

## **NON-TECHNICAL SUMMARY**

## 1 INTRODUCTION

This is a Non-Technical Summary of the Environmental Statement (ES), which accompanies the Outline Planning Application and Masterplan for the redevelopment of the Woodberry Down Estate.

Hackney Homes Ltd<sup>1</sup>, as agent for Hackney Borough Council (Hackney BC), is seeking to obtain outline planning permission for the redevelopment of Woodberry Down Estate. The site is located in the north of the London Borough of Hackney, and is bounded by two former reservoirs to the south, and by Green Lanes and Finsbury Park to the west. The New River forms the boundary to the north, south and east of the site. A plan showing the location of the site is included as Figure 1. Figure 2 shows the exact boundary of the application site.

Woodberry Down is a former London County Council housing estate, developed mainly in the 1940's and 1950's. The site currently comprises 2,013 dwellings, of these 1,980 are either existing or former Council properties and 33 properties are in private ownership. A small retail area consisting of 13 shop units is positioned on Woodberry Grove to the south where it crosses the Seven Sisters Road. The estate has good access to public transport with Manor House tube station situated at the western edge of the boundary and good bus services along the Seven Sisters Road.

Woodberry Down Estate is a priority for housing renewal and targeted community development, and has been identified for regeneration on account of high levels of deprivation and poor housing conditions. Most of the buildings within Woodberry Down are now in a poor state of repair, falling way short of the Government's Decent Homes standard and many have severe structural problems. Flats at present are small, some 20% below Parker Morris standards<sup>2</sup>, and the resident population also suffers from relatively scarce and poorly used community facilities.

The Masterplan proposal is for the demolition of most of the existing estate and replacement with a residential development of 4,842 units, along with associated public services and facilities, and some retail provision. Community facilities will include a new three-form entry primary school, city academy, health centre, nursery, multi-purpose community centre and youth centre.

An Area Action Plan (AAP) for Woodberry Down was prepared and adopted by Hackney BC as Supplementary Planning Guidance (SPG) in August 2004 (Ref. 1). The AAP sets out broad policies and proposals for the site, and proposes a vision for Woodberry Down to:

*"be transformed from an estate to a neighbourhood, which is made up of a variety of distinctive quarters, with a bustling new mixed use centre along Seven Sisters Road and a community focus area along Woodberry Grove. Each quarter will have its own special character, maximising the potential of its natural assets, be it the reservoir, the river or views of Finsbury Park. As a whole, the Woodberry Down neighbourhood will provide a range of high quality homes, pleasant and safe streets and public spaces and good quality education and health facilities, with excellent links to surrounding areas and public transport connections."*

## 2 ENVIRONMENTAL IMPACT ASSESSMENT

Environmental Impact Assessment (EIA) is the process of collection, publication and consideration of environmental information in the determination of a planning application. An EIA has been undertaken as required by, and in accordance with, the Town and Country

<sup>1</sup> Hackney Homes Ltd are the 'arm's length management organisation' (ALMO) responsible for managing council homes in Hackney and owned outright by Hackney Borough Council.

<sup>2</sup> Parker Morris standards were introduced in 1961 to establish common understanding of minimum space standards that families should expect of new housing, based on occupancy and furniture layout.

Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (hereafter referred to as the EIA Regulations) (Ref. 2).

The EIA considers the environmental effects of the development during construction and once completed, and proposes ways to prevent, reduce and where possible offset any significant adverse effects on the environment, known as mitigation measures. The results of the EIA have been documented in a report, referred to as an Environmental Statement (ES).

The scope of topics and issues to be covered by the EIA was agreed in consultation with Hackney BC and a number of statutory and non-statutory consultees.

### **3 THE MASTERPLAN**

The purpose of the Masterplan is to set out a comprehensive framework for the future development of the estate. It does not include precise details of building design but rather seeks to establish broad principles that, whilst providing an overall strategy for the whole estate, allow future developers a degree of flexibility. For that reason, the Masterplan is the subject of an outline rather than detailed planning application.

#### **Masterplan Development Process**

The Masterplan is the result of a significant amount of work undertaken at various phases over a period of many years. Pre-Masterplan this comprised the development of an AAP for Woodberry Down, and an Urban Design Framework (UDF), which then formed the overall concept on which the Masterplan was based.

Masterplanning of the area has proceeded hand-in-hand with economic appraisal work, which has informed how private investment will be used to pay for the new social rented housing and community facilities.

The AAP, UDF and the Masterplan were subject to extensive consultation in order to ensure that the Masterplan was soundly based on a full appreciation of locally identified needs, opportunities and aspirations. The consultation and engagement that has taken place during the design process is presented in the Statement of Community Involvement (SCI) that accompanies the outline planning application.

#### **The Masterplan Content**

The 33.5-hectare Masterplan proposal is predominantly a residential scheme with integrated community, commercial, retail and leisure facilities. Figure 3 illustrates the proposed mix of uses and their location.

The Masterplan includes substantial provision of open space, play facilities, and an improved network of footpaths and cycle ways. The plan proposes to reduce the effect of severance that the Seven Sisters Road currently creates by reducing the number of lanes from 6 to 4, constituting a bus lane and general traffic lane in both directions.

The Masterplan proposes several principal focal points: at the cluster of shops and community facilities at Woodberry Grove; the site of the proposed Woodberry Down Primary School and City Academy; two intersections on Seven Sisters Road; and the existing site of the John Scott Health Centre, where Green Lanes comes into close contact with the West Reservoir. The Masterplan framework has then been structured to give expression to four urban quarters forming distinct neighbourhoods each focusing on a major new open space or series of open spaces.

The main components of the Masterplan are listed in Table 1.

