

# NORTHAW – FORMER HOOK ESTATE AND KENNELS

## Sustainability Statement

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Sustainability Statement  
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## SUSTAINABILITY STATEMENT

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**Prepared by:**

**RPS**

Liam Seamer  
Senior Consultant – Energy and Sustainability

20 Farringdon Street  
London  
EC4A 4AB

T [REDACTED]  
[REDACTED]

**Prepared for:**

**Lambert Smith Hampton**

Rosanna Metcalfe  
Associate Director – Planning Consultancy

55 Wells Street  
London  
W1T 3PT

T [REDACTED]  
[REDACTED]

## EXECUTIVE SUMMARY

RPS Consulting Services Ltd. (RPS) have been commissioned by *Lambert Smith Hampton* to produce a Sustainability Statement for the proposed development at the Former Hook Estate and Kennels, Northaw, EN6 4BY. The scheme consists of the development of 150 new extra care dwellings, ancillary on-site facilities, extensive landscaping and associated access roads and parking areas. The proposed ancillary facilities include a treatment/consultant room, bar and restaurant, community area, spa pool and allotments.

This sustainability statement supports the full planning application for Welwyn Hatfield Borough Council. The purpose of this report is to demonstrate that sustainable development principles have been considered during the design of the development and how these would be further embedded throughout the lifecycle of the development, in accordance with relevant national, regional, and local planning policies and guidance. The report is based on information received to date, detailed within the main body of the report.

As set out in this report, the proposed development has been designed to take account of a number of fundamental design concepts to create a sustainable development. As a result, the following key sustainability aspects have been incorporated into the design:

- A commitment that the main contractor on site will sign up to the Considerate Constructor's scheme (or equivalent) and that the score achieved will be recognised as being above best practice (35 or above);
- The maximisation of daylight to reduce the demand on artificial lighting and create a healthy internal environment for the occupants;
- Provision of adequate cycle storage facilities and car parking spaces on site to promote the use of sustainable transport modes;
- Maintenance / enhancement of the site's ecological value through retention of existing features of ecological value, tree protection during development and planting scheme designed to enhance the number of species on site;
- The sourcing of the major building elements and materials from responsible local sources where practical;
- Specification of materials rated as A or above under the Green Guide and use of responsibly sourced timber;
- Minimisation of construction waste stream quantities and targets for diversion of non-hazardous construction waste from landfill;
- Implementation of a Site Waste Management Plan on site;
- Minimisation of the generation of construction waste and of the waste that is generated, ensuring a high percentage is diverted from landfill;
- Reduction of water use on site through the specification of water saving sanitary items;
- Effective surface water management;
- Reduction of CO<sub>2</sub> emissions, through the incorporation of high insulation standards, very efficient building services and LZC technologies.
- Incorporation of energy efficient internal and external lighting.

## SUSTAINABILITY STATEMENT

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Overall, the principles of good sustainable design have been incorporated in the development and good sustainable practices would be followed during the construction phase.

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# 1 INTRODUCTION

1.1.1 RPS Consulting Services Ltd. (RPS) have been commissioned by *Lambert Smith Hampton* to produce a Sustainability Statement for the proposed development at the Former Hook Estate and Kennels, Northaw, EN6 4BY.

## 1.2 Scheme Overview

1.2.1 The proposal consists of a residential led redevelopment of the previously developed site comprising 150 C2 (extra care) dwellings including 30% on-site affordable housing, ancillary community facilities, extensive landscaping, and access from Coopers Lane Road.

1.2.2 Enhanced connectivity and a range of additional public benefits. The new dwellings would demonstrate an appropriate mix of tenure, type and size of housing taking into account local need and circumstance.



Figure 1: Indicative Masterplan

1.2.3 This sustainability statement supports the full planning application for the *Welwyn Hatfield Borough Council*.

## 1.3 Purpose of the Sustainability Statement

1.3.1 The purpose of this report is to demonstrate that sustainable development principles have been considered during the design of the development and how these would be further embedded

throughout the lifecycle of the development, in accordance with relevant national, regional, and local planning policies and guidance.



**Figure 2: The 'three pillars' of Sustainability**

- 1.3.2 The statement provides an account of how the design team have considered and integrated sustainability during the design process. Based on this planning policy review, this sustainability statement has been structured to address the following aspects of sustainability:
- Sustainable Economic Development.
  - Sustainable Healthy Communities.
  - Conserving and Enhancing the Natural and Historic Environment.
  - Low Carbon Future and Climate Change.
  - Sustainable Transport.
  - Use of Natural Resources and Minimising Waste.
  - Management.
- 1.3.3 These aspects are then drawn together in the concluding Chapter 10, summarising the sustainable design and construction principles incorporated in the development.

## 2 SUSTAINABLE POLICIES AND OBJECTIVES

2.1.1 Various national, regional and local planning and dedicated sustainability policy documents promote the themes of sustainable development which are summarised below. This section details the relevant policies applicable to the proposed site and which form the basis of our sustainability statement.

### 2.2 National Level Policies

#### National Sustainability Policy

- 2.2.1 The National Planning Policy Framework (NPPF) was revised in October 2023 and sets out the government's planning policies for England and how these are expected to be applied. This revised Framework replaces the previous National Planning Policy Framework published in March 2012, it has been revised multiple times since its original publication.
- 2.2.2 The NPPF is designed to make the planning system less complex and more accessible; to protect the environment and promote sustainable growth. It provides a framework within which local people and their respective councils can produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities.
- 2.2.3 At the heart of the NPPF is a presumption in favour of sustainable development (paragraph 11). The three dimensions of sustainable development can be defined as the economic, social and environmental.
- 2.2.4 Plans should provide a framework for addressing housing needs and other economic, social and environmental priorities; and a platform for local people to shape their surroundings. Strategic policies should set out an overall strategy for the pattern, scale and quality of development, and make sufficient provision for:
- housing (including affordable housing), employment, retail, leisure and other commercial development.
  - infrastructure for transport, telecommunications, security, waste management, water supply, wastewater, flood risk and coastal change management, and the provision of minerals and energy (including heat);
  - community facilities (such as health, education and cultural infrastructure); and
  - conservation and enhancement of the natural, built and historic environment, including landscapes and green infrastructure, and planning measures to address climate change mitigation and adaptation.
- 2.2.5 The NPPF aims to strengthen local decision making, with the use of decision-taking in a positive way, as a means of fostering the delivery of sustainable development.
- 2.2.6 Finally, the NPPF (paragraph 16) also highlights that plans should be prepared with the objective of contributing to the achievement of sustainable development and in a way that is aspirational but deliverable.



