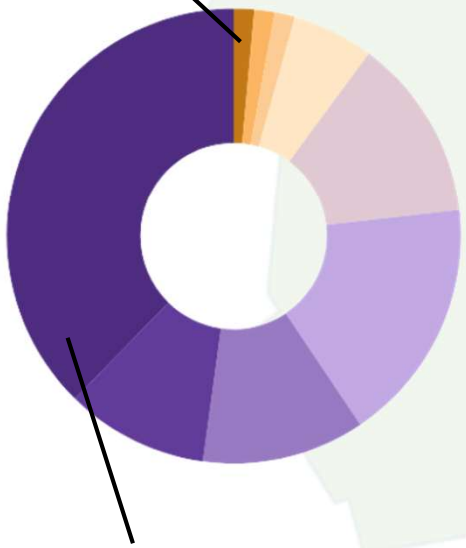
HARROGATE TOWN COUNCIL
ESTD 2025

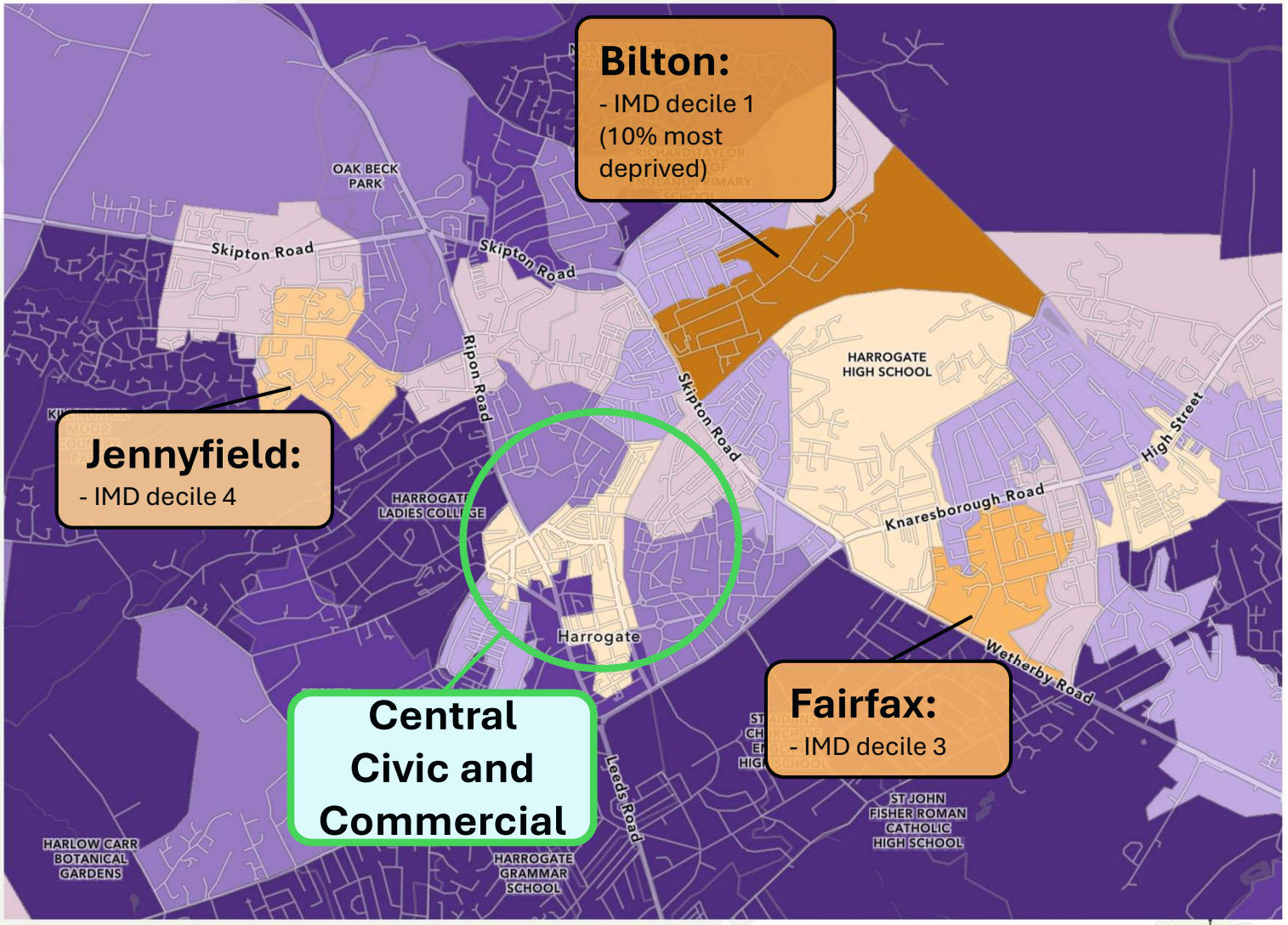
HHN
Cleaner air and lower carbon heating for all of Harrogate