**Table 1: The Main Components of the Masterplan**

<b>Mixed-use development, including the following:</b>
<ul style="list-style-type: none"> <li>• Approximately 4,842 homes (houses and flats);</li> <li>• A six-form City Academy;</li> <li>• A new three-form Primary School;</li> <li>• A new Health Centre;</li> <li>• A Children’s Centre and stand-alone nursery;</li> <li>• A 3,000 m<sup>2</sup> Business and Training Centre;</li> <li>• Approximately 6,000 m<sup>2</sup> of mixed-use space - comprising a food store and small-scale shops / offices / cafes / bars / restaurants, anticipated to equate to approximately 25 units in total; and</li> <li>• New additional community uses including a community centre and gymnasium, youth centre, police base and three satellite community facilities, as well as the existing church, Beis Chinuch Lebonos Girls School and sailing centre.</li> </ul>
<b>Transport infrastructure, including:</b>
<ul style="list-style-type: none"> <li>• Remodelling of Seven Sisters Road;</li> <li>• New street network;</li> <li>• New and enhanced walking and cycling routes and facilities;</li> <li>• New bus links and facilities; and</li> <li>• Managed on-street and underground parking provision.</li> </ul>
<b>New and improved public open spaces, including:</b>
<ul style="list-style-type: none"> <li>• A riverside park, running alongside the New River;</li> <li>• Five major new green public open spaces, including one ‘Neighbourhood Equipped Area for Play’ (NEAP), two ‘Local Equipped Areas for Play’ (LEAPs) and an amphitheatre;</li> <li>• Two further major public spaces (Woodberry Circus and Woodberry Neighbourhood Centre); and</li> <li>• A series of smaller open spaces designed to incorporate ‘Local Areas for Play’ (LAP).</li> </ul>
<b>Ground infrastructure works, including:</b>
<ul style="list-style-type: none"> <li>• Construction of access roads;</li> <li>• Modifications to existing highways and highway structures and footpaths;</li> <li>• Modifications to existing utility services and provision of new services, including Energy centres, strategically dispersed throughout the area, providing an integrated neighbourhood Combined Heat and Power system;</li> <li>• Foul water drainage for development; and</li> <li>• Surface water drainage for development.</li> </ul>

**Kick-Start Sites**

Four parcels of land have been identified by Hackney BC for early development. These are referred to as the kick-start sites and together comprise Phase 1 of the Masterplan. The four kick-start sites are shown on Figure 4. Following a tendering process, Berkeley Homes was appointed by Hackney BC as the preferred developer for the kick-start sites. It is the current intention that each of these sites will be the subject of separate detailed, or reserved matters

planning applications. The first site to come forward for development will be the 'Old School Site' – kick-start site 1, which will comprise in the order of 450 residential units.

### Residential Provision

The proposal incorporates a high density of residential units (4,842) built into 38 separate blocks. A diverse mix of housing is planned for the site including homes for sale. The key features of the Masterplan in reference to housing provision and the formation of a vibrant and integrated community are:

- The establishment of three complementary 'character areas' within which high quality architecture and landscape design will draw out and emphasise unique local qualities;
- Perimeter blocks that are efficient in providing urban densities;
- Streets that are active and well overlooked, with front doors and windows onto the street. Ground floor flats with their own front doors onto the street rather than off shared entrance lobbies;
- Internal gardens or courtyards that are secure, tranquil and well overlooked;
- Buildings with a public side fronting onto the street and rear gardens and courtyards that are to be private, for block residents only. 'Secured-by-Design' principles intended to foster stewardship and reduce crime;
- A range of building heights, from 20+ storey towers that emphasise strategically important locations to 3-4 storey medium rise buildings more geared to family accommodation;
- A minimum of 20m back-to-back distances across courtyards to ensure that acoustic and visual privacy needs can be readily accommodated;
- The layout of the site has been designed to maximise the penetration of light into residential properties; and
- All residential buildings will be built:
  - To high environmental standards – a minimum "Very Good" Building Research Establishment Environmental Assessment Method (BREEAM) EcoHomes rating is required;
  - To generous internal space standards, particularly in the social sector (replacing the existing Council housing) where a minimum 'Parker Morris Plus 10%' will be required. Typical social rented homes will be larger than existing flats and will tend to be bigger than the private homes. 10% of all tenures (whether social, intermediate or private) will need to be designed for the needs of wheelchair users, which will tend to increase individual unit floor areas by approximately 15%);
  - In line with the Woodberry Down Area Action Plan, so that all accommodation will be provided to lifetime homes standards;
  - So that all homes have private external amenity space – whether a balcony, terrace or private garden;
  - To high design standards, including the use of high quality materials for the façade treatment and attending to the landscape design of open spaces; and
  - To designs that are 'tenure blind', with all housing built to high aesthetic and environmental standards irrespective of whether they are in public or private ownership.

### Housing Mix

The proposed scheme provides a mix of accommodation types, reflecting the nature of housing demand and needs in this part of London. In response to market and social expectations, the

residential element of the scheme incorporates approximately a 40% requirement of affordable housing<sup>3</sup>. A breakdown of the proposed housing provision is presented in Table 2.

**Table 2: Proposed Housing Provision on the Masterplan Site**

Housing Type	Number of Units	Percentage of total
Private	2845	59
Social rented	1525	31
Intermediate	472	10
<b>Total</b>	<b>4842</b>	

The Masterplan accommodates 4,328 new homes on Hackney BC owned housing land and a further 514 in total on sites owned by others, generating a total of 4,842 homes within the Masterplan area. On the Council-owned land, 2,546 homes for sale will cross subsidise the 1,458 social rented homes needed to re-house existing tenants. A further 312 homes have been identified for intermediate tenures (such as key workers or shared ownership).

The Masterplan proposes varying mixes of unit types for social rented, private and intermediate accommodation; and unit sizes will also vary. The proposal for social rented housing seeks to achieve a housing mix in line with the Woodberry Down Area Action Plan, and to provide rooms that are sized at a minimum of Parker Morris standards +10%.

### Building Heights

The proposed building heights strategy includes a mixture of building heights across the application site, with the tallest buildings (ranging between 9 and 21storeys) to be located at key locations across the site, where they will serve to emphasise strategically important locations. Figure 5 shows the proposed building heights across the site.