## 2.3 Local Level Policies – Welwyn Hatfield Borough Council

### Local Sustainability Policy

#### Welwyn Hatfield Borough Council Adopted Local Plan (October 2023)

- 2.3.1 A new Local Plan has been adopted (October 2023) which will shape the future of development between 2016 and 2036 and supersedes the last Welwyn Hatfield District Plan which was adopted in 2005 and covered the period up to 2011. It includes new homes, new jobs and business premises, open spaces and community facilities as well as infrastructure such as roads, schools and healthcare. It is about supporting the growth of Welwyn Hatfield and a vibrant local economy.
- 2.3.2 Along with the Minerals and Waste Local Plans for Hertfordshire and any Neighbourhood Plans the new Local Plan forms the Development Plan for the borough, upon which planning applications should be determined unless there are material planning considerations which indicate otherwise.
- 2.3.3 *Policy SP1: Delivering Sustainable Development*

The Local Plan seeks to bring about sustainable development in the borough by applying the following principles:

- The need to plan positively for growth in a way which supports economic growth, increases the supply of housing and helps to reduce social and health inequalities in the borough - whilst recognising environmental and infrastructure constraints.
- That new development should contribute to the creation of mixed and sustainable communities which are well planned, promote healthy and active lifestyles, are inclusive and safe, environmentally sensitive, accessible, culturally rich, vibrant and vital, well served, and built to high design standards reflecting local character.
- That the location of new development should deliver a sustainable pattern of development which prioritises previously developed land; minimises the need to travel by directing growth to those areas with good transport networks and which are well served by jobs, services and facilities; protects areas of highest environmental value; and avoids areas of high flood risk.
- That the natural and heritage assets of the borough should be protected and enhanced and its natural resources used prudently.
- That adaptation and mitigation principles relating to climate change are incorporated into the design and construction of new development which include energy and water efficiency measures, the use of low carbon and renewable energy, the provision of green infrastructure and sustainable drainage systems (SUDs).
- The Council will take a positive approach when considering development proposals that reflect the presumption in favour of sustainable development contained in the National Planning Policy Framework and the principles set out above.

2.3.4 *Policy SP3: Settlement Strategy and Green Belt Boundaries*

In villages and other rural areas of the borough that lie within the Green Belt, development will be restricted so as to be consistent with the type of development envisaged in national planning policy and other policies of this plan.

Development that would result in disproportionate growth to any of the settlements, conflict with the function and position of a settlement within the hierarchy, which cannot be supported by the necessary infrastructure or result in a loss of services and facilities which are considered to be key to supporting local communities will be resisted.

### 2.3.5 Policy SADM 1: Windfall Development

Planning permission for residential development on unallocated sites will be granted provided:

- The site is previously developed or is a small infill site within a town or excluded village. In the Green Belt, Policy SADM 34 will apply.
- The development will be accessible to a range of services and facilities by transport modes other than the car.
- There will be sufficient infrastructure capacity, either existing or proposed, to support the proposed level of development.
- Proposals would not undermine the delivery of allocated sites or the overall strategy of the Plan.
- Proposals would not result in disproportionate growth taking into account the position of a settlement within the settlement hierarchy.

Windfall sites will also be supported where the proposed development would support communities through the provision of community facilities to meet the demand for new or enhanced community services.

### 2.3.6 Policy SADM 2: Highway Network and Safety

Development proposals will be permitted provided:

- There would be no unacceptable impacts on the local and /or strategic transport network. Development proposals which generate a significant amount of traffic movements must be accompanied by either a Transport Assessment or Transport Statement as appropriate in accordance with the criteria in the Hertfordshire County Council Highway Design Guidance(26).
- There would be no negative impacts on highway safety.
- They are designed to allow safe and suitable means of access and site operation.
- They provide satisfactory and suitable levels of parking.

### 2.3.7 Policy SADM 3: Sustainable Travel for All

All developments at or above the thresholds set out in Hertfordshire County Council's Hertfordshire Travel Plan Guidance will be required to submit a Travel Plan as part of a planning application.

Development proposals should make provision where appropriate for:

- Cyclists, through safe design and layout of routes integrated into new development and the wider cycle network and provision of secure cycle parking and where appropriate changing facilities.

- Pedestrians (including disabled persons and those with impaired mobility), through safe, accessible, direct and convenient design and layout of routes within the new development and wider pedestrian network.
- Safeguarding existing Public Rights of Way and promoting enhancements to the network, where appropriate, to offer walking and cycling opportunities.
- Public transport, through measures that will improve and support public transport and provide new public transport routes.
- Community transport, through the implementation of Travel Plans where appropriate (for example including measures that will promote car pools, car sharing and voluntary community buses, community services and cycle schemes).
- Servicing and emergency vehicles.
- Facilities for charging plug-in and other ultra-low emission vehicles

### 2.3.8 Policy SADM 7: New community services and facilities and losses of community services and facilities

Developments that result in additional need for community facilities will be required to contribute towards enhancing existing facilities or provide/contribute towards new facilities. The Council will encourage the dual use of schools.

Planning permission will only be granted for proposals involving the loss or change of use of community services or facilities in the following circumstances:

- It can be clearly demonstrated that there is no longer a current demand for such a facility or for alternative recreational, leisure or community use, or any real prospect of such a demand arising within a realistic timescale.
- It can be clearly demonstrated that an acceptable alternative means of meeting any such demand is or will become available before the loss of the existing facility.
- The new development consists of, incorporates, or provides an appropriate alternative recreational or community service or facility, either on site or within the vicinity, of equivalent or better provision in terms of quantity and quality in a suitable location accessible to the local community. Demand should be assessed according to the nature of the existing facility in question.

### 2.3.9 Policy SPT7: Type and Mix of Housing

In order to deliver a choice of homes and help create sustainable, inclusive and mixed communities, provision will be made for a range of housing to support the needs and requirements of different households.

**Housing mix:** Proposals for 11 or more new dwellings should demonstrate how the mix of tenure, type and size of housing proposed on sites will reflect the council's latest evidence of housing need and market demand and contribute towards meeting the varied needs of different households including single person households, couples, families with children, older people, people with disabilities and people wishing to build their own homes. For larger sites, there should be a greater opportunity to deliver a broader mix.

**Affordable Housing:** As part of the overall housing target, a proportion of new homes built in the borough will be for affordable housing. Subject to viability, affordable housing will be sought (for residential or residential-led mixed use schemes) to be between 25-35%.

**Accessible and Adaptable dwellings:** At least 20% of all new dwellings on sites involving 5 or more new dwellings will be required to meet Building Regulations Part M4(2) standards for 'accessible and adaptable dwellings' (or as subsequently amended), the delivery of which should be distributed across market and affordable tenures. This proportion may be varied where a proportion of dwellings are proposed to meet Part M4(3) standards for 'wheelchair user dwellings' (or as subsequently amended).

### 2.3.10 Policy SP9: Place Making and High-Quality Design

Proposals will be required to deliver a high-quality design that fosters a positive sense of place by responding to the following principles in an integrated and coherent way.

Respond to character and context

- Proposals have been informed by an analysis of the site's character and context so that they relate well to their surroundings and local distinctiveness, including the wider townscape and landscape, and enhance the sense of place.
- Proposals are of an appropriate density (typically between 30 - 50 net dwellings per hectare) that combines the efficient use of land with high quality design that respects character and context. Higher density development will be encouraged in accessible locations, such as around transport hubs or town and neighbourhood centres, where this is appropriate.

Legible, permeable and well connected.

- Places are easy to understand and navigate by virtue of the layout; hierarchy and design of routes; height, scale and design of buildings; and views and vistas, and other landmarks such as public art.
- Places are accessible, permeable, well connected and easy to move through for all in society. New routes connect into the existing route network and are safe and pleasant to use. Public spaces seek to prioritise the pedestrian and cyclist above motor vehicles in their layout, landscaping and provision of street furniture/facilities.