Priority district heating networks across Harrogate Town

Overview of priority heat networks across Harrogate Town

- 3 Priority Residential Areas (based on Index of Multiple Deprivation)
- Central Civic and Commercial Area (highlighted in Local Area Energy Plan)





https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/833959/IoD2019_Infographic.pdf

Cleaner air and lower carbon heating for all of Harrogate

Priority Residential Areas:

Bilton

LSOA: Harrogate 013F

- IMD decile 1
- Approximately 940 households with a population of about 1,500 (2021)
- Bilton and Woodfield Community Library
- Bilton Grange URC church

Opportunities for collaboration:

- **Yorkshire Water** waste water treatment facility ca. 1.5km north/north-west of the neighbourhood
- Produces heat as a by-product of waste treatment
- Potential renewable heat source via heat network to houses in the Bilton area

YorkshireWater

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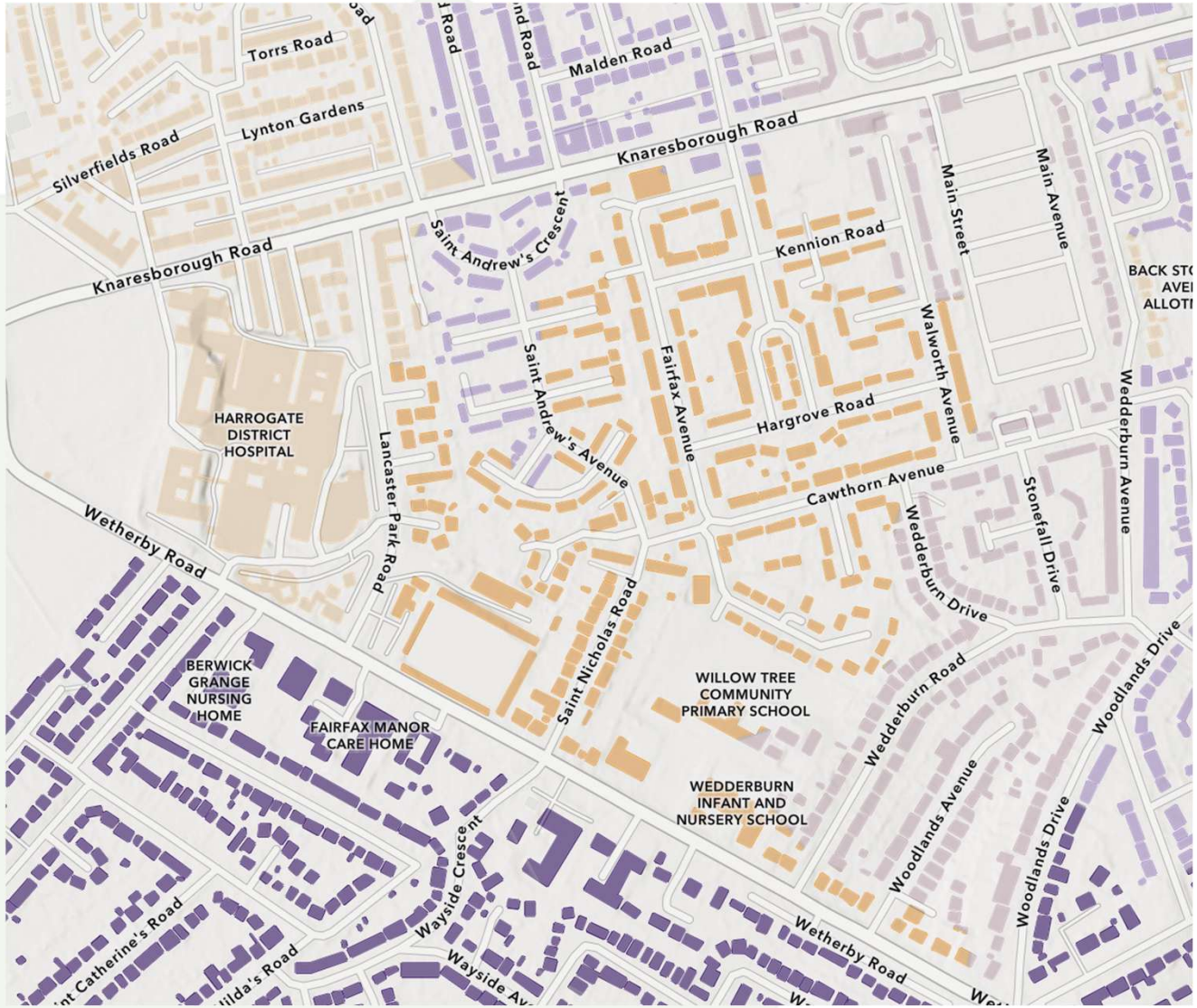
Cleaner air and lower carbon heating for all of Harrogate