Building heights are lowered around St Olave's Church, close to existing neighbouring residential areas and immediately facing the reservoirs. Views to the reservoirs are exploited with building heights staggered on terraced slopes, often arranged as U-shaped blocks.

### Programme and Phasing

It is anticipated that the full implementation of the Masterplan will take approximately 20 years. The decanting of the residential blocks began in 2004 and some blocks have already been demolished.

The phasing strategy will be devised in close cooperation with private sector and registered social landlord development partners. At this stage the strategy is therefore indicative only. Full detailed, or reserved matters planning applications will be brought forward for each phase of development.

The development programme is anticipated to run until 2027. In addition to the private housing development, social housing needs to advance at a rate that enables the wider regeneration programme to come forward. Wherever possible the programme is premised on establishing a 'one move' principle that ensures local residents only have to be re-housed once into their new homes (rather than being decanted elsewhere temporarily).

There are six principles that underpin the decant and phasing strategy:

- Building condition: replacing the worst first;

<sup>3</sup> Affordable housing encompasses both social rented and intermediate accommodation.

- A rolling programme: minimising disruption to residents, with clear progression across the area;
- Commercial continuity: ensuring continuity of the retail offer;
- Getting the momentum going: developing lower density areas early;
- Providing community facilities early, including parks and play facilities at each phase – ensuring that a vibrant, well-rounded and well-resourced sustainable community emerges; and
- Providing adequate construction access.

In broad terms, five phases are foreseen, as illustrated in Figure 6 and these are summarised below. Table 3 details the estimated start and end dates for each phase of the development.

**Table 3: The estimated decant and new build dates for each phase of the proposed scheme**

Phase	Estimated Decant, Rehousing and Demolition Date	Estimated New Build Date
1	2004 - 2007	2007 - 2013
2	2008 - 2013	2009 - 2016
3	2011 - 2017	2016 – 2020
4	2016 - 2019	2019 - 2023
5	2018 - 2022	2022 - 2027

### Planning Policy Context

The Masterplan proposal has evolved, and will be determined against national, regional and local planning policy. The key policy documents are the relevant national Planning Policy Guidance Notes (PPGs) and Planning Policy Statements (PPSs), the Regional Planning Guidance for the South East (Ref. 3), the Mayor's Spatial Development Strategy (SDS) – the London Plan (Ref. 4), the Unitary Development Plan for the London Borough of Hackney (Ref. 5), and the Area Action Plan for Woodberry Down.

## 4 SOCIO-ECONOMICS AND COMMUNITY EFFECTS

The ES presents an evaluation of the social, economic and community impacts associated with the proposed development at Woodberry Down on existing and future residents and workers on the site and the areas surrounding the site. In particular it considers the effects of the development on the following:

- Population, including changes in age structure, socio-economic profile of population and population density;
- Deprivation, including changes in overall levels of area-based deprivation as well as deprivation affecting the existing resident population of Woodberry Down;
- Employment, including employment creation;
- Retail, health and education provision;
- Housing, including changes to housing supply, housing mix and quality of housing;
- Community and leisure facilities, including open spaces;
- Crime and public safety;
- Equality and community cohesion;

- Community disturbance during site works, including decant and re-housing - assessment of effects on community well-being and quality of life, including as a result of the decant and rehousing process; and
- Impacts on pedestrian access through the estate.

The cornerstone of the Masterplan is to create a vibrant, inclusive and secure community, which vastly improves existing and future resident's opportunities, social welfare and their quality of life as a whole. This accords with the main principles of national planning policy, and will fulfil people's aspirations to *'live in pleasant thriving places, to have good quality services, a safe and good physical environment, accessible transport links, a strong sense of community and for there to be opportunity for all'* (Local Government White Paper, DCLG, 2006, Strong Prosperous Communities). The inclusion and integration of an extensive range of high standard residential, community, health, educational and commercial facilities within the Masterplan aims to achieve this by not only providing adequate accommodation but also ensuring that residents have *'access to key public services and local amenities within vibrant and better balanced communities which minimise social exclusion and polarisation'* (Ref. 4).

The availability and accessibility to good quality housing, community facilities and services will be substantially improved, and reflect the provision required for an increasing population and their future demands. The Masterplan's design and layout will further ensure that Woodberry Down is a safe environment in which to live, work and visit.

The Masterplan will address the current severe levels of multiple deprivation in Woodberry Down, which is reflective of the poor levels of social and economic welfare experienced across Hackney and the neighbouring borough of Haringey. The Masterplan seeks to break the divisive social and economic barriers that currently exist for residents and improve the quality of life of existing and future residents through good design and an emphasis on sustainable development.

A central theme of the Masterplan is the creation of a neighbourhood, not an estate. To attain this, the Masterplanning team has extensively consulted the resident population and many of the principles of the scheme have originated from the extensive knowledge of members of the community, whose insight has been used to help create solutions to specific problems. The range of consultation activities and views of the consultees are reported in a document called a 'Statement of Community Involvement', which accompanies the outline planning application.

Although the overall benefit of the Masterplan is clear, the EIA process has highlighted a number of issues that will need careful monitoring during and after the redevelopment process. Unlike most development projects, Woodberry Down has an existing population which will be directly affected by the proposals. Due to the lengthy demolition and construction programme some residents will potentially be subject to disturbance for a long period of time. Careful management of demolition and construction activities will therefore be crucial in ensuring that noise, dust, movement of heavy goods vehicles etc. does not create a significant impact. The ES sets out clear guidance on the measures that will need to be put in place to ensure that disturbance is minimised. This includes the requirement for each developer to produce a Construction Environmental Management Plan (CEMP), which must be approved by Hackney BC's Planning and Environmental Health Departments before work can commence.

Once residents start to move into the new dwellings, a degree of monitoring will be required to ensure that the aspirations of the Masterplan are delivered on the ground, and so that the Masterplan can respond to changing circumstances over time. A Community Development Trust will be established to assist in this process of review.