High quality public space and landscaping

- Proposals provide an appropriate amount of public open space that is well sited and designed to help create and enhance a sense of place.
- Public open spaces are coherent, attractive, multi-functional, safe, inclusive and utilise high quality soft and hard landscaping.
- Public open spaces promote health and wellbeing, with play and leisure spaces well located and attractively designed to encourage their use.
- Continuity of frontages and appropriate definition of spaces is created or maintained through the siting, layout and design of routes, buildings, landscaping and boundary treatments.

Space for nature

- Proposals make space for nature, enable the movement of wildlife through the development, and protect and improve the connectivity of habitats at the wider landscape scale.
- Layout and design of development respects and guides people's interaction with spaces for nature, with strategies in place to manage and maintain the ecological integrity of those spaces.

### Vibrant and diverse

- Proposals offer an appropriate mix of uses to support sustainable and vibrant places to live, work and visit.
- Public spaces and publicly accessible buildings are designed to be inclusive, promote social interaction and provide opportunities for informal cultural and economic activities.

### Safe and secure

- The design of buildings and boundary treatments create a sense of safety and security that is consistent with achieving active, welcoming, legible and permeable places.
- Building entrances and public spaces are appropriately sited, designed and lit in order to maximise natural surveillance and a sense of safety

### Building function and form

- Development proposals respect neighbouring buildings and the surrounding context in terms of height, mass and scale.
- Development proposals are of a high quality architectural design that creates coherent and attractive forms and elevations and uses high quality materials.
- Alterations to buildings relate well to the character and proportions of the existing building and its curtilage, the surrounding context and the street scene in terms of their siting, height, mass, scale, detailed design and materials.
- Buildings and their approaches are accessible and provide adequate internal amenity and functionality for occupiers and users..

### 2.3.11 Policy SADM 11: Amenity and Layout

All proposals will be required to create and protect a good standard of amenity for buildings and external open space in line with the Council's Supplementary Design Guidance, and in particular should ensure:

- The levels of sunlight and daylight within buildings and open spaces, and garden areas in particular, are satisfactory.
- Dwellings are dual aspect to enable passive ventilation and avoid the need for mechanical ventilation, subject to any noise and air pollution mitigation measures that are required to make the proposal acceptable.

- External private or communal garden space, in its extent and design, meets the reasonable needs of its users.
- A reasonable degree of privacy to new and existing private living space and the main private garden area, with overlooking limited to an acceptable degree. The design of new communal garden areas should seek to create spaces that provide opportunities for privacy or seclusion for residents, particularly where residents do not have access to private balconies or other private external space.
- New development is not overbearing upon existing buildings and open spaces.
- The outlook and visual amenity afforded from within buildings and private/communal garden areas should be satisfactory, taking account of the relationship with neighbouring buildings and the wider street scene, including the design of parking, boundary treatments and landscaping.
- Shared circulation space and routes to private entrances within flatted development should be of sufficient width, be welcoming, and be naturally lit wherever possible.

### 2.3.12 *Policy SADM 12: Parking, Servicing and Refuse*

#### ***Parking***

The type and quantum of vehicle and cycle parking provided within development proposals will be informed by the standards set out in the Council's parking standards taking account of:

- The site's location and accessibility to public transport, services and facilities.
- The nature and degree of parking demand likely to be associated with the development and opportunities for shared parking.
- The need to promote more sustainable forms of travel within the borough.

The siting, layout and design of vehicle and cycle parking, including detached garage blocks, within development proposals will be required to ensure an attractive and coherent street scene is maintained, not prejudice the wider functionality of public and private space, and create an effective functional link and relationship with the buildings and areas they will serve.

Electric vehicle charging points will be incorporated into parking areas for new neighbourhood centres and the necessary infrastructure provided for major residential schemes.

#### ***Servicing and refuse***

Appropriate provision of service areas and refuse storage and collection areas should be made according to the nature of the development. Such areas and access to them should be appropriately sited and designed to ensure they can:

- Perform their role effectively without prejudicing or being prejudiced by other functions and users.
- Maintain an attractive and coherent street scene and protect visual amenity.
- Avoid creating risk to human health or an environmental nuisance.

### 2.3.13 *Policy SP10: Sustainable Design and Construction*

Proposals that adopt sustainable design and construction principles, as set out below, within an integrated design solution will be supported. This should be demonstrated via a Sustainable Design Statement and associated plans.

#### ***Materials and waste***

- Reuse land and buildings wherever feasible and consistent with maintaining and enhancing local character and distinctiveness.
- Reuse and recycle materials that arise through demolition and refurbishment, including the reuse of excavated soil and hardcore within the site.
- Prioritise the use of materials and construction techniques that have smaller ecological and carbon footprints, where appropriate.
- Consider the lifecycle of the building and public spaces, including how they can be easily modified to meet changing social and economic needs and how materials can be recycled at the end of their lifetime.
- Space is provided and appropriately designed to foster greater levels of recycling of domestic and commercial waste.

#### ***Water sensitive design***

Water sensitive design principles and practices are integrated into development proposals to sustainably address water supply, consumption and quality, extreme rainfall, drainage and flood risk in a holistic way that supports other design aims and objectives.

#### ***Energy and climate change***

- Layout and design of the site and building(s) reflect the energy hierarchy to maximise opportunities to reduce carbon emissions.
- The use of renewable and low carbon energy infrastructure is used where it is appropriate and consistent with other policies.
- Proposals are responsive to how the climate will change over their lifetime and minimise their contribution to the urban heat island effect.

#### ***Landscape and biodiversity***

- New and existing habitat and landscaping are incorporated into the layout and design of proposals in line with sound ecological principles.

- Site and building-level landscaping and features promote biodiversity and help achieve other aims, such as climate change adaptation, flood risk and amenity.
- Newly created habitat and soft landscaping prioritise the use of native species. Non-native species are only used if they significantly help achieve other policy objectives, such as adapting to climate change.
- Proposals seek to create space for growing food, both at a building and wider community scale.

### 2.3.14 Policy SADM 13: Sustainability Requirements

All major development proposals must demonstrate that they have sought to maximise opportunities for renewable and low carbon sources of energy supply where consistent with other Local Plan policies.

All non-residential development with a floorspace of 1,000 square metres or more will be required to meet at least BREEAM 'Excellent' unless it is demonstrated that it is not technically feasible or viable to do so, in which case such proposals will be required to demonstrate a 'Very Good' rating.

All newly constructed dwellings will be required to achieve an estimated water consumption of no more than 110 litres/person/day, with water reuse and recycling and rainwater harvesting incorporated wherever feasible to reduce demand on mains water supply.

### 2.3.15 Policy SADM 14: Flood Risk and Surface Water Management

Development proposals in areas at risk of flooding from any source.

Development proposals in areas at risk of flooding from any source should be informed by and be consistent with relevant national planning policy and guidance, local and regional strategies and plans, and the latest flood risk information available.

Flood Risk Assessments will be required in line with national policy and guidance and should be prepared in accordance with the requirements and advice set out in the Council's Strategic Flood Risk Assessment. In addition, proposals that require a site-specific Flood Risk Assessment will be required to:

- Protect and enhance the flood risk management function of existing overland flow routes, watercourses and flood plains/storage areas to ensure there is no net loss of flood storage, flows are not impeded, and opportunities to make space for water are taken.
- Maintain an appropriate development free corridor along watercourses and take opportunities to naturalise watercourses to improve their ecological status, biodiversity and habitat connectivity.

