



INVITATION TO TENDER

**FUTURE NEW BUILD SPECIFICATION
& PERFORMANCE STANDARD**

MARCH 2020

Contents

- 1. Project Introduction 3
- 2. The Requirement..... 3
- 3. Tender and Project Delivery Timescales..... 8
- 4. Selection and Award Criteria 9
- 5. Quality Submission..... 10
- 6. Contract and Payment Terms 11

1. Project Introduction

Yorkshire Housing will deliver 8000 new homes by 2030. We will provide smarter homes that are more energy efficient, sustainable and affordable to live in. Our Development programme includes a mix of social rent, intermediate rent, shared ownership and outright market sale.

Yorkshire Housing wish to adopt a ‘fabric-first’ approach to carbon reduction and thermal efficiency, through high insulation and airtightness standards. From March 2021 our new homes that we commission for build should no longer be heated using gas fuelled heating/hot water systems.

The Yorkshire Housing Growth Strategy will see properties developed across the whole of the Yorkshire region. The building design and materials used will need to reflect the local planning authority requirements.

Yorkshire Housing currently develop to a portfolio of 19 standard house-types, along with a variation of other architect-led designs. We also purchase properties from the private housing build sector via the s106 planning route and make occasional market purchases from the same.

2. The Requirement

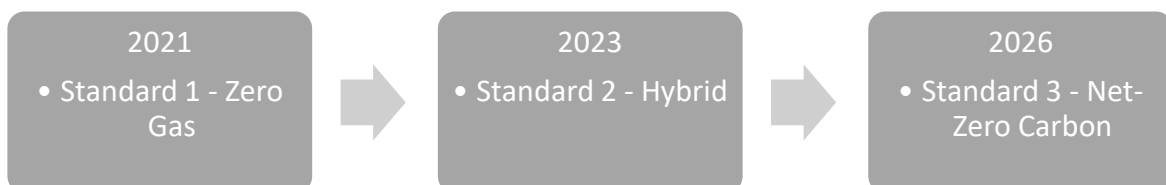
Yorkshire Housing wish to appoint a consultant to deliver services related to new build thermal energy efficiency standards plus heating and hot water provision across a selection of property types, to be developed across a range of locations across Yorkshire.

The consultancy requirement is split into five main elements as outlined below:

- Element 1 - Developing a performance based standard for the thermal efficiency, ventilation and generic energy efficiency measures
- Element 2: Undertaking an options appraisal and final performance standard for the preferred heating and hot water provision
- Element 3: Identify fabric, ventilation, heating, hot water and general energy efficiency measures which can be incorporated into the specification of s106 properties that are purchased from the private house-building sector.
- Element 4: Work with Yorkshire Housing to develop a targeted matrix of measures and outputs to achieve our strategic aspirations.
- Element 5: To offer a retained service, optional to the client, to review and adapt the standard ‘as-built’ as required and in response to change.

These elements are further detailed within this section.

Yorkshire Housing wishes to produce three evolving standards, switching from current conventional house building standards towards an energy efficient net-zero carbon standard. Long term, we aspire to being fully zero carbon. We wish to undertake these changes on an incremental basis over coming years. Our requirements and aspirations for the evolution of the standard, which the consultant will need to work to, are as below:



Standard 1 –Zero Gas

- The standard will be compliant with the changes proposed in the consultation on Part F and L of the Building Regulations through 2019-20. Where the standard has not been agreed during the phase of the consultants engagement, all options in the Building Regulations consultation will need to have been modelled and a standard produced so the client has a compliant standard ready to be implemented.
- Will switch to a non-gas fuelled heating/hot water provision.

Standard 2 - Hybrid

- Building on Standard 1, be compliant with the energy and thermal performance standards proposed in the Future Home Standard for implementation from 2025.
- Will achieve an A rated EPC home.

Standard 3 – Net-Zero Carbon

- The standard will achieve a net-zero carbon rated home (irrespective of primary energy generation).

As a general aim, the consultant will identify opportunities for how we can achieve our aspiration of developing a zero carbon home.

At each standard, it should consider each of our house-types, producing a general specification based on a house, bungalow or flat, including any variations where that type may be detached/semi-detached/mid-terrace or ground/mid/upper floor. Where applicable, the specification will need to differentiate between tenure types where Yorkshire Housing develop for rental and market sale.