## 5 TRAFFIC AND TRANSPORT

The outline planning application is accompanied by a full Transport Assessment (TA), which examines in detail the traffic issues that are likely to arise from the Masterplan proposals, including the impact on the local and strategic highway network. The TA also looks at ways in

which reliance on cars can be reduced, and use of public transport encouraged. The ES includes a summary of this work and also examines how the development proposals might impact on road safety, driver delay, severance and pedestrian amenity.

Footpaths are currently provided on all the existing strategic carriageways and access roads and there are excellent pedestrian connections available to the local bus and tube facilities. However, crossing points across Seven Sisters Road, between the two parts of the estate, are not ideal and the existing 6-lane carriageway is seen as a major obstacle to fully achieving the Masterplan objectives. Therefore, the key transport proposal within the Masterplan is for the reduction of Seven Sisters Road from 6 to 4-lanes.

The Masterplan seeks to embody sustainability principles and to assign land uses in order to maximise functionality and usability whilst minimising unnecessary journeys and less sustainable travel choices. The Masterplan has been based on the creation of 'streets for people' whereby the priority and usability of the neighbourhoods is concentrated on that of the residents. Day-to-day requirements of households can be catered for on site, as well as providing appropriate connections with the public transport network. The layout seeks to maximise pedestrian and cycle movements within the site and between residential areas and the retail, community, health and education facilities. A series of green links and areas of open space have also been designed into the Masterplan.

It is anticipated that a reduction in intimidation and fear relating to the perceived presence of vehicles will be achieved as a result of the contemporary design of the Masterplan, which aims to place pedestrians at the top of the travel demand hierarchy.

The increased population on the estate and measures to reduce the severance caused by Seven Sisters Road are not expected to have a significant adverse effect on the local or surrounding highway network in terms of increased traffic flows and queuing.

Construction traffic will need to be carefully controlled to avoid disruption on local roads and to minimise disruption to residents on the estate. Each developer will be required to prepare a Construction Traffic Management Plan, which must be approved by Hackney BC's Planning and Highways Departments.

## 6 AIR QUALITY

The ES includes an assessment of the potential effects on air quality during demolition and construction, and once redevelopment is complete.

During construction, the key issue will be dust generation and how this can be controlled. To minimise the generation of dust during the construction phase mitigation measures will be implemented. These will be detailed in the Construction Environmental Management Plan (CEMP) for each development phase and will incorporate techniques detailed in the best practice guidance for the control of construction dust (Ref. 6). The best practice guidance sets out the mitigation measures and monitoring requirements for a construction site, the extent of which depends on the size and dust generating potential of the development to be undertaken. The redevelopment of Woodberry Down is likely to be classed as a high-risk site, based on its scale and status as a major development.

Each developer, in advance of work on the scheme commencing, will be required to consider the potential for dust to be emitted during site activities. This exercise will include a comprehensive inventory of materials, machinery and manual processes with the potential to generate dust. The findings of the risk assessment will enable the most effective, appropriate control measures and contingency plans to be incorporated into an Air Quality Risk Assessment (AQRA) aimed at reducing the impact of dust emissions to the lowest possible levels. The measures identified within the AQRA will be incorporated into the CEMP for the site

The significance of the predicted impacts once development is complete has been assessed against the nationally recognised air quality assessment criteria and it has been established that additional road traffic emissions associated with the proposed development will not lead to a significant change in the standard of air quality in the vicinity of any existing or proposed air quality sensitive receptor.

Overall the air quality issues associated with the construction and operation of the proposed development will not have a significant adverse effect on local air quality.

## 7 NOISE AND VIBRATION

As with Air Quality, the EIA considered potential noise and vibration impacts during demolition and construction and from the completed development. The assessment also informed the Masterplanning process by examining the acceptability of locating certain types of development (residential dwellings, schools etc.) close to existing and future sources of noise. This is a requirement of Planning Policy Guidance Note 24: Planning and Noise (PPG24) (Ref. 7).

The assessment of the noise impact from construction works has highlighted that there is potential for high noise levels at neighbouring receptors. Careful consideration and detailed assessment of construction activities is required for each phase of the proposed development to consider the working practices to be employed and the particular requirements of the neighbouring sensitive receptors. A range of measures may be employed to ensure that an adverse noise impact does not arise. This may include suitable hoarding around the boundary of the site, local screening around particularly noisy plant or operations, the careful location of fixed plant (for example generators) to ensure that they are an adequate distance from receptors and utilise any affordable screening from topography or buildings. The measures to be adopted by each developer will be included within the Construction Environmental Management Plan and agreed with Hackney's Environmental Health Department.

A prediction of the impact of ground borne vibration resulting from construction operations has indicated that it is highly unlikely that superficial damage to neighbouring buildings would result.

The site has been shown to be acceptable for residential development and no areas of the site fall into Noise Exposure Category (NEC) D as defined in PPG24, whereby planning permission should normally be refused. Areas falling within NEC B and NEC C will require mitigation measures to ensure that acceptable internal noise levels are achieved and a detailed assessment of the sound insulation of the building envelope will be required at the detailed design stage.

The proposed school/college will be subject to high levels of ambient noise from Seven Sisters Road. However suitable mitigation measures are available to ensure that internal noise levels are acceptable for teaching. The internal layout of the building will determine the degree of mitigation measures that are required.

Variations in the road traffic noise levels on the local road network as a result of the proposed development have been determined for the year 2027. The change in road traffic flows will be less than +25% therefore the change in road traffic noise levels of less than 1 decibel is considered to be negligible.

## 8 WASTE AND MATERIALS MANAGEMENT

The ES identifies the sources of solid waste arising from the development and quantifies the volumes of waste expected to be produced from each source. An important distinction is made between waste with a temporary impact, arising from demolition and construction activities, and waste with a permanent impact, arising from operational activities within the completed development. Mitigation measures are then proposed in order to minimise the adverse impacts

of waste, both through reducing the volumes of waste produced and through managing that waste effectively.