All major development proposals, and all proposals in areas identified as being at risk of surface water flooding, will be required to manage surface water runoff and surface water flood risk via the use of Sustainable Drainage Systems that:



- Have been incorporated into the layout and design of proposals at the earliest stage of scheme design.
- Are designed in accordance with the national non-statutory technical standards (or their successor) as well as guidance and advice provided by the relevant flood risk management bodies.
- Wherever feasible improve upon peak greenfield runoff rates, particularly in locations identified as experiencing surface water flooding problems, in order to help reduce overall flood risk in the wider area.
- Use management and control measures that aid multi-functionality of space, enhance visual amenity, support biodiversity and allow for safe interaction with the water environment, as opposed to hard engineered and/or sub-surface features which will be resisted.
- Protect water quality by using an appropriate number of treatment stages before discharging to the ground or a surface water body.
- Avoid discharging to a combined sewer particularly in locations where the existing sewer network is identified as having constrained capacity.
- Enable maintenance of individual measures and the system as a whole to be undertaken in a financially sustainable way and without significant disruption to occupiers and users of development.

Sustainable Drainage Systems that include measures for managing surface water runoff beyond the individual building or plot-level will be required to demonstrate how the long term maintenance of the system will be secured.

All development proposals should seek to incorporate suitable source control measures at the building and plot-level. The loss of permeable surfaces and other features which help reduce and manage surface water flood risk without suitable compensatory provision will be resisted.

### 2.3.16 Protection and Enhancement of Critical Environmental Assets

The protection, enhancement and management of the environmental, ecological and historic assets within the borough, will be sought commensurate with their status, significance and international, national and/or local importance.

The best and most versatile agricultural land that has the greatest potential for local food security will be protected.

Proposals affecting the water environment should protect and enhance the ecological status of water bodies and maintain its flood management function. The borough's flood plains will be protected by avoiding development in Flood Zones 2 and 3 in accordance with national policy and guidance.

Development that would secure positive improvements to and ensure the long-term conservation of ecological and heritage assets for the enjoyment of future generations will be supported.

Designation of ecological and heritage assets will be supported where it is deemed appropriate and necessary to safeguard them for the enjoyment of future generations.

New areas of Urban Open Land created through development of the sites allocated within this Local Plan will be protected and maintained during the plan period.

### 2.3.17 Green Infrastructure

The Council will work with partners to actively support the creation and enhancement of strategic green infrastructure across the borough. Opportunities to link existing green spaces and to improve public access and amenity will be supported in order to provide a comprehensive network of functional and linked spaces for the benefit of wildlife, biodiversity and the community. The Council will aim to ensure there is no overall net loss in green infrastructure across the borough within the plan period. Development that would compromise the integrity, functionality or cause significant fragmentation of the green infrastructure network will not be permitted.

Priorities for the creation and enhancement of green infrastructure include river corridors, sites designated for their nature conservation, heritage and/or landscape value and areas of Urban Open Land that are important for community recreation. Development proposals within the borough should plan positively for, and contribute to, the creation and management of high quality, multifunctional green spaces that are linked to the surrounding green infrastructure network. To ensure beneficial results for biodiversity and habitat creation, Hertfordshire's Ecological Networks Mapping should be used (where appropriate) and, once available, the Local Nature Recovery Strategy, to inform the location and nature of green infrastructure provision.

### 2.3.18 Policy SADM 15: Heritage

Proposals which affect designated heritage assets and the wider historic environment should consider the following:

- The potential to sustain and enhance the heritage asset and historic environment in a manner appropriate to its function and significance.
- Successive small scale changes that lead to a cumulative loss or harm to the significance of the asset or historic environment should be avoided.
- Proposals should respect the character, appearance and setting of the asset and historic environment in terms of design, scale, materials and impact on key views
- Architectural or historic features which are important to the character and appearance of the asset (including internal features) should be retained unaltered.
- The historic form and structural integrity of the asset are retained.
- Appropriate recording of the fabric or features that are to be lost or compromised takes place and is deposited into the Historic Environment Record.

A Heritage Statement, Heritage Impact Assessment and/or Archaeological Assessment will be required if the scale and nature of the proposal are likely to have an impact on the significance of all or part of the asset.

### 2.3.19 Policy SADM 16: Ecology and Landscape

Proposals will be expected to maintain, protect and wherever possible enhance biodiversity, the structure and function of ecological networks and the ecological status of water bodies.

Proposals that would result in loss of or harm to:

- International sites, Sites of Special Scientific Interest, National Nature Reserves, Local Nature Reserves or other statutorily protect features or species, will be refused unless: the mitigation hierarchy has been followed, to firstly avoid, reduce and remediate direct and indirect adverse impacts before considering compensation; and imperative reasons of overriding public interest can be demonstrated.
- Ancient Woodland, veteran trees, chalk river habitats or habitats or species of national principal importance, will be refused unless: the mitigation hierarchy has been followed, to firstly avoid, reduce and remediate direct and indirect adverse impacts before considering compensation; and the need for, and benefits of, the development significantly outweigh the loss or harm.
- Local Wildlife Sites, other habitats, species and ecological assets of local importance, including ecological networks, woodland, orchards, protected trees and hedgerows and allotments, will be refused unless: the mitigation hierarchy has been fully implemented to avoid, reduce and remediate and compensate direct and indirect adverse impacts; and the need for, and benefits of, the development outweigh the loss or harm.

Where compensation is required to make development acceptable within the above, necessary financial and/or other provision will be required to deliver and maintain ecological and biodiversity objectives over appropriate time scales.

Proposals will be assessed for their impact on landscape features to ensure that they conserve or improve the prevailing landscape quality, character and condition. Proposals should take full account of the relevant Landscape Character Assessment and adopt the strategy and guidelines for managing change set out therein. Regard should also be had to relevant advice contained within the Hertfordshire Historic Environment Record.

### 2.3.20 *Policy SADM 18: Environmental Pollution*

#### ***Contaminated land and soil pollution***

Planning applications for proposals on land formerly used for industrial, commercial or utilities purposes, or land which is considered to be contaminated or potentially contaminated, must be accompanied by a preliminary Contaminated Land Risk Assessment.

Proposals which, by their nature, risk contributing to soil and water pollution will be required to demonstrate how this risk will be avoided or mitigated to an acceptable level.

#### ***Air Quality***

Prevailing air quality and potential impacts upon air quality arising from airborne emissions, dust and odour associated with the construction and operation of a proposal (including vehicular traffic) will be considered when determining planning applications. Proposals that would result in or be subject to

unacceptable risk to human health and the natural environment from air pollution, or would prejudice compliance with national air quality objectives, will be refused.

An Air Quality Assessment that demonstrates how prevailing air quality and potential impacts upon air quality have been considered and how air quality will be kept to an acceptable standard through avoidance and mitigation will be required for major and minor development proposals that are:

- Likely, due to the nature of the proposal, to give rise to significant air pollution.
- Within an Air Quality Management Area.
- Within 50 metres of a major road (71) or heavily trafficked route (72).
- Within proximity to a source of air pollution which could present a significant risk to human health.
- Particularly sensitive to air pollution due to their nature, such as schools, health care establishments or housing for older people.

### ***Noise and Vibration***

A Noise and Vibration Impact Assessment will be required for proposals with the potential to cause disturbance to people or the natural environment due to noise and/or vibration and for proposals that are considered to be sensitive to noise and/or vibration.

