

# URBAN DESIGN FRAMEWORK

The UDF uses the information contained in previous sections of the document to generate a series of key diagrams. These establish an overarching framework to guide future regeneration and ensure that proposals brought forward meet the ambition and vision.



## Character Areas

Within the UDF's vision to develop a vibrant mixed-use neighbourhood there is the opportunity to enhance or generate a number of character areas. This will ensure diversity of built form and encourage 'place making' through acknowledging the unique characteristics of the area.



### **Blackhorse Road Station**

Blackhorse Road Station and the Standard Junction form a key node in the local public transport network. Any improvements to the public realm or transport infrastructure should seek to improve the legibility of the station and accessibility to all public transport.



### **Forest Road**

South of the Station Hub site Forest Road has a transitionally quality – the open landscape of the Lee Valley meets an industrial edge of warehouses and service garages before reaching the Standard Junction and returning to a more typical high street condition. Building setbacks and heights along with landscaping of the public realm should be carefully considered to reflect this transitional quality.



### **Blackhorse Lane South**

The southern section of Blackhorse Lane comprises a mix of two storey terrace housing and taller buildings used by local businesses and industries. This establishes an asymmetrical street profile, which is likely to characterise future redevelopment by the retention of suitable existing buildings or the construction of new buildings of a similar height.



### **Linear Park**

A new linear park will provide amenity space for the redevelopment. Through an east-west orientation, the park connects with existing neighbourhoods and provides an opportunity to access the Lee Valley. Contributions towards the cost of the park can be shared across multiple landowners. The character of the park should reflect the transition from the Lee Valley to the urban condition of the high street at Blackhorse Lane. Recreation and opportunities for play should be provided for all age groups.



### **Hookers Road**

Hookers Road should be characterised as an edge condition between the redevelopment of a mixed-use neighbourhood and the existing industrial and business uses that continue north along the edge of the Lee Valley. Careful attention should be given to any residential accommodation provided in this character area.



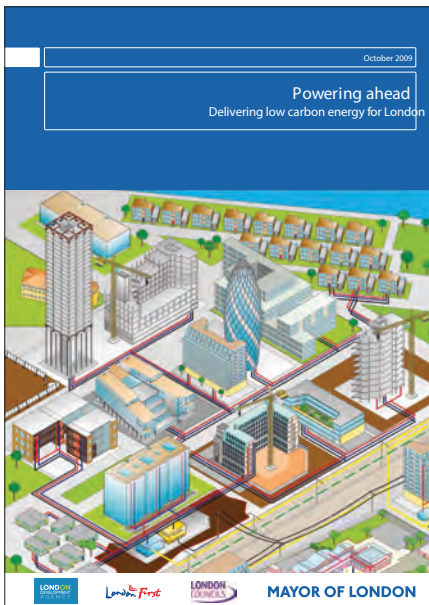
### **Blackhorse Lane North**

Continuing north along Blackhorse Lane the character shifts with a series of business uses that step back from the street edge. There is an increase of private open space associated with these businesses defining the edge of the public realm. This is interspersed with rows of two storey terraced housing.



### **Sutherland Road**

Sutherland Road is characterised by warehouse buildings containing business and industrial use with varying degrees of associated open space. A series of terrace houses exist between Stirling Road and Higham Street. Current redevelopment proposals tend towards an internalised relationship to the street. The UDF proposes that any further redevelopment should seek to actively address Sutherland Road.



Greater London Authority - Powering Ahead, delivering low carbon energy for London. October 2009

## Environmental Sustainability

The London Plan (Policy 5.1) sets a target of an overall reduction in London's CO<sub>2</sub> emissions of 60% - below 1990 levels - by 2025. The emerging Core Strategy refers to **the Waltham Forest Local Strategic Partnership Climate Change Strategy's own locally specific target of 40% reduction - below 2005 levels - by the same period.** The UDF and a future AAP contribute to achieving these targets by influencing development.

In accordance with the Mayor's energy hierarchy of 'lean', 'clean' and 'green', the priority is to design new development so that it uses less energy, then ensuring that the remaining energy demand is supplied efficiently and by using on-site generated renewable energy.