The demolition process is expected to generate a total of around 200,000m<sup>3</sup> of waste, most of which will be suitable for re-use within the construction phase of the new development. However, approximately 20,000 m<sup>3</sup> is expected to be unsuitable for re-use, and this will be disposed of at a nearby licensed depot.

It is difficult to estimate the volume of waste that will arise from construction, and this has been estimated using Environmental Performance Indicators (EPIs) developed by the Building Research Establishment and Constructing Excellence<sup>4</sup>. A mean value of approximately 58,000m<sup>3</sup> was calculated, although this can be reduced significantly through the use of efficient construction techniques such as prefabrication and the use of standardised modular components. A Site Waste Management Plan (SWMP) will be developed for each phase of development, in order to ensure that construction waste is responsibly managed on site.

Operational waste is expected to be in the region of 10,400 tonnes per annum, the majority of which will be municipal solid waste generated from residential buildings. Mitigation measures include the raising of awareness through the provision of recycling information to all residents, the provision of easily accessible recycling facilities and the provision of on-site composting facilities where possible. For non-residential waste, similar measures are recommended.

## 9 WATER RESOURCES

The water environment within Woodberry Down is considered to be highly sensitive due to the close proximity of the New River and the East and West Reservoirs. As the East reservoir and the New River are used for public water supply, it is important that any proposed development does not contribute to deterioration in water quality. The New River and the East and West Reservoirs are located within the Stoke Newington Conservation Area and are Sites of Metropolitan Importance for Nature Conservation.

Due to its location, the New River is the water body directly at risk from the development, with the East and West Reservoirs being affected via their connection with the New River. The East Reservoir is connected by a small tributary to the New River and in turn is connected to the West Reservoir through a small pipeline.

Groundwater sources at the site are considered to be of low importance. Although there is a major aquifer present in the Upper Chalk below the site, this is not at risk from the development (despite its allocation as a Source Protection Zone) because of approximately 40m of London Clay (known to be of low permeability and therefore essentially acts as a barrier). There is perched water present in the Made Ground above the London Clay although this is of little importance as it is classed as a non-aquifer.

The redeveloped estate is not expected to present a significant increase in risk to the water environment compared to the present use, provided appropriate mitigation measures are adhered to. This is due to both present and proposed uses predominantly being for residential dwellings. As part of the proposed development, the foul sewerage system will be rebuilt, with surface runoff attenuated with controlled discharge rates. This will be mitigated through the use of oil and silt interceptors redirecting the potential pollutants into the foul sewer system.

During construction and ongoing remediation, there may be risks to the water environment. These risks are related to the leakage or spillage of fuels or chemicals, disturbance of land, including any potentially contaminated land. However, correct mitigation procedures will minimise any impacts.

<sup>4</sup> <http://www.constructingexcellence.org.uk/>

Once the development has been completed there should be no reduction in water quality or increase in flood risk as the existing foul sewerage system will be updated and water attenuation of surface runoff will occur. Interceptors on all discharges will ensure water quality of the New River and therefore the East and West Reservoirs is unaffected by the proposed development.

## 10 CONTAMINATION AND HAZARDOUS MATERIALS

The EIA included a detailed examination of the potential for ground contamination and presence of hazardous materials within the existing estate that may require some treatment during the redevelopment process.

The ground investigations undertaken on the estate have revealed the presence of some contamination, including heavy metals. This will require some remediation in areas of soft landscaping, i.e. where it is not covered with a building or hardstanding and will need to be tackled on a phase by phase basis. Existing ground contamination may also necessitate some protection measures within certain buildings although this will need to be evaluated via ground investigations on a building by building basis.

Although a number of remedial options have been identified within the ES, it is considered prudent that statutory consultees, including the contaminated land officer of Hackney BC and the Environment Agency are consulted by the developer of each phase. It is likely that any remediation will need to be followed up by a validation programme to ensure that the remediation has been fully and appropriately performed.

## 11 TOWNSCAPE AND VISUAL

The EIA has examined in detail the potential effects of the Masterplan proposals on the existing townscape of the Woodberry Down estate and surrounding area, and on the views from a number of representative short, medium and long-distance locations.

The Masterplan has evolved with reference to planning policies and objectives at national, regional and local levels. Quality of design is fundamental to these strategies and is key to the Government's urban regeneration and sustainable communities agenda in order to create well-planned and well-built communities.

In terms of the long-term effects, it is considered that the completed development on the Woodberry Down estate will result in a significant overall positive effect on townscape.

Only one 'Townscape Character Area' – the existing estate (TCA1) will be directly affected, and the assessment identifies only two other Character Areas which will have their setting significantly adversely affected during the construction of the proposed scheme – the Reservoirs (TCA6) and Finsbury Park (TCA4) (these are shown on Figure 7).

Figure 8 shows the Primary and Secondary 'Zones of Visual Influence', which are the areas over which the new estate, including its construction, is likely to be seen. Within the Primary ZVI, which covers people with views close to or actually on the site boundary, over half of the representative views across the five construction phases are assessed as not significant. The remaining representative views are likely to experience a detrimental effect, particularly those of existing and new residents and whilst this effect will be temporary, the lengthy construction programme means that some views may be affected for a long period of time.

The effects of the completed development on over half of the visual receptors identified are not considered to be significant and, over time, the proposed landscape treatment will assist in creating further positive effects on both visual amenity and townscape.

The EIA therefore demonstrates how the Masterplan has been informed by both a sound understanding of local character and circumstances as well as its contextual surroundings. The introduction of well designed, high quality development and improvements to open spaces and public realm will all be beneficial aspects of the scheme, which have the further potential to be optimised during the detailed design stages. High quality, medium- and high-rise buildings will replace the poor quality existing built form and unused buildings and be well-linked by a framework of high quality, hard and soft landscape spaces and links to New River and the reservoirs.

## 12 ECOLOGY AND NATURE CONSERVATION

The EIA has examined the potential impact of the development proposals on areas of habitat value within and in close proximity to the estate. Consideration has also been given to the presence of and impact on protected species.