Proposals that would result in or be subject to noise pollution and/or vibration that is:

- Very disruptive and would have an unacceptable adverse effect on human health or the natural environment will not be permitted.
- Disruptive and would have a significant adverse effect on human health or the natural environment will be refused unless the need for, and benefits of, the development significantly outweigh the harm and all feasible solutions to avoid and mitigate that harm have been fully implemented.
- Intrusive and would have an adverse effect on human health or the natural environment will be resisted unless the need for, and benefits of, the development outweigh the harm and all feasible solutions to avoid and mitigate that harm have been fully implemented.

### ***Light pollution***

Proposals that include external lighting schemes, including floodlighting, will be approved where it can be demonstrated through a Lighting Assessment that all of the following criteria can be satisfied:

- The lighting scheme is the minimum required for security and operational purposes.
- Glare and light spillage are minimised.
- The amenity of residential areas is not adversely affected.
- The visual character of historic buildings and conservation areas are not adversely affected.
- There would be no dazzling or distraction of drivers using nearby roads.
- There would be no unacceptable adverse impact on the character or openness of the countryside and the green belt.
- There would be no unacceptable adverse effects on species, habitats or the wider natural environment.

### 2.3.21 *Policy SP13: Infrastructure Delivery*

To support the delivery of sustainable communities, the Council will ensure that suitable provision is made for new or improved infrastructure, required to meet the levels of growth identified in this Local Plan.

The Council's Infrastructure Delivery Plan sets out the key infrastructure projects that will be required to deliver the objectives of the Local Plan.

Developers will be required to contribute to the reasonable costs of enhancing existing infrastructure or providing new physical, social and green infrastructure, required as a result of their proposals, through either financial contributions (including planning obligations or the Community Infrastructure Levy (CIL)), or by direct provision of such infrastructure on-site within the development.

The Council will use grant funding, Section 106 agreements, unilateral undertakings, planning conditions, and when adopted, the Council's CIL Charging Schedule, to secure this. The adopted Planning Obligations SPD sets out guidance in relation to the negotiation of Section 106 contributions and will be updated in due course to reflect the Council's approach to planning obligations once the Community Infrastructure Levy has been implemented.

Supporting infrastructure should be provided in advance of, or alongside, the development, unless there is sufficient existing capacity. The appropriate phasing for the provision of infrastructure will however be determined on a case by case basis.

Furthermore, the Council will continue to work with its partners to address existing deficiencies and secure appropriate levels of funding

### 2.3.22 *Policy SADM 34: Development within the Green Belt*

Within the Green Belt as defined on the Policies Map planning permission will be granted for development in accordance with national policy and other policies in this plan subject to the following criteria.

Proposals for the re-use of buildings, appropriate facilities for outdoor sport, outdoor recreation, cemeteries and development on previously developed sites will need to demonstrate that they preserve the openness of the Green Belt and do not conflict with the purposes of including land within it. In assessing the impact of the proposal the Council will take into account:

- Whether the site lies within a parcel of land which makes a significant or partial contribution to one or more purposes of the Green Belt.
- Whether the scale of development or activity would compromise that purpose.
- The level of impact on both the physical and visual openness of the Green Belt

### 3 SUSTAINABLE ECONOMIC DEVELOPMENT

3.1.1 The first of the ‘three pillars’ of sustainable development is economic development. This is recognised within the NPPF, identifying the ‘economic role’ of the planning system to “*contribute to building a strong, responsive and competitive economy*”.

3.1.2 New mixed-use developments, if located and designed appropriately, can contribute to the economic prosperity of the region / locality.

#### Short Term Employment Benefits

3.1.3 In the short term, the construction activities will generate employment opportunities for local skilled tradesmen and there is potential for building companies to develop the local skills base through apprenticeships and links with local construction training providers.

3.1.4 Where possible, the developer would recruit local contractors. There are also opportunities further down the construction supply chain, with the use of local suppliers for materials and equipment. Training and employment opportunities will be secured as part of the planning obligations.

#### Long term economic benefits

3.1.5 In the longer term, there are a number of economic benefits, including expenditure in the local economy from new residents and building users and the indirect support this provides to new employment and the vitality of the Northaw area.

3.1.6 Direct economic benefits of new housing are generated from:

- Additional Council Tax revenue
- Increased expenditure by residents on goods and services in the local area which will provide positive effects upon the economic sustainability of the local economy.

3.1.7 Implementation of this development, particularly the requirement of 24-hour extra care staffing and the running of the ancillary areas, will result in a number of employment opportunities becoming available to local residents and may contribute to alleviating some local unemployment.

## 4 SUSTAINABLE HEALTHY COMMUNITIES

4.1.1 The second of the ‘three pillars’ of sustainable development is social development. This is recognised in the NPPF, identifying the ‘social role’ of the planning system as “*supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with accessible local services that reflect the community’s needs and support its health, social and cultural well-being*”.

### Supply of Housing to Meet the Needs of Present and Future Generations

4.1.2 The NPPF outlines policies for local authorities to enable them to boost the local housing supply, widening opportunities for home ownership and creating sustainable, inclusive and mixed communities.

4.1.3 The development proposes 150 extra care residential units. The Welwyn Hatfield Borough Council Local Plan Policy SP7 states that developments of more than 10 dwellings should include an appropriate mix of affordable housing. Additionally, the District Plan Policy H7 states that on sites of more than 1 hectare or with 25 or more units, a minimum of 30% subsidised housing must be provided. For this development, of the 150 units being provided, this equates to 45 of them being affordable.

### Creating a High Quality Built Environment

4.1.4 The importance of high-quality inclusive design is a key aspect of sustainable development. This Design and Access Statement (DAS) has been prepared by Lambert Smith Hampton (LSH) with a multidisciplinary team on behalf of Swing Ltd. to accompany an outline planning application for the redevelopment of land at the former Hook Estate and Kennels. In more detail, the aim of the project is to comprehensively redevelop the site and deliver the following benefits:

- Provide a high-quality care and retirement living community within an attractive setting.
- Community Care and Home Care options are likely to expand to satisfy a certain amount of demand for elderly people to remain in their own homes whilst receiving a degree of care. There is currently lack of accommodation of this type in the area to cater for this need and the physical fabric of people’s homes is often inadequate or unable to support conversion needs.
- Landscape setting providing opportunities to inform the character of the development.
- Enhance the landscape, ecological context and visually contain the development from the wider public vantage points. Secure the long-term future and management of Local Wildlife Sites. Use existing and new tree planting to shape the development and open space
- Potential for new community facilities afforded to residents and visitors as part of a sustainable community.
- Provision for a sustainable development and facilitate connections from development towards Potters Bar.



## Accessibility to Local Services

- 4.1.5 The development of a continuing care / retirement community can accrue a number of local and regional benefits. Empirical evidence suggests that care homes result in increase in income generating opportunities for the local economy as well as contributing to increasing the sustainability of local services. Anecdotal evidence supports the freeing up of existing family sized properties in the local property market as residents move into the care / retirement Community with obvious benefits for the property market
- 4.1.6 The development of a continuing care / retirement community can accrue a number of local and regional benefits. Empirical evidence suggests that care homes result in increase in income generating opportunities for the local economy as well as contributing to increasing the sustainability of local services. Anecdotal evidence supports the freeing up of existing family sized properties in the local property market as residents move into the care / retirement Community with obvious benefits for the property market.
- 4.1.7 As part of the proposals, a demand responsive mini-bus service can provide residents with access these towns in the vicinity of the site including public transport links. It is also envisaged that the development would incorporate a space for supporting retail units to cater for day to day needs of the residents such as basic provisions, newspapers and hairdressing.