Yorkshire Housing are exploring developing with modern methods of construction (MMC). The standards need to consider any variation that may be beneficial versus a traditional build form, distinct where applicable for each of the defined methods allowed in MMC.

The heating and hot water system will need to be considered in response to the fabric performance once enhanced. Consideration will then be required based on the size of the property, plus the occupancy of the house-type.

Yorkshire Housing is keen to adopt and make use of innovative smart home technology and innovation in the design our future homes. A key measure will be identifying and proposing solutions for each of the five elements of this brief that can help positively impact on energy usage, monitoring or management in the homes that we develop, both in terms of technology and design.

As a minimum and not to act as a constraint in breadth, the consultant will be required to produce a standard for each increment as below:

Element / System	Performance Standard Required
Walls	
Floors	
Roof (pitched (cold) / flat / roof in roof)	
Doors	
Glazing	
Air Permeability	
Heating / Hot Water System (energy rating / thermal efficiency (co-efficient where applicable)	
Lighting	

Renewable Technology Requirements (in-line with Building Regulations)
Ventilation / Air Quality
Over-Heating
Shower Provision
Smart Technology
Design Considerations (car charging points, recycled products, glazing areas)

The consultant will be expected to collaborate with Yorkshire Housing's employer's agent panel to understand existing and projected building costs. The financial modelling for the enhanced standards will need to give consideration for value for money of the standard and cost the impact of each measure to be incorporated.

Concurrent with this piece of work, Yorkshire Housing are procuring an architect to re-design and add to our existing 19 strong house-type range. The energy consultant will need to collaborate with the architect to model and produce a standard for the fabric, ventilation and heating/hot water for any changes or new house-types that emerge from this piece of work. To date, an additional 6 variations on our housetypes have been identified for creation, which will need consideration in this commission. The timeline for the production of new and updated archetypes is listed in the project timeline further. It will be critical that initial modelling and an interim proposal are produced so the architect's revisions are not delayed.

In the interest of maintaining communication and progress with the project, Yorkshire Housing envisage that regular meetings (remote acceptable) would be valuable during the delivery of the project. Consultants should allow for a fortnightly meeting to be planned and co-ordinated following the introductory meeting.

The Client project team will report to the Directors with the proposed standards, costs and implications of the Consultant's work. The Consultant will be expected to provide evidence for the submission to the Directors Report and act on amendments to the commissioned report and standards that arise from their feedback.

On conclusion of the final standards, the Consultant will need to work with Yorkshire Housing's marketing and sales teams to produce materials that capture the benefits and outputs of the commissioned work. The Consultant will deliver a presentation and overview of the standard, report recommendations and project outcomes to Yorkshire Housing's internal stakeholder team (allow one meeting) and to our panel of architectural / employers agent consultants (two meetings).

Element 1 – New Build specification development: fabric, ventilation and generic energy efficiency measures

This element requires the production of a performance based standard for upgrading the fabric, ventilation and generic energy efficiency performance of Yorkshire Housing property archetypes.

The final output should produce a fabric and air permeability standard that applies across all build types. This is to avoid different specifications / materials being used on site.

A report which highlights the process and calculations employed is required. This should incorporate a technical and financial assessment, to explore the options available to improve the overall thermal performance of the identified properties and identify the preferred options.

The following considerations shall be taken into account when developing the performance based standard:

