## 6. Environment





An Environmental Statement (ES) is being prepared and a set of updated draft chapters forms part of the consultation material. The ES will be submitted alongside the application providing more comprehensive information about the technical studies and assessments being undertaken. The following series of boards provide information about key environmental issues including elements of the ongoing ES.

## **Building design and sustainability**

The design approach for Northampton Gateway is based on low energy design principles. In summary, this approach involves energy demand minimisation through effective building form and orientation, good envelope design and proficient use of building services.

A range of measures are being explored to both reduce the inherent energy demand of the development, and to seek to ensure that a proportion of the energy needs are met from sustainable sources. As part of this approach the building envelope will be designed to ensure that the fabric and form of the office and warehouse spaces encompass the low energy sustainability principles necessary to achieve a BREEAM 'Very Good' rating.

In addition, Roxhill is seeking to future-proof the site through measures to encourage and enable energy generation and storage on-site. At present the local energy infrastructure is unable to accept 'feed-in' power, but a strategy is being investigated to store energy generated from roof-mounted Photovoltaic Panels in on-site batteries. This could be used to help power electric vehicles (employee cars and other vehicles used on-site), as well as meeting other energy requirements on-site. Such an approach would help with 'load levelling', for example to make power generated and stored during the day available to power lights at night. However large-scale battery storage remains relatively new, and work to explore this strategy is ongoing.

Efficient building services and lighting systems will be supplemented by the following key sustainable construction and environmental features:

- Solar Thermal Evacuated Tubes to contribute towards hot water requirements
- Air Source Heat Pumps (ASHP) for space heating/cooling in the office areas
- Solar Photovoltaic Panels to provide a large proportion of the electrical demand of the buildings, and to support electric vehicle charging.
- Reduction in Carbon Dioxide (CO2) emissions over Part L 2013 Building Regulations Standards through improved envelope and services provision
- Energy Performance Certificate (EPC) A-rating
- BREEAM rating of 'Very Good'
- Use of A and A+ rated construction materials, wherever possible, with associated low Embodied Carbon impact (Green Guide to Specification)
- Rainwater harvesting system to supply the office areas, and use of water saving and monitoring/control devices to minimise consumption including low flow appliances (such as showers, and WC's)
- On-site recycling of waste materials
- Good daylighting provision to promote occupant well-being and to mitigate the use of artificial lighting

## Landscape and Visual

The assessment of the landscape and visual effects of the proposals considers the site's relationship with, and proximity to, the existing built-up area of Northampton, as well as its relationship with the countryside and villages beyond. It also considers the Roade Bypass.

The Proposed Development site (SRFI and Bypass) is currently agricultural land and forms part of the 'Northamptonshire Vales' National Landscape Character area (as defined by Natural England). The site includes a mixture of predominantly arable farmland, with a number of existing woodland areas and tree belts (including areas known as Highgate and Churchill's which are to be retained) within the site, and along the M1 boundary to the north. The main site's immediate context is dominated by the M1 motorway and urban influences to the north and east and the railway corridors, smaller settlements and countryside to the west. The land within the site generally rises towards the north, west and south of the site to provide some natural enclosure, with most of the site typically falling towards the east.

The landscape strategy devised for the main site is illustrated on the Landscape Framework Plan and the cross-sections which follow. The existing topography of the site and surrounding area, coupled with new perimeter mounding as part of the scheme will provide the opportunity to substantially screen the development and minimise any landscape and visual impacts upon the surrounding settlements and areas. The strategy maximises the opportunities afforded by existing features on the ground and the site's topographical characteristics to deliver a suitably strong landscape boundary to the west, south-west and north in particular. Therefore, while the Proposed Development will result in permanent change to the existing landscape, the effects will be minimised, and both landscape and visual effects will reduce over-time as the new landscaping matures. The ongoing landscape and visual assessment suggests mostly minor or moderate visual impacts arising from the completed development on those receptors or viewpoints most directly affected on the edges of existing nearby villages.

Following the consultation process held in December 2016 further work has been undertaken on the landscaping and screening to Collingtree. This followed questions about whether the bunds could be higher than originally shown to further improve the visual effects of the scheme. Following further work, the bund height has been increased by between 4 and 6 metres - see cross-section 5 on Board 7.

The Roade Bypass design also incorporates landscaping, with bunding and planting to help assimilate the road into the landscape, and to provide screening to minimise visual (and noise) impacts. Also see Board 10.



Landscape framework plan



2500/2017