Figure 3. Traffic Plan Diagram



- 4.1.8 There is a bus stop located at Potters Bar Bus Garage circa 1.9 kilometres to the west of the Site, which provides access to two regular bus services (84 and PB1). The 84 provides access to South Mimms, London Colney and St Albans, which staff could use as part of a combined modal journey. The PB1 is a circular service of Potters Bar.
- 4.1.9 In addition, an on-site electric village transport service will be available to residents and staff, which will provide access to / from Potters Bar, Northaw and other places of interest within the surrounding area.
- 4.1.10 There is a range of facilities and amenities available within Potters Bar and Northaw that future extra care residents could access should they wish.
- 4.1.11 The proposed extra care development will provide a range of ancillary on-site facilities for the residents of the development that will enable the residents to walk the short distance to the facilities from their residential units without having to leave the Site.
- 4.1.12 The ancillary on-site facilities to be provided will include access to 24-hour support services and staff and are anticipated to include a consulting room, bar and restaurant, community area, swimming pool, allotments, and electric golf buggies for on-site transport.
- 4.1.13 Other facilities could include a gym, spa and treatment rooms, hairdressing facilities, croquet lawn, putting green and nature walks.
- 4.1.14 The analysis of the site context demonstrates that the site currently provides excellent connections to the local transport network, enabling wider connection to town centres, commercial and retail centres as well as providing connection with other modes of transport for travel further afield.

### Noise

- 4.1.15 A report undertaken by IDOM has been submitted as part of this planning application. This provides further details into noise modelling undertaken to ascertain whether there are any changes to noise levels associated with the development.
- 4.1.16 External noise levels are expected to meet the lower guideline criteria of 50 dB across the development.
- 4.1.17 Partially open standard double glazing units, providing natural ventilation, are expected to be acceptable for all plots across the development.
- 4.1.18 Good acoustic design principles have been implemented as part of the preliminary design to minimise the impact of environmental noise.
- 4.1.19 Noise is expected to be present from the surrounding wildlife but is not considered to be intrusive. Natural noise sources from birdsong and tree rustling will likely provide a pleasant soundscape for occupants of the development.

4.1.20 The environmental noise assessment has identified that there will be no observed adverse effect for occupants of the proposed development from externally generated noise. As a result, no specific mitigation measures are required.

### **Air Quality**

4.1.21 An Air Quality Assessment (AQA) has been undertaken by IDOM for the proposed development. The report details the existing air quality at the proposed location and the impacts of the construction and operational activities on the local air quality.

4.1.22 The site is not situated within, or in close proximity to, an AQMA.

4.1.23 There is considered to be a high risk of dust soiling during earthworks and associated with trackout in the absence of mitigation. The risk of dust soiling is expected to reduce (to medium) during construction (once earthworks have been completed). The risk to human health throughout the construction phase is assessed as 'low' in the absence of mitigation.

4.1.24 Recommended mitigation measures are outlined in this report and should be incorporated into a future DMP or wider Construction Environmental Management Plan (CEMP). Provided mitigation is employed for the duration of the construction works the overall effect on local air quality is judged to be 'not significant'.

4.1.25 The proposed development is expected to generate 405 daily vehicle trips (inclusive of delivery and servicing vehicles). The potential impact on local air quality resulting from an increase of this magnitude can be screened out as insignificant in accordance with IAQM guidance.

4.1.26 The proposed heating strategy is based on ASHPs therefore no localised emissions will be introduced as part of the proposed development.

4.1.27 It is considered that the development proposals adhere to policy guidance and that there is no reason falling within the scope of this report, that precludes the granting of planning permission for the development as proposed.

## 5 CONSERVING AND ENHANCING THE NATURAL AND HISTORIC ENVIRONMENT

- 5.1.1 The third of the ‘three pillars’ of sustainable development is the protection of the environment and sustainable use of existing resources. This is recognised within the twelve core principles of the NPPF, which includes conservation and enhancement of the natural environment.
- 5.1.2 Biodiversity encompasses all living things and plays an important function within urban areas; providing pleasant areas of amenity, whilst maintaining the ecological function of natural systems. The objectives outlined in the NPPF and the government’s Biodiversity 2020 strategy reflect the government’s commitment to halt the overall decline in biodiversity and recognise the wider benefit of ecosystem services.

### Conserving and enhancing the natural environment and landscape

- 5.1.3 The Design and Access statement makes reference to the landscape strategy for the proposed development. The structure of the residential areas would link to the surrounding landscape through the structure of street and open spaces that create views and a network of green spaces.
- 5.1.4 A connected green link around the perimeter of the site allows the opportunity to retain the existing trees and connect to the landscape setting within the site. Gaps through the development areas will afford views to the surrounding countryside edges.
- 5.1.5 As part of the landscape strategy, use of colour, planting and smells, texture in surfaces and signage can be of assistance for residents with dementia or other visual impairments.



Figure 4. Landscape General Arrangement Plan

5.1.6 A palette of tree, shrub and grassland species can provide a rich and varied planting scheme. Defining species would be used to provide interesting points of focus, which can help reflect the seasons and provide interest and colour throughout the year. The green infrastructure will:

- Be sympathetic to local landscape character and sustain the existing landscape setting through an appropriate palette of materials and new planting;
- Maintain and create a variety of wildlife habitats to enhance biodiversity and provide a linked network of green corridors through the site;
- Incorporate views into the wider countryside; and
- Ensure a net gain in tree canopy cover to provide shade, mitigate air quality and climate change and contribute to biodiversity in accordance with national and local initiatives

### Ground Contamination

5.1.7 A Phase 1 Preliminary Environmental Risk Assessment has been produced by IDOM to provide an assessment of potential sources of contamination at the site, review the environmental setting to assess the sensitivity of the surrounding area to contamination/pollution, produce an outline Conceptual Site Model (CSM) detailing how any contamination may impact the identified receptors via pollutant linkages and provide recommendations for further investigation of potential pollutant linkages, where considered necessary.

5.1.8 The site investigation has identified made ground resulting from previous development. This includes fragments of brick, concrete, ash, clinker and glass. Localised contamination by lead, zinc, copper, nickel, asbestos and three Polyaromatic Hydrocarbons has been reported.

5.1.9 The concentrations of lead copper and zinc are significant and will require mitigation in the event of redevelopment. Due to the thick vegetation cover, the current risk is considered to be low as this will prevent contact or dust generation.

5.1.10 There is no evidence of vegetation die back and deeper samples indicate that the contamination is not readily mobile or bioavailable.

5.1.11 Made ground identified across the two intrusive investigations was consistent with historical mapping from 1935 – 1938 (1:10,560), indicating that historic dog kennels may be the source of the localised made ground. Drawing 22278-304-003 included within Appendix 2 of this report indicates the presence of confirmed made ground and potential further unencountered made ground associated with the dog kennels.

5.1.12 Based upon the underlying clay rich geology, combined with the type and nature of contamination, which is not readily soluble or mobile, the potential risk to controlled waters is considered to be low.