Priority Residential Areas:

Fairfax

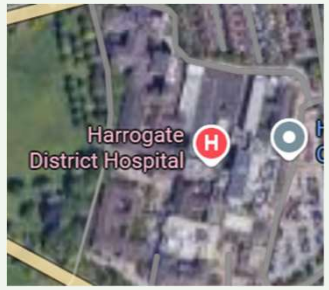
LSOA: Harrogate 013B

- IMD decile 3
- Approximately 600 households with a population of about 1,500 (2021)
- Fairfax Community Centre
- Willow Tree Community Primary School



Opportunities for collaboration:

- **Harrogate and District NHS Foundation Trust Hospital**
- Recently deployed £14 million to install solar panels and air source heating
- Possible opportunity to connect the hospital up to an energy network to increase efficiency both in the hospital and the surrounding area



NHS
Harrogate and District
NHS Foundation Trust

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Cleaner air and lower carbon heating for all of Harrogate

Priority Residential Areas:

Jennyfield

LSOA: Harrogate 011E

- IMD decile 4
- Approximately 730 households with a population around 1400 (2021)
- Jennyfield evangelical church
- Saltergate Primary School

Opportunities for collaboration:

- **Active North Yorkshire** (The Hydro)
- Recently replaced gas boilers with air source heat pumps as part of a renovation to reduce carbon emissions
- Possible opportunity to connect to an energy centre and heat network with the surrounding area

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Cleaner air and lower carbon heating for all of Harrogate

Central Civic and Commercial area

Source: Harrogate and the Dales Local Area Energy Plan

Outline Priority Projects Summary

Demonstrator and low regrets projects for near-term implementation

Domestic Air Source Heat Pump Installations in the Skipton, Embsay and S. Craven Zone	
Number of Dwellings	7,200
Predominant Type	Terrace
Capital	~£50m

Ground Mounted Solar in the Skipton, Embsay and S. Craven Zone	
Capacity	30MW
Generation	29 GWh/annum
Land Use	50
Capital	~£15.9m

Domestic Building Fabric Upgrades in the Skipton, Embsay and S. Craven Zone	
Number of Dwellings	c. 215
Predominant Type	Pre-1914-1979 terrace
Capital	~£0.4m
Additional Benefit	Fuel poverty reduction

On-shore Wind in the Skipton, Embsay and S. Craven Zone	
Capacity	2MW
Generation	4.4 GWh/annum
Land Use	90 hectares
Capital	~£2.5m

Domestic Building Fabric Upgrades in the Catterick Garrison to Masham Corridor	
Number of Dwellings	c. 760
Predominant Type	1965-1979 terrace 1945-1964 semi-detached
Capital	£0.5m
Additional Benefit	Fuel poverty reduction

Domestic Solar PV Installations in the Catterick Garrison to Masham Corridor	
Number of Dwellings	c. 1,800
Capital	~£9m
Additional Benefit	Fuel poverty reduction

Heat Network Starting Point in Harrogate Centre	
Number of Dwellings	c. 1,200
Number of Non-Domestic Properties	c. 870
Peak Demand	19 MW
Capital	~£37m

	Number of Domestic Dwellings	Number of Non-Domestic Properties
Area 1	1,222	870
Area 2	202	312

Opportunities for collaboration:

- **North Yorkshire Council** (Central heat network, energy centre and NYC-owned buildings)

https://yorknorthyorks-ca.gov.uk/wp-content/uploads/2023/12/Harrogate-and-The-Dales-Local-Area-Energy-Plan.pdf