There are no statutory designated sites (Local Nature Reserve, Site of Special Scientific Importance, Special Area of Conservation or Special Protection Area) on the estate, although there are three Local Nature Reserves within 1 km of the boundary. There are no non-statutory sites of importance for nature conservation on the estate itself, but there are 17 situated within 1 km. Two of these (Stoke Newington Reservoirs, comprising the East and West Reservoirs, and The New River) are immediately adjacent to the estate, and the West Reservoir is located within the application boundary. The East Reservoir is also designated as a non-statutory local nature reserve within the Hackney UDP (See Figure 9).

In order to inform the assessment, ecologists have made extensive use of existing data (Greenspace Information for Greater London, London Bat Group and The Black Redstart Working Group all supplied data concerning sites of importance for nature conservation and records of protected/notable species that may be relevant to the development) and consulted with Natural England and the Environment Agency. Reference has also been made to the extensive data held on TeRNS website. In addition, a detailed habitat survey and surveys for reptiles and roosting bats within the Woodberry Down Estate were undertaken.

In order to render any ecological impact of the redevelopment non-significant, a series of measures will be implemented:

- **Tree retention** – Trees and woodlands are a priority habitat under the Hackney Biodiversity Action Plan. The 0.5 ha of woodland within the ‘Old School Site’ will be retained within the development both as an important habitat feature and in order to provide a visual screen between wintering birds on the reservoirs and the Old School Site. No trees with high potential as bat roosts will be felled.
- **Tree planting** - While there will be tree felling in order to facilitate the redevelopment, there will be no net reduction in the number of trees on the estate since any trees that are felled will be numerically compensated for during landscaping works. A mixture of young, semi-mature and mature trees will be planted. Selection of species for tree planting will be biased towards native species, in contrast to the current planting across the estate, which contains a wide range of non-native species.
- **Bat roost features** - Bat boxes suitable for pipistrelles will be placed on buildings around the redeveloped estate and within the retained woodland strip in order to increase the roost availability within the estate.
- **Wasteland habitat** - In order to mitigate for the loss of wasteland habitat on the ‘Old School Site’, vegetated roofs (so called “brown” roofs, as they mimic brownfield habitats), will be incorporated into the design of new buildings wherever possible. This will be of value for many species of bird, but particularly the black redstart.

- **Nest boxes** - Open-fronted nest boxes will also be attached to buildings to provide further nesting opportunities. These will be situated under overhangs, balconies etc. and will have entrances that are small enough to deter nesting by large birds, particularly feral pigeon.
- **East Stoke Newington Reservoir** - An undeveloped 15 – 20m margin will be retained between the built estate and the banks of The New River in order to maintain the currently open nature of this corridor. The formal footpath that currently lies on the north bank of The New River as it flows above the east reservoir will be moved further north into the body of the estate in order to reduce the potential for disturbance.
- While informal access will be permitted onto the south bank of The New River as it flows above the East reservoir, no permanent formal paths will be created and tree planting will be undertaken on the southern edge of the south bank (which currently has little tree planting) in order to provide additional visual screening for waterfowl on the reservoir.

In addition, the following precautions will be adhered to during demolition/construction work:

- Direct mortality of birds, nests and chicks will be avoided through restricting the clearance of trees and scrub (particularly on the Old School Site) to the period September to February, avoiding the breeding season and thus the period when birds are at their most vulnerable.
- Construction activity will be situated no closer to the more sensitive east reservoir than is currently the case for existing disturbing activities and construction on the Old School Site will be screened from the Reservoirs by the retained woodland block.

With these measures in place, impacts will be reduced such that residual effects are not considered significant. Indeed, the incorporation of brown roofs will spread habitats of ecological value across the site rather than localising them in one particular locality, as is currently the case. In addition, the measures outlined above will double the amount of wasteland habitat within the development without decreasing the human amenity value.

## 13 CULTURAL HERITAGE

The EIA has considered the potential impact of the development proposals on both archaeology and built heritage. The locations of all statutory designations within the development site boundary, and the near vicinity, are presented in Figure 10.

### Built Heritage

There are no Scheduled Ancient Monuments (SAM) within or in proximity to the Site. The only listed building within the application site is the Grade II listed St Olave's church, which is located in a triangular plot of land at the junction with Woodberry Down and Seven Sisters Road. The church was designed by Ewan Christian and constructed between 1893-4. The rectory was built in the 1890s, and is of a similar architectural style to the church. It is directly attached to the church and is considered to be a curtilage listed structure. The rectory is considered to be of local value.

The church hall, constructed in the 1930s, is not directly attached to the church, and is not considered to be curtilage listed. The church hall is considered to have no built heritage value.

The assessment concludes that the setting of St Olave's church and rectory will benefit from a more attractive setting. Careful consideration has been given to building heights in the vicinity of the church thereby reducing impacts on setting arising from mass and scale. The Masterplan includes plans for the demolition of the church hall and replacement with a building to accommodate a new community facility. Although the church hall has no heritage value, the proximity to the church itself will require the new building to be carefully designed so that the setting is not compromised.

There are 5 other listed buildings located in close proximity to the application site, all are located within the Stoke Newington Reservoirs, Filter Beds and New River Conservation Area and are

of national value and relate to the provision of water services. Finsbury Park, which is located to the west of the Site is a Grade II registered park and is of local historical value.

Hackney BC maintains a list of buildings of local significance. Buildings are included on the list on account of association with a historical person or event, architectural interest or special contribution to street or locality. None of the buildings within the application site are included on the list of buildings of local significance. The Woodberry Down Estate was designed by Forshaw, the Council's architect in 1943. It was one of the first areas to be redeveloped under the Abercrombie Plan<sup>5</sup> and one of the first estates to be provided with community facilities, health care and education. In these respects the estate, in a London and planning context, is of local historic value.