5.1.13 No significant ground gas risk has been identified.

- 5.1.14 As part of the proposed redevelopment, it will be necessary to break any potential exposure pathways to future site users. Buildings and associated hard standing would act as a suitable barrier and it is only if areas of soft landscaping are coincident with these areas that mitigation would be required. This can be achieved through the provision of clean soils in these areas, which could be site won.
- 5.1.15 A minimum of 600 mm of clean soil should be provided in private gardens and 300 mm in communal open spaces, but only in the areas impacted by contamination.
- 5.1.16 Asbestos fragments should be picked from the surface of the site and disposed of to a licenced facility. Site won soils with inclusions of glass will not be suitable for reuse in areas of soft landscaping.
- 5.1.17 Ground gas protection measures are not required, but further monitoring will be necessary to confirm this.
- 5.1.18 The soils contaminated by metal identified by this site investigation would be classed as a hazardous waste for disposal.

## 6 LOW CARBON AND CLIMATE CHANGE

- 6.1.1 Climate change is widely regarded as the most pressing challenge for sustainable development. The UK Sustainable Development Strategy, 'Securing the Future' recognises climate change and energy as a priority area for UK's sustainable development. The Government has created a legally binding framework for reducing CO<sub>2</sub> emissions through to 2050 via provisions made within 'the Climate Change Act' (2008). This establishes a specific duty on the Secretary of State to ensure that greenhouse gas emissions are reduced by at least 80% by that date.
- 6.1.2 However, not only is it important to consider how a proposed development can mitigate climate change by reducing greenhouse gas emissions, it is also fundamental to ensure that the development is resilient to potential future changes in climatic conditions.

### Carbon Dioxide Emissions during Construction

- 6.1.3 To comply with the planning policy, during construction, best working practices should be followed and will be set out in the Construction Environment Plan (CEMP) for the proposed development. This would ensure that where possible, construction activities with the potential to generate carbon emissions would be appropriately managed and undertaken to minimise the production of carbon dioxide emissions and ensure the efficient use of fuel could be set out through the following ways:
- Vehicles used in road deliveries of materials, equipment and waste arisings on and off-site would be loaded to full capacity to minimise the number of vehicle journeys associated with the transport of these items;
  - All machinery and plant would be efficiently procured to adhere with emissions standards and would be maintained to be fuel efficient;
  - When not in use vehicles and plant machinery involved in site operations would be switched off to further reduce fuel consumption;
  - All construction staff will be appropriately trained to operate plant and machinery effectively. Plant which is operated efficiently will ultimately burn less fuel and produce less carbon emissions;
  - Where possible, local waste management facilities would be used to dispose of all waste arisings; and
  - To minimize the use of electricity, equipment and machinery requiring electricity will only be switched on when required for use. During construction, procedures would also be implemented to ensure that staff adheres to good energy management practices when in staff areas, through turning off all lights, any computers and heating/air conditioning units when leaving buildings.
- 6.1.4 Consideration will also be given at detailed design to specifying construction materials with a low embodied energy (i.e. low levels of energy used during their manufacture), and to methods of minimising energy use during construction.

## Carbon Dioxide Emissions During Operation

- 6.1.5 Where feasible the development will incorporate holistic low carbon energy solutions to the housing mix, considering natural daylighting, passive solar design and low energy lighting. An energy report has been produced by RPS.
- 6.1.6 In line with the Mayor's Energy Hierarchy 'be lean, be clean, be green' principles, passive design measures will be incorporated into the building envelope to reduce energy demand. To maximise the energy efficiency of the development and thus reduce the energy demands, the following design principles were incorporated:
- Improved building fabric elements and openings over Building Regulations minimum requirements.
  - Reduced air permeability over minimum required standards.
  - Efficient space and water heating services, ventilation and control systems.
  - Energy efficient lighting.



**Figure 5: The three stages of the Energy Hierarchy**

- 6.1.7 To maximise the energy efficiency of the development, and thus reduce the energy demands, the following design principles and features have been incorporated:
- Building fabric elements and glazing specifications significantly improved to the Building Regulation requirements, more specifically the domestic part will align with the Future Homes Standard indicative specifications.
  - Reduced air permeability compared to maximum required standards in line with Future Homes Standard.
  - Energy efficient lighting through the development.
- 6.1.8 The high-level energy analysis undertaken has shown that a 12% saving for the residential units and a 5% saving for the non-residential units can be achieved by the use of energy saving measures and a 'fabric first' approach.

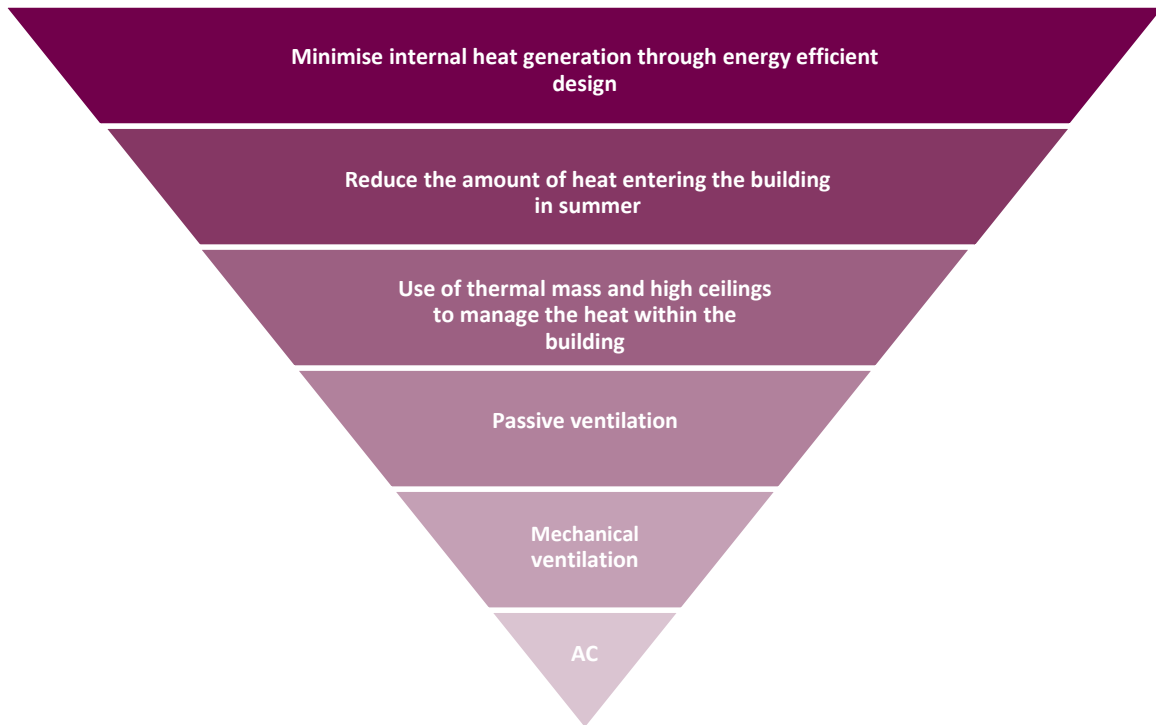


- 6.1.9 The inclusion of a site wide heating system was investigated. Potential options at the site included either connection to an area wide low carbon heat distribution network, a site wide heat network or a Combined Heat and Power (CHP) system. It was considered that the installation of either of these options was not practical.
- 6.1.10 A low or zero carbon (LZC) technology feasibility study was completed as part of this Energy Strategy which compared the feasibility of different technologies based on the energy demand of the developments. Based on this, it was identified that the most appropriate technology to meet the planning requirements of Policy SP10 of the adopted 2016 local plan could be the installation of Photovoltaic Panels (PV) and ambient loop heat pumps. From the high-level energy assessment undertaken for the domestic units, the use of renewables achieves a 58% reduction in CO<sub>2</sub> over regulated emissions compared to the lean measures (be lean) scenario, which equates to overall saving of 70%.
- 6.1.11 The high level energy assessment undertaken for the non-domestic part equates to a 39% reduction in CO<sub>2</sub> over regulated emissions compared to the lean measures (be lean) scenario, which equates to an overall saving of 44%.