Client objectives	Understand the aims and objectives and capacity and resources of the Client regarding technological and practical considerations relating to this project
Review property archetypes	Working with the Client, confirm the number of property archetypes that are to be assessed. Consider changes to house-types and produce standards covering emerging house-types.
Customer impact	Assess and highlight the implications for occupants of each element (tenants and owner occupiers), including running costs. Any ongoing impacts post installation and any behaviour change requirements.
Heat loss calculations, air tightness, u-values and heat load	Confirmation of energy requirement from dwellings and the building as a whole (based on thermal performance of properties and u-value calculations). Airtightness, SAP ratings, fuel bills, CO ₂ emissions shall also be modelled against each proposed standard.
Physical site constraints and building physics	Assess and highlight the implications of the energy efficiency proposals on the fabric of the building and how it currently behaves. Specific areas of concern that should be addressed include the risks from existing moisture level and subsequent movement within the building, the impacts of thermal bridging and existing utility connections. The use of suitable moisture and thermal modelling testing and software is required to inform specification development.
Fabric thermal standards	Assess and identify the appropriate solutions to enable walls, roof, floor, window and doors to be insulated and deliver airtightness levels so as to comply with Yorkshire Housing's requirements.
Measures to mitigate summer overheating	Appraise our housetypes and consider measures that can be employed to reduce summer overheating and the potential impacts of further climate change to our general house-type range.
Ventilation strategy	Outline the preferred approach to ensuring that dwellings are adequately ventilated, in conjunction with the identified fabric thermal standards. Recommendations should take into account customer impact, running costs, servicing and maintenance.
Ancillary energy efficiency improvement measures	Outline additional measures to improve the energy efficiency of dwellings such as, but not limited to; high performance doors, waste water heat recovery units, smart technology etc. Recommendations should take into account the relevant legislative requirements as well as any potential customer impact.
Financial viability and modelling	Produce financial models including outline enhanced construction costs per element, maintenance and operation costs and revenues / external funding opportunities for all measures proposed.
Smart Home Technology	Propose and appraise with recommendations for innovative technology to be used to manage and monitor energy usage within the home – benefitting the customer and Yorkshire Housing as the landlord.

Element 2 – Heating and hot water system options appraisal

This element requires the production of an option appraisal report to identify the preferred heating and hot water provision systems for the identified property archetypes.

The report shall highlight the process and calculations employed, incorporating a technical and financial assessment, to explore the heating system options available to the identified properties and the subsequent preferred options.

When investigating the most appropriate technology and size for the heating system to be deployed in the identified archetype properties, the thermal performance of the properties post installation of the energy efficiency upgrades identified in Element 1 shall be used.

An assessment of the most energy efficient means of providing showering will be undertaken, comparing

electric shower use versus mixer shower provision, sourced from the means of hot water production identified in this element.

The following considerations shall be incorporated into the options appraisal:

Customer impact	Assess and highlight the implications for occupants of the method of heating and hot water provision. Identify any behaviour change requirements. Estimated running costs of proposed heating and hot water system are to be modelled
Physical site constraints and land ownership	Assessment of access and requirements for siting and installation of plant and services, pipe runs etc. Assessment of archetype roof size and structure for PV / solar thermal to inform use of these technologies in suitably orientated properties. Consideration of connections and land ownership issues. Assessment of increased electric load capacity on network and estimated additional cost.
Planning and legislative requirements	Identify planning and legislative requirements associated with heating installations that would need to be considered and may impact on scheme viability.
Technology and construction appraisal	Assessment of technology options (type and scale) and their performance and any associated civil engineering / ground works required to support the different solutions. Using data generated during delivery of Element 1, the required performance output and size of the relevant heating technologies shall be calculated. Data from Element 1 (post energy efficiency upgrades) shall be used when calculating heat load. The impacts on SAP ratings, resident fuel bills, CO ₂ emissions and revenue opportunities of the various options shall be modelled as part of this appraisal. If identified as potentially viable on a particular archetype (subject to suitable orientation), the impact of PV / solar thermal shall be modelled
Communal heat metering opportunities	Should communal heating systems be viable, undertake an options appraisal and assessment of the most appropriate heat metering and billing options available to the Client that will best meet their needs and those of their occupants (consideration where this could be tenants, owner occupiers or mixed circumstances).
Financial viability and modelling	Produce basic financial models including outline development and construction costs, maintenance and operational costs and revenues / external funding opportunities for all measures proposed. Consideration will need to be given to enhancing the electric network infrastructure.
KPIs / Outputs	Propose and devise measurable outputs for carbon and energy usage in construction and during the life of the building and in running costs.
Smart Home Technology	Propose and appraise with recommendations for innovative technology to be used to control, manage and monitor the heating/hot water system; from an occupant and landlord basis.

Element 3 – Identify fabric, ventilation, heating, hot water and general energy efficiency measures which can be incorporated into the specification of s106 properties purchased from the private house-building sector

This element requires the production of an elemental list of energy efficiency measures with a performance based standard that can be incorporated to s106 or ‘off-the-shelf’ properties purchased by Yorkshire Housing from the private house-building sector. The standard should identify the stage at which the measure can be incorporated based on the stage the development is at:

- Pre-construction
- Construction phase
- Post-construction (to be retro-fitted post-purchase of the property – by the developer or alternative contractor)

The options can include measures where the heating / hot water is provided by a gas fuelled appliance.