### Minimising Energy Use Including Use of Passive Design

The need to minimise CO<sub>2</sub> emissions has been a consideration in developing the UDF and early consideration at the site-specific design stage is essential. Factors to be taken into account to ensure that energy is used as efficiently as possible include:

- Buildings contain very high levels of embodied energy therefore the UDF advocates reusing existing buildings wherever possible in order to reduce energy consumption and waste;
- The UDF requires that any materials from demolished buildings are reused on site;
- Code for Sustainable Homes (CfSH) Level 4 and BREEAM 'Excellent' as a minimum;
- Retro-fitted energy efficiency measures as part of refurbishing buildings;
- Orientating and arranging buildings to manage solar heat gain and maximise natural lighting, natural ventilation and cooling;
- Incorporating street trees, green open space, structural landscaping, passive architectural strategies and other features to reduce the heat island effect / demand for mechanical ventilation and contribute to biodiversity objectives;
- Minimising new single-aspect homes, particularly those that face south or north;
- Link development density to PTAL, limit car parking levels & maximising cycle parking / facilities and providing attractive & safe streets that encourage walking and cycling;
- Encouraging the use of efficient heating systems - such as under floor heating, energy efficient appliances and low energy lighting systems;
- Maximising insulation of walls, roofs, and floors and advanced glazing systems;
- Securing electric vehicle charging points for new development; and
- Providing energy efficient street lighting and other street furniture.

### Decentralised Energy

The Blackhorse Lane growth area provides opportunities to promote the delivery of a **Decentralised Energy (DE) network(s) and a number of studies are either complete or underway** to help realise this potential. These include:

- Waltham Forest Climate Change Evidence Base (October 2009);
- Upper Lee Valley Opportunity Area Energy Strategy (Draft, April 2010); and
- The DeMAP Programme Heat Mapping project.

Whilst there are not yet firm proposals, options are being developed for the creation of a network - comprising separate 'flow' and 'return' pipes - fed from a supply-hub at either Central Leaside or Enfield Power Station. There may also be opportunities to **develop a more local supply-hub in the Blackhorse Lane SIL area.**

The Blackhorse Lane AAP will clarify options and mechanisms for delivering DE in the area. In the interim, all major housing and mixed-use schemes in the Blackhorse Lane area will be required to future proof themselves by ensuring that they are 'connection ready' and are able to connect to a distribution network in the future. This will include:

- Designing streets and other public realm areas - including other service provision - in ways which enable the provision and easy maintenance of a pipe trench of agreed specifications;
- Providing centralised heating systems in new housing schemes and the avoidance of individual boilers and providing adequate space for heat exchangers in boiler rooms;
- Ensuring that energy centres are appropriately sized not only to accommodate

- the interim requirements of CHP / other centralised plant, but to accommodate a 'consumer substation unit' – to provide all the necessary equipment for a connection to a heating network and for domestic hot water preparation;
- Incorporating energy centres as an integral part of a building and locating them close to a street frontage - but without creating 'dead frontage' to a street - which provides the likely shortest distance to future networks;
  - Safeguarding routes from site boundaries to energy centres to enable a connection to be made to a network in the future; and
  - Making a financial contribution towards the design and establishment of a heat network.

Prospective developers should discuss energy centre and boiler plant specifications and location with LBWF at the pre-application stage.

### **On-site Renewable Technologies**

The provision of solar / photovoltaic panels and other DE compatible forms of renewable electricity generation need to be carefully considered from the outset and integrated into the design of developments. They should not be added as an afterthought at the end of the design process and Energy, Design and Access Statements should explain how they have been incorporated into the proposals.

### **Sustainable Design and Construction**

All new development should be environmentally sustainable by:

- Incorporating 'living roofs' and green walls and SUDS;
- Minimising water use and closely examining the use of grey water recycling and rainwater harvesting within developments;
- Meeting CfSH Level 4 and BREEAM 'Excellent' as a minimum;
- The Careful sourcing - locally where possible - and specification of materials for buildings, paving and landscaping areas, in accordance with the London Plan SPG on Sustainable Design and Construction
- Making good provision for waste minimisation, re-use and recycling; and
- Making use of on-site waste during construction wherever possible.

### **Green Space and Biodiversity**

The proposed new publicly accessible open spaces should be designed and managed to help provide the following four benefits that Natural England has identified:

- **Natural Signature** - Enabling people to value their local neighbourhoods, through a 'sense of place' informed by the natural environment by creating locally distinctive landscapes, more wildlife and ecological connections - including to the reservoirs to the west.
- **Natural Connections** - Providing for children's play spaces that are wildlife-rich and occasionally 'wild' in nature providing the imaginative play essential for healthy child development. Encouraging adults to get involved in environmental activities - such as growing food - that reinforce a sense of place and give people a reason to care about the environment.
- **Natural Resilience** - Greening the urban environment to contribute to climate change adaptation through flood management and urban cooling.
- **Natural Health Service** - Providing easily accessible natural greenspace close to where people live and work, providing opportunities for physical activity, relaxation, mental well-being and healthy living.

The inclusion of brown / green roofs, green corridors, the landscaping of the public realm, incorporation of biodiversity features, publicly accessible open space and private gardens - using indigenous species - and the inclusion of bird and bat boxes can all help enhance biodiversity.