

Sustainability Statement

Sustainability Summary

- Low Carbon/Energy Efficient design – achieved through gas-free energy and renewable electricity, use of enhanced fabric insulation, integrated solar photovoltaics, and low energy light.
- Modern Methods of Construction – houses will be manufactured in factory where the quality is controlled and waste is minimised.
- Environmentally conscious site layout design to respect the existing topography and surrounding environment.
- Wide range of homes – Wide range of homes – from large family homes to bungalows, starter homes to affordable homes, including social rent and intermediate, the blend of homes makes for a genuinely mixed community.
- Pedestrian-friendly – layout designed to promote walking and cycling
- Community green space – with public open space utilising retained existing vegetations
- Wildlife-friendly sustainable drainage and landscape design
- Biodiversity net gain development – through a range of measures

1 Sustainability Statement

1.1 Low Carbon/Energy Efficient Homes

Sauro Architectural Design Ltd. (hereafter Sauro A.D.) have been commissioned to produce a sustainability-led design for the Residential Development project in Tean, Stoke-on-Trent by Enzo's Homes Ltd (hereafter Enzo's Homes).

Enzo's Homes have acknowledged that the commitment from the Government to achieve low carbon emission and energy efficient homes and this commission is in response to this. It is an exciting opportunity to produce an exemplary layout of a new residential development which demonstrates how environmental thinking can be at the forefront of the design, not only regarding climate issues but sustainability in its broadest sense.

Houses will be designed and constructed using fabric-first principles, with good levels of insulation and airtightness, reduced thermal bridging and low surface area to volume ratios. (See 1.3 Modern Methods of Construction for details). From this environmentally sound manufacturing process, Enzo's Homes achieve that the average Standard Assessment Procedure (SAP) rating of Enzo's Homes' new homes is 87, which equates to an average 'B' rating.

Enzo's Homes' homes contain a range of energy efficient features and renewable technology to promote sustainable living for our customers. During 2021, all of our homes were installed with solar photovoltaic (PV) panels. Furthermore, energy efficient hot water cylinder heat pump system will be installed.

By avoiding gas boilers that emit carbon dioxide - a greenhouse gas that contributes to global warming, using renewable electricity efficiently, and generating renewable energy on-plot we can create low-carbon homes.

From these measures, houses are, on average, approximately 30% more energy efficient than the existing national housing stock, which has an average SAP rating of c.66, or an EPC rating of C.

1.2 Modern Methods of Construction

FREDS Timberframe have been commissioned to manufacture houses for Enzo's Homes. FREDS Timberframe is one of the UK's leading producers of precision-engineered construction systems producing timber frames, highly insulated wall panels and roof cassettes as a 'fabric first' solution. Modular system will be also produced and thus reducing the on-site works.

1.3 Environmentally Conscious Site Layout

1.3.1 Sustainability exemplar

This is a local community location which will attract buyers from all walks of life. This development is aiming to integrate strong sustainability principles by creating a layout and homes designed to help residents to lead a greener, healthier lifestyle and minimise their impact on the environment.

For this reason we hope that it will be an exemplary sustainable development – one that will fit comfortably into its local community location and will have broad appeal.

We recognise that, like many other local community locations, it is not near a main transport hub or within walking distance to a broad range of shops. The site does benefit from both a local convenience store and coffee shop located nearby on the High Street.

1.4 Landscape-led, place inspired

The aim of this design is to produce a great place where people will want to live, with a high quality of life; a place which will foster a good sense of community.

The layout has been influenced by the natural constraints and opportunities of the site and by successful linked to the existing road networks.

The site plan seeks to create a green and leafy place that will be good for people's physical and mental wellbeing but also good for wildlife.

The site plan also creates a strong sense of place; a distinctive design which is easy to find your way around and where one is aware of the setting, with different parts of the site having different characters and a main space which will be a natural focus of the development.

1.5 Creating a mini community

The development will provide opportunities for single dwellers, couples, families, and retirees with a mix of different types and sizes of homes, including flats.

The Government's target for affordable "first homes" will also be delivered.

1.6 People first, cars second

The road around the development will be designed with different categories, estate road, share drive, housing court drive and private drive. This will make the development highly accessible and will help reduce vehicle speeds by breaking down the perceived barriers among those roads with different surfaces.

The road around the development will have more of a pedestrian friendly character – a pleasant route that will encourage walking and cycling, its winding nature also helping to reduce vehicle speed. Along much of its length will be planting and a series of public open spaces.

Public open spaces are scattered through the development, these spaces will be an attractive people friendly space which will be conducive to informal play or a part of walking route.

A footpath link to the existing footpaths in the area are proposed at the south west location of the development. This link will enhance and create strong connections from/to the existing residential area.

1.7 Water sensitive design

SUDs's basins will be created and integrated as a part of public open space. These attractive, ecological features will naturally attenuate rainwater in storm events.

1.8 Wildlife friendly

A substantial area will be allocated as public open spaces incorporated with the retained existing hedgerows. The combination of newly created green open space and the existing vegetation will provide good opportunities for ecology, strengthening the existing hedge planting.

Additional wildflower, native hedgerow and native tree planting along with ornamental plantings will be introduced throughout the development, which, with the boundary ecological corridor and gardens will significantly improve the biodiversity value of the currently open site.