For each option, the Consultant should propose the running costs, potential savings (cost / carbon / energy, plus other suggested measures as Element 4) and indicative installation costs.

Element 4 – Development of targets / KPIs / tangible benefits of energy efficiency measures

As Yorkshire Housing develop more energy efficient homes, it will be important to capture the benefits of doing so. The consultant will be required to propose and allow for Yorkshire Housing to input and refine a matrix of KPIs to measure the existing base-line performance of the existing new-build housetypes and subsequently at each modelled standard proposed in this commission. Alongside this, we want the consultant to propose and support Yorkshire Housing in the development of aspirational targets in line with our strategy and the KPIs identified. It is envisaged that these measures will identify benefits including but not limited to; running costs, carbon savings, EPC enhancements, construction time and cost savings (where modern methods of construction are proposed), embodied energy (carbon or other energy unit use from construction-use-demolition)

The aim of this section is to develop the tangible measures so we can compare as-built performance versus that which was modelled in this project. In addition, we want to be able to create a series of benefits of our enhanced specification to promote our standard with our stakeholder groups, both internally and externally (i.e. residents / home-buyers, external reporting).

Having understood our archetypes and developed our future standard in this project, we envisage this element to identify and target when we can achieve a fully zero carbon home.

Element 5 - Retained services (optional requirement – Client discretion)

Yorkshire Housing may wish to retain the services of the successful consultant to offer technical support and advice during any ensuing construction contracts, changes to house-type, changes to legislative / planning and or regulatory requirements using the relevant performance based standards developed in Elements 1, 2, 3 and or 4.

The following tasks are likely to form part of this ongoing requirement:

- Reviewing contractor design proposals and product standards and specifications.
- Reviewing house-type design changes and re-modelling Elements 1 & 2.
- Reviewing legislative / planning / regulatory requirements and re-modelling Elements 1 & 2.
- Consideration of emerging or innovative technologies which may necessitate the re-modelling of Elements 1, 2, 3 and or 4.
- Reviewing KPIs / carbon and energy usage during the construction / running cost phase of our new homes.

3. Tender and Project Delivery Timescales

The timetable of events is as follows:

Activity	Timing
Tender Documentation Issued to Consultants	6 th March 2020
Tender Documentation Return Deadline	27 th March 2020
Written Tender Scoring, Pricing Analysis and Clarification	by 3 rd April 2020
Contract Award	6 th April 2020

Introduction & briefing meeting	9 th April 2020
Initial modelling and liaison with architect	9 th April – 22 nd May 2020
Interim report feedback and workshop with internal YH teams	w/c 11 th May 2020
Architect produces updated existing archetypes	22 nd May 2020
Architect produces new archetypes	5 th June 2020
Consultant's Final Report & Standards Produced	17 th July 2020
Input to Yorkshire Housing Directors Report	17 th July – 7 th August 2020
Directors Meeting	10 th September 2020
Post Directors Meeting Amendments to Report and Standards (if applicable)	By 30 th September 2020
Comms / Marketing collaboration	September / October 2020

The deadline for submission of the written tender questionnaire responses and the complete pricing matrix is 12:00 noon on Friday 27th March 2020.

The deadline for Clarification Questions submitted shall be 12:00 noon on 20th March 2020. No Clarification received after this time shall be responded to.

Tenders are to be returned marked for the attention of Richard Bould at Yorkshire Housing, Dysons Chambers, 12-14 Briggate, Leeds, LS1 6ER. Tenders should be returned in an unmarked envelope so the consultant cannot be identified prior to tender opening.

Clarifications should be e-mailed to Chris Hill (chris.hill@yorkshirehousing.co.uk) & Richard Bould (richard.bould@yorkshirehousing.co.uk).

4. Selection and Award Criteria

Yorkshire Housing will conduct an evaluation of the bids received and the contract will be awarded on the basis of the most competitive tender in accordance with the process outlined below.

Tenders will be subject to a three-stage evaluation process:

1. Tenders will be screened to confirm that the tender was submitted on time, completed correctly and meets the requirements in this Invitation to Tender. Tenders that do not meet these requirements may be rejected at this stage.
2. The written tender will be scored according to the evaluation criteria as outlined below in Section 5 Quality Submission.
3. The price score will be calculated for each tender by reference to the lowest tender submitted, which is given a points score of 40. Other scores will be awarded proportionate to that cost.