### **Thermal Comfort and Climate Change**

- 6.1.12 The detailed design of the buildings will consider the issue of Thermal Comfort and the impact of higher summer temperatures. Appropriate design features will be incorporated to minimise any detrimental effects and reduce the risk of overheating.
- 6.1.13 New development proposals should demonstrate how the design, materials, construction and operation of the development would minimise overheating and also meet its cooling needs. Therefore, all new developments should also be designed to avoid the need for energy intensive air conditioning systems as much as possible, in accordance with the Cooling Hierarchy.





**Figure 6: Cooling Hierarchy**

6.1.14 This will be achieved through the inclusion of the following measures:

- **Passive Design**
  - Locate spaces and uses that need to be unheated (i.e. corridors, stores) or that generate heat (i.e. plant rooms, servers) on the north side of development.
  - Avoid designing small, single aspect south or west facing units.
  - Avoid designing large rooms with small openings.
  - Use low g-value glazing to reduce solar gains.
  - Use carefully designed shading measures, including balconies and external local shade.
  - Allow for high insulation standards, exceeding Building Regulations requirements, for all building fabric elements and openings
  - Reduce heat losses from communal heating pipework.
  - Minimise internal heat gains by using low energy equipment, including energy efficient lighting.
  - Use well insulated hot water systems.
  - Specify High efficiency appliances.
- **Passive ventilation**
  - Design the building and its internal layout to enable passive ventilation, including openable windows.
  - Allow for cross ventilation

- Mechanical ventilation
  - High efficiency Mechanical Ventilation with Heat Recovery (MVHR) will be provided for the whole of the building.
  - Extract fans for the main kitchens and WC.
- Active cooling systems (ensuring they are the lowest carbon options)
  - High efficiency cooling system used (SEER: 5).

### Drainage and Flood Risk

- 6.1.15 A Flood Risk Assessment has been undertaken by IDOM for the proposed development and submitted as part of the planning application. The aim of the report is to outline the potential for the site to be impacted by flooding, the impacts of the proposed development on flooding in the vicinity of the site, and the proposed measures which could be incorporated into the development to mitigate the identified risk.
- 6.1.16 **Overland surface water flows.** EA mapping demonstrates that the developable area is shown to be at-risk from flooding. Consultation with the EA (Appendix 2) has confirmed that they do not hold any records of historic flooding events that have occurred in the site area. Hertfordshire County Council make no reference to a flood investigation report that has been completed on behalf of the site.
- 6.1.17 **Groundwater.** Vulnerability to groundwater is considered within the 'Local Flood Risk Management Strategy 2' but does not make any reference to the site, indicating that the site is not shown to be at-risk of flooding. Within the LFRMS2 there is a map suggesting that the site is only 25% susceptible to groundwater flooding. The Lead Local Flood Authority's consultation response has not highlighted that there is a risk of groundwater flooding to the site.
- 6.1.18 **Infrastructure flooding** (from reservoirs/ponds/canals). There are no man-made water retaining structures within the vicinity of the development site. Environment Agency (EA) flood mapping is provided in Appendix 1. This demonstrates that the site is not shown to be at-risk from flooding. Consultation with the EA has confirmed this to be the case.
- 6.1.19 **Sewer flooding.** Foul and surface water sewers are located within the site. The LFRMS2 was reviewed and does not refer to the site. This demonstrates that there have been no reported incidents of flooding from sewers in the area, therefore the risk is to be considered as 'Low' and mitigation is considered to not be required.
- 6.1.20 **EA flood mapping.** The site is shown as being in Flood Zone 1, 2 and 3. However the construction area lies wholly within flood zone 1 and is therefore in the lowest possible risk category. Consultation with the EA has confirmed this to be the case.
- 6.1.21 **Local Flood Risk Management Strategy 2.** Hertfordshire County Council don't have any flood investigation reports that are specifically referring to the development site being at risk of flooding.
- 6.1.22 **Historic records.** The EA have confirmed that they have no records of any historical flooding for this site.

6.1.23 The risk posed by the proposed development. Without mitigation the introduction of impermeable areas for example roofs, drives and roads will increase the flood risk both within the site and to surrounding areas.

## 7 SUSTAINABLE TRANSPORT

- 7.1.1 In order to integrate sustainable travel within the proposed development, the NPPF encourages local authorities to support “*a pattern of development which, where reasonable to do so, facilitates the use of sustainable modes of transport*” and “*gives priority to pedestrian and cycle movements with access to high quality public transport facilities*”. The framework recognises that transport policies have an important role to play in facilitating wider sustainability and health objectives.

### Encouraging Sustainable Transport Services

- 7.1.2 A Transport Statement has been undertaken for the development by RPS and submitted as part of this outline planning application.
- 7.1.3 The Site is accessed via the existing vehicular access along Firs Wood Close which is accessed via a priority junction with Coopers Lane Road.
- 7.1.4 The Site is not currently readily accessible by sustainable modes of travel, with no footway along Coopers Lane Road providing access from Potters Bar to Firs Wood Close and on to the Site.
- 7.1.5 Existing PRoW provide some access for pedestrians and cyclists towards Potters Bar to the west and Northaw to the north; however, these would not be attractive for all users and there is a gap of circa 220 metres between the western end of Bridleway Northaw 017 towards Potters Bar and the existing footway provision along the southern side of Coppers Lane Road.
- 7.1.6 There is no public transport readily accessible from the Site, with buses and trains accessible within Potters Bar to the west of the Site.
- 7.1.7 Vehicular access to the Site will be achieved through extending Firs Wood Close at its northern end into the Site, with access to the local highway network via the Firs Wood Close / Coopers Lane Road junction.
- 7.1.8 20 car parking spaces will be relocated for Firs Wood Close residents to be able to use, to accommodate the extension.
- 7.1.9 It has been demonstrated that the existing junction visibility splays at the Firs Wood Close / Coopers Lane Road junction are appropriate based on the extent of the adopted highway and existing vehicular speeds on Coopers Lane Road.
- 7.1.10 Key sustainable transport measures that will be delivered with the development are:
- 7.1.11 the implementation of a Travel Plan, aimed at minimising single occupancy vehicular trips.
- 7.1.12 the introduction of a bespoke village electric village transport service for both residents and staff, enabling staff to travel by non-car modes and providing residents with flexibility to access local facilities and services if desired without the need to drive or own a car. The electric village transport service to be paid for through the resident’s service charges, which ensures its provision.
- 7.1.13 reducing the need to travel through the provision of ancillary on-site communal uses and the coordinating of grocery deliveries.

- 7.1.14 provision of circa 220 metres of new footway, subject to agreement with HCC Highways, to connect bridleway Northaw 017 to the existing southern Coopers Lane Road footway, to provide a complete pedestrian link into Northaw. This will be a betterment for existing