### Archaeology

There are no known archaeological sites within the development site boundary, and the site is not located in an Archaeological Priority Area.

The application site remained relatively undisturbed until the early 19th century. Although the foundations of the current buildings are likely to have had a high impact on any archaeological deposits within their footprints, there is much open space generally between the tower blocks. There will also have been a moderate localised impact from bomb damage on the site during World War II. Overall, there remains a moderate potential for archaeological deposits to be preserved, but these are likely to be of only local (low) or no value.

A programme of archaeological evaluation, to investigate those areas where there has been no previous impact, will be required to establish the archaeological potential of those areas where new construction is proposed.

## 14 DAYLIGHT, SUNLIGHT AND OVERSHADOWING

The EIA has examined the likely daylight and sunlight availability of the proposed Woodberry Down development and its open spaces. Overshadowing, Vertical Sky Component and internal Daylight Factors have been assessed in order to evaluate the availability of natural daylight and sunlight in the dwellings of the proposed development and those immediately adjacent to it.

Daylight enhances the appearance of a space, and people expect good natural light in their homes. Daylight also helps reduce the need for electric lighting, thus decreasing energy consumption. The quantity and quality of natural light is dependent on the design of the interior. This encompasses the depth and shape of rooms, size and position of windows, colours of internal surfaces, and also the external environment and obstructions such as other buildings and objects.

Sunlight has a high amenity value, particularly within residential accommodation. Sunlight provides aesthetic and health benefits, both internally and externally. Due to the changing path of the sun, the orientation and position of windows and open spaces is critical to optimise sunlight in a new development. Overshadowing may impede the use of open spaces due to its dull, unattractive appearance, the persistence of frost and limited plant growth.

The daylight and sunlight analysis has been fundamental in determining the location and height of buildings across the whole site. The process has been iterative and included several stages of analysis and revisions to improve the daylight and sunlight performance of the development. Even though the EIA has been undertaken at the outline planning stage, the architect has generated typical block and flat layouts so that both Vertical Sky Component and average Daylight Factors could be assessed.

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<sup>5</sup> The Masterplan for the post-war reconstruction and future development of London

Although the site will experience some reductions in daylight and sunlight as the density of the site has been increased, the majority of the development is in accordance with the minimum suggested levels of both Building Research Establishment Guidelines and British Standards and the resultant internal conditions are improved.

The resultant overshadowing conditions of the proposed Woodberry Down upon the retained neighbouring residential properties are also minimal. None of the blocks are affected in June or March/September, and only two blocks have increased overshadowing in December for less than 20% of the façade areas while the overshadowing of one block is reduced.

The daylight and sunlight conditions produced by the Masterplan proposal are considered to be sufficient to satisfy Hackney BC that the redevelopment will result in an acceptable form of development. An additional Daylight and Sunlight analysis will be undertaken for the final designs of each phase at the full, or reserved matters planning application stages. These will further assess the acceptability of the revised designs.

## 15 WIND

Strong winds have the potential to impede pedestrian movement and in extreme cases blow people over, but there are also lower wind speeds that can generate nuisance depending upon pedestrian activity. It is therefore desirable that the wind conditions around a site are compatible with the intended pedestrian use of the site. The EIA has considered the likely impact of the proposed Woodberry Down Masterplan on the comfort and safety of pedestrians from wind.

The assessment examined a worst-case scenario, i.e. the windiest conditions likely to be experienced during the winter period. During the summer, winds are generally lighter and more conducive to leisurely pedestrian activity.

The Lawson Comfort Criteria, which relate to the Beaufort Scale, have been used to identify the likely conditions within the site. These criteria account for the fact that the wind conditions pedestrians will perceive as tolerable are dependent upon the activity they are engaged in. The criteria consider both wind speed and the frequency of occurrence of these wind speeds. The criteria define six pedestrian activities arranged in ascending order of transient activity: sitting, entrance doors, standing, leisure walking, business walking and roadways/car parks.

The criteria reflect the fact that wind conditions in an area suitable for sitting need to be more benign than a location that people merely walk past. The distinction between leisure and business walking is that in the business scenario, where pedestrians are on the site because their livelihood depends upon it, they will be more tolerant of stronger winds.

The classification of wind conditions across the site ranges from sitting to leisure walking which is in the lower half of the Lawson Comfort Scale. These wind conditions are typical of those experienced in urban areas. The assessment has highlighted the need to carefully consider entrance locations, at the detailed design stage, if the entrances are in regions where the assessment has shown that the microclimate is suitable for leisure walking.

Landscaping is a useful means of softening the streetscape to create naturalised shelter within and around the site. Relatively dense planting deflects the wind but does not necessarily reduce its speed, whereas, more open planting removes energy from the wind as it blows through the screen. Strategically positioned landscaping around the site is expected to have favourable impacts on wind conditions during the summer months. The more exposed areas of the site are to the south because of the proximity of the reservoir and so planting these areas would have greatest benefit.

## 16 SUSTAINABILITY

Sustainability is a powerful and far reaching concept that requires local interpretation, definition and articulation. The approach to sustainability for Woodberry Down has been addressed holistically within the Sustainable Design and Construction Statement (SDCS), a standalone document describing how sustainability considerations have influenced the Masterplan proposals and how sustainable design and construction measures will be carried through to the detailed design stage and eventual implementation.

As part of the sustainability assessment, a considerable amount of work has been undertaken to address issues of energy demand minimisation and management. This has included an examination of the potential for incorporating District Heating and renewable energy into the development proposals. This work is presented in detail in a comprehensive Energy Strategy Report, which is submitted as a stand-alone document with the outline planning application.

The objectives of the SDCS are:

- To appraise the Masterplan against sustainable development requirements as outlined via national, regional and local policy;
- To promote high levels of sustainable design and construction;
- To ensure integration of sustainable design and construction principles at the earliest possible stage of design; and
- To set a framework against which subsequent detailed planning applications will be assessed.

Although the approach to sustainability has been influenced by policy objectives at a national, London-wide and local level, the SDCS responds specifically to the requirements of the Greater London Authority's Supplementary Planning Guidance (SPG) on Sustainable Design and Construction (Ref 8). The SPG sets out the ways in which new developments can contribute to sustainability, setting out 'Essential Standards' and 'Mayor's Preferred Standards'. For all major developments in London, the Essential Standards reflect good industry practice, while the Mayor's Preferred Standards indicate exemplary approaches that are not yet policy requirements.

The SDCS demonstrates how the Woodberry Down development performs against each of these standards. In some cases the standards have been addressed through the evolution of the Masterplan proposals, whereas some of the standards can only be fully addressed at the detailed design stage. In such cases, the SDCS sets out commitments for future developers to adhere to, and essentially creates a framework for the determination of subsequent detailed planning applications.

The structure of the SDCS reflects that of the SPG, dividing the wider scope of sustainability into the following ten categories:

- Re-use of land and buildings;
- Maximising the use of natural systems;
- Energy conservation;
- Building materials;
- Water conservation;
- Reduction of noise, pollution, flooding and microclimatic effects;
- Comfort and security for users;
- Conservation and enhancement of the natural environment and biodiversity;
- Promotion of sustainable waste behaviour; and

- Sustainable construction.

For each of these categories, Design Statements of Commitment (DSCs) were developed, demonstrating compliance with the SPG standards either through the adoption of specific measures within the Masterplan or through precise recommendations to be adopted at the detailed planning stage. Where appropriate, these commitments are accompanied by Key Performance Indicators (KPIs), providing quantitative targets to be met by future developers.

The Woodberry Down energy strategy, forming a key part of the SDCS, has been developed in order to meet, and in some cases exceed, policy requirements at a national, regional and local level. The main aim of the strategy is to minimise energy consumption and associated carbon dioxide emissions, mitigating the effects of climate change. Through the adoption of efficiency measures, incorporating district heating (combined heat and power) and on-site renewable sources (to meet a minimum of 10% of the energy demand), it is expected that even with more than double the number of dwellings, the Masterplan will result in an overall reduction in carbon emissions compared to the existing situation.

## 17 MITIGATION AND MONITORING

The ES identifies the measures that will need to be put in place to reduce or remove any significant environmental effects identified through the EIA process.

### Mitigation Incorporated in the Masterplan

The EIA process works most effectively where it forms an integral part of the project design. In so doing, there is an opportunity to influence the decision-making such that negative environmental effects can be avoided, or minimised, and opportunities for environmental gain or enhancement can be fully exploited.

The Woodberry Down EIA project team has worked closely with the Masterplanning design team to achieve an iterative design process where one team responds to the emerging work of the other. One such example is the daylight, sunlight and overshadowing analysis. Over a period of more than 12 months, the EIA specialist worked with the architect to identify the optimal location and height of the various blocks within the Masterplan, thereby mitigating, as far as possible at the outline planning stage, potentially significant adverse effects of overshadowing and lack of access to daylight and sunlight.

### Mitigation Through Detailed Design

Many of the mitigation measures identified in the ES can only be implemented through the detailed design of the various Masterplan components. This will generally happen on a phase by phase basis as detailed full / reserved matters applications come forward, either for groups of buildings or for individual buildings, over the course of the 20 year development programme.

One example, involving kick-start site 1, is the measures required to retain areas of habitat value within the development site. The ecological assessment recommends that this area is protected but, until the detailed layout for kick-start site 1 is known, it is not possible to say precisely how this will be achieved. It is therefore anticipated that the outline planning consent will include a condition that will require details of how habitat value will be protected when the detailed planning application for this part of the Masterplan is submitted.

Further guidance to developers of the site will be provided in the form of a Design Code to be prepared by the Masterplanning design team. This will build on the principles established in the Masterplan and provide information which ensures that the design content and quality envisaged by the Masterplan is delivered.

### Mitigation During Demolition and Construction

The responsibility for minimising the effects of demolition and construction will ultimately rest with the developers of each phase of the Masterplan. The ES sets out the approach to the

preparation of a Construction Environmental Management Plan (CEMP) for each development phase. The intention is that the CEMP will explicitly define the procedures relevant to that particular part of the site and the specific nature of what is being built.

### Mitigation Post-Construction

Many of the mitigation measures identified in the Socio-Economic and Community Effects assessment rely upon effective implementation once the decant, demolition and redevelopment process commences. The precise management structures for managing these activities and ensuring that impacts are minimised is yet to be defined but is likely to involve the Woodberry Down Regeneration Team and a Community Development Trust.

## 18 RESIDUAL EFFECTS AND CONCLUSIONS

Mitigation measures have been incorporated, wherever possible, into the Masterplan design, so that measures to eliminate environmental impacts, and opportunities for enhancement, are integrated into the development proposals. Where integration has not been possible, the ES identifies the measures that will need to be put in place to avoid, reduce or offset adverse effects. The ES has also identified the measures to be adopted to ensure that the benefits of the proposals for the existing and new residents are maximised.

Due to the lengthy regeneration programme, control on demolition and construction activities will be crucial. Construction effects can generally be regarded as being temporary, but some individuals may be close to construction activity for a long period of time. The implementation of comprehensive Construction Environmental Management Plans and Construction Traffic Management Plans will be vital in avoiding adverse effects.

Overall, it is considered that the proposed Masterplan will have a hugely beneficial long-term impact upon the residents of Woodberry Down, and on the London Borough of Hackney in general.

## REFERENCES

- 1 Hackney Borough Council (August 2004) Woodberry Down Area Action Plan – Supplementary Planning Guidance
- 2 HMSO (1999) Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (SI 1999/293)
- 3 Government Office of the South East (GOSE) (2001) RPG9: Regional Planning Guidance 9: South East
- 4 Greater London Authority (GLA) (2004) The Mayor's Spatial Development Strategy: The London Plan
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- 7 Department of Environment (1994) Planning Policy Guidance: Planning and Noise PPG 24. Department of Environment.
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