Assessment Criteria

Area	Criteria	Weighting
Capability	Relevant Experience & Service Delivery	60%
Competitive Pricing	Submitted cost	40%

5. Quality Submission

The questions below should be answered and included in the tender response:

Part 1 – Your Team

1. Provide pen profiles of the key individuals that will be directly involved in the delivery of this project, noting the role of each of the individuals identified. This profile should highlight the individual's experience of providing their respective service on similar schemes.
2. The proposed management structure for the team is also to be detailed. A statement must be included with details of availability and expected involvement as a percentage of overall time of the proposed individuals who will work on the scheme.

Response to be no more than 4 sides of A4, plus management structure (which can be appended).

Part 2 – References & experience

3. Please describe your involvement in up to three projects similar to the requirement listed within this ITT.
4. Please provide references for three organisations for which you have delivered similar projects to the requirement listed within this ITT.

Response to be no more than 1 side of A4 per case study and 1 side of A4 for references.

Part 3 – Service delivery and management of timescales

5. Please provide a proposed outline structure for the reports and performance based standards.
6. Delivering this project to the right level of quality and within the stipulated timeframes is essential to Yorkshire Housing. Consultants are to provide their methodology for delivering this project, advising the sequence and timeframes and key critical path activities to deliver the project.
7. In line with your proposed methodology (Question 2), Consultants are to provide a programme showing the timescales to which the service will be delivered

Responses to Question 6 & 7 to be no more than 2 sides of A4 (1 side for each question)

Qualitative Scoring

The qualitative scoring will be split as follows:

- Question 1 – 20%
- Question 2 – 5%
- Question 3 – 30%
- Question 4 – 5%
- Question 5 – 10%
- Question 6 – 20%
- Question 7 – 10%

6. Contract and Payment Terms

Consultants are asked to submit their proposed form of contract in their tender submission.

Payment terms will be as follows:

- 25% at Interim report stage
- 75% at Final report

Retained Service to be priced at the following rates:-

- Annual retained service (to be paid annually – at year end of service delivery)
- Day Rate
- Hourly Rate

Please complete the below form with the required details and costs for each element of the tender.

Name of contact: _____

Name of organisation: _____

Address: _____

Contact phone number: _____

Contact email: _____

Element 1 - £ _____

Tender sum (written) _____

Element 2 - £ _____

Tender sum (written) _____

Element 3 - £ _____

Tender sum (written) _____

Element 4 - £ _____

Tender sum (written) _____

Total Element 1, 2, 3 + 4 - £ _____

Tender sum (written) _____

Element 5

Annual retained service rate £ _____

Day Rate - £ _____

Hourly Rate - £ _____

I confirm that this tender is accurate and meets all the requirements in the invitation made by Yorkshire Housing.

Name _____

Signed _____

Date _____

7. Appendices

Example EPCs for existing properties

House-type	Address	Detachment	Construction
Airedale	No example available		
Bardale	6 Tortoiseshell Close	Detached	Timber Framed
Bedale	3 Parkview Place	Semi-Detached	Standard Masonry
Birkdale	13 Parkview Place	Semi-Detached	Standard Masonry
Bishopdale	No example available		
Cotterdale	35 Parkview Place	Semi-Detached	Standard Masonry
Fossdale	15 Ringlet Way	Semi-Detached	Timber Framed
Garsdale	15 Parkview Place	Semi-Detached	Standard Masonry
Kingsdale	1 Parkview Place	Detached	Standard Masonry
Littondale	4 Argus Lane	Semi-Detached	Timber Framed
Malhamdale	9 Ringlet Way	Detached	Timber Framed
Nidderdale	5 Parkview Place	Semi-Detached	Standard Masonry
Patterdale	18 Parkview Place	Semi-Detached	Standard Masonry
Raydale	1 Ringlet Way	Detached	Timber Framed
Silverdale	7 Parkview Place	Semi-Detached	Standard Masonry
Stonesdale	39 Parkview Place	Semi-Detached	Standard Masonry
Waldendale	No example available		
Wensleydale	2 West Grove	Detached	Standard Masonry
Wharfedale	31 Parkview Place	Detached	Standard Masonry