

For Information Only – Prequalification Briefing document for 64 homes at Derwenthorpe



The central tree-lined avenue



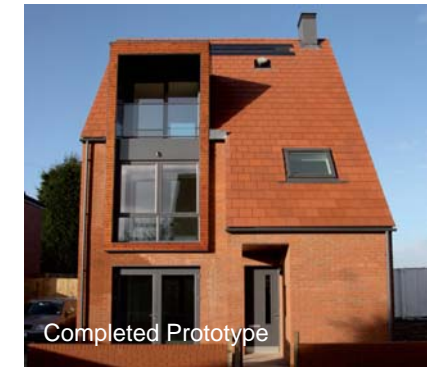
Houses overlook perimeter areas



Central Square & LAP



Energy Centre



Completed Prototype



Completed Prototype

Prototypes (completed Dec 09)

Type 1 - Thin-Bed Masonry

The first prototype house uses thin-bed masonry technology in which concrete blocks are bonded using a high-strength resin. With this method, the detailing of the wall construction remains very similar to traditional cavity wall construction, but the time on site is greatly reduced. Hairline cracking of the blockwork can occur after construction, specifying a 'parge coat'; a thin layer of plaster to the inner face of all external walls which help reduce air-leakage. In testing this house was found to have an air-tightness level of under 5.

Type 2 - Timber Frame

The second prototype house uses Kingspan TEK structurally insulated panels, which were then externally clad in brickwork. Considerable design stage discussions took place with Kingspan to ensure that the proportion of structural timber within the panels was minimised, so as to prevent unaccounted for heat loss. Additional insulation was fitted on the inside of the panels as the required u-values could not be achieved within standard TEK panel sizes. In testing this house was found to have an air-tightness level of under 3.

Testing & Monitoring

A programme of post-completion monitoring is also currently being undertaken by researchers from Leeds Metropolitan University. Co-heating tests are being carried out over a one-month period to calculate the as-built energy efficiency relative to that predicted by SAP.



Phase 1a

Energy Centre

The energy centre will provide low-carbon heating and hot water, helping the development to achieve exemplar environmental performance. It will also fulfil a flexible role as both community building and educational centre.

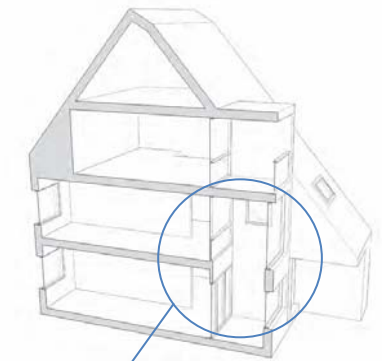
It is sited at the centre of the scheme; an accessible and visible location which will also maximise the efficient distribution of heat. Along with other community and residential buildings it will help to establish the identity for the central community square.

Local Context

The design draws on the rich architectural legacy of the Joseph Rowntree Housing Trust century-old model village at nearby New Earswick. Large steeply pitched roofs, painted brickwork and striking dormer windows combine to create a distinctive sense of place.



Prototype Houses



South-facing double-height winter gardens act as a thermal buffer and are linked to the ventilation system to take advantage of wintertime solar heat gains



Phase 2



Phase 3



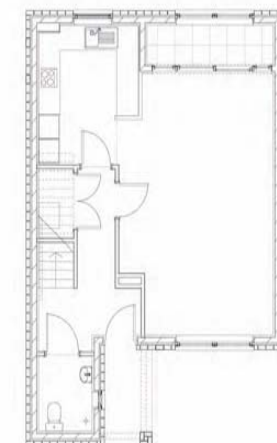
Phase 4



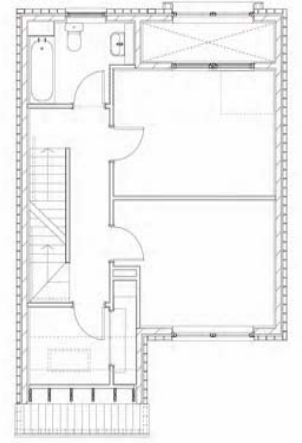
Phase 1 Siteplan



The principal route through the scheme is a tree-lined avenue with a small public square at its centre



Type A 3-bed ground floor plan



Type A 3-bed first floor plan

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Derwenthorpe Phase 1a, York

Architect: Richards Partington Architects

Developer: Joseph Rowntree Housing Trust

LPA name: City of York Council

Developer/Contractor: Yet to be identified

No. of homes: 64 Site size (ha): 2.35

Net density: 27/Ha (36-38/Ha for entire site)

Schedule of accommodation (showing range of choice): 18x 2-bed houses, 24x 3-bed, 24x 4-bed

Smallest/largest home size (m²): 81/161

Size of home which is principal offer (m²): 135

Tenure mix: 64% private, 23.5% housing association, 12.5% shared ownership

The primary objective has been to create a high-quality public realm with well-defined street frontages and pedestrian friendly spaces in accordance with the following criteria:

- priority for pedestrians and less dependency on private cars;
- well-managed and maintained open space and park land with conservation areas;
- play areas and opportunities for young people and children of all ages;
- long-term commitment and stewardship from an experienced and respected housing association.

Community spaces

The design for the first phase recognises the importance of the street as a place for social interaction. The Avenue is the main focus of the community and will be green with lots of trees. It is the main artery through the scheme and connects the Local Area Play Space (LAP) and the Home Zone.

The Square and LAP

At the heart of the scheme is a small public square, which will feel secure with homes overlooking it, and sufficiently enclosed to feel like a proper space. The Square incorporates seating and a small play area to help foster children's play and create opportunities for families to meet informally.

The Home Zone

The Home Zone has homes overlooking it and limited access for cars. It will give priority to pedestrians over vehicles and will be part of the centre of the local neighbourhood.

The Courtyard (Mews)

The courtyards will be shared spaces with community and parking facilities. The garage structures within the courts will collect rainwater, have space for visitors' bikes and support climbing plants and green roofs.

Private Space

Each house has its own private garden and sun- spaces, such as winter gardens. Generous bay windows are incorporated into some of the houses.

Brief planning history:

Outline Planning

The project is the first phase of a 540-unit exemplar sustainable community on the periphery of York. Outline planning permission was granted for the whole site in May 2007 following an extended application process. This involved a public inquiry and referral to the secretary of state. Local concerns related to the perceived damage to the area by house building. The site has hedgerows and open fields that are home to various flora and fauna and also provides open space for local residents. Flooding and excess traffic issues were also raised.

'Very Special Circumstances'

York has a shortage of family housing and the price of homes also contributes to families moving out of the city. The development intends to counter this whilst maintaining the amenities currently enjoyed by the local residents. This need for housing, combined with a lack of suitable development sites within York, meant that the Derwenthorpe site was ruled to have 'Very Special Circumstances' (VSCs) of sufficient weight to allow development. The nature of the project was also important in receiving approval; it is a high quality scheme that will maintain the involvement of the Joseph Rowntree Housing Trust.

Detailed Proposals

The reserved matters permission for Phase 1a was granted in 2008. The proposed scheme successfully incorporates a number of existing hedgerows and maintains a large amount of parkland and open space for existing and new residents to enjoy. Sustainable urban drainage is also incorporated and cycle and bus links will be integral to the development. Prior to Phase 1a, two recently completed prototype houses have been constructed. These use two different forms of construction and will undergo extensive monitoring and testing. The results and conclusions are intended to inform the final designs for the main development.

Scheme description:

Derwenthorpe seeks to create a mixed income, mixed tenure community of high-quality, eco-friendly, energy efficient homes that are well-managed and maintained. All homes are to have private gardens and will be designed to 'Lifetime Homes' standards. Priority will be given to pedestrians and extensive amenity space, in the form of parkland, will be an integral part of the development.

Sustainability

The basis of the sustainability strategy is a highly efficient building fabric with good u-values, low air-permeability and carefully controlled thermal bridging. Houses will obtain their heating and hot water from the biomass-fired district heating network. The development is set to achieve CSH level 4 with three homes completed to CSH level 5.

Local Context

The design draws on the rich architectural legacy of the Joseph Rowntree Housing Trust's century-old model village at nearby New Earswick. Large steeply pitched roofs, painted brickwork and striking dormer windows combine to create a distinctive sense of place.

Layout and Access

The house layout has been designed for full compliance with both the letter and the spirit of the JRF's Lifetime Homes standard. The main living spaces are dual aspect, bringing natural light deep into the plan and allowing cross ventilation. A proposed ceiling height of 2.7m contributes to the overall sense of light and space.

Materials

The materials palette is based on the New Earswick precedent, a 100-year old Arts and Crafts village in York (North) established by Joseph Rowntree to help house his workforce. Brick predominates but in a few locations rubble stone is used to articulate the ground floor. Red clay tiles are used for the roofs; these are large-format to allow special photovoltaic tiles to be integrated with ease.

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Infrastructure & Landscaping Work

- Maintenance and Alteration of Water Supply to Grid Cottage
- Maintenance and integration of cross site Drainage from Grid Cottage
- Diversion of the cross site Abattoir Drain
- The Construction Link Road to Phase One from Fifth Avenue and all temporary drainage provisions
- The Adopted Roadways within the Phase 1 boundary
- The Adopted Drainage Foul and Surface serving the Phase 1 Housing
- The SUDS surface water balancing pond and associated structures for inlets and outfall
- All Phase 1 Landscape areas ('Village Green', 'Osboldwick Beck Park' etc (excepting areas within the Housing development zones) this being the environs of the SUDs pond, the recreational facilities street furniture and lighting and the bounds of the housing development zones including the drainage swales, (these Public Access Areas to be available before the occupation of the 22nd house)
- The development car park and associated lighting
- Arrangements for all required utilities in the landscaped areas
- Arrangements to facilitate the undergrounding of the east - west running Pylon Lines by CE Electric appointed contractor
- The Interim Sustrans Scheme works – Signage, enhanced lighting and some street furniture
- The required Phase 1 off site highway works (prior to house occupations)
- Arrangements to facilitate the effective connection to Foul sewers works by YWA off site.

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Energy Centre & Community Heating

- Arrangements for Gas Supply to the Energy Centre
- Arrangements for other utility services to the Energy Centre
- Arrangements to facilitate the YWA installations within the Energy Centre Yard
- The Adopted Drainage (Foul and Surface) serving the Energy Centre
- The Energy Centre Building, secure yard
- The Biomass (& Gas back up) Plant and M&E installations for the Communal Heating and Hot Water Network for the housing
- The Communal Heating & Hot Water Distribution Network to all the dwellings up to the in-house heat exchange
- External works to the Energy Centre sufficient to integrate with the 'Village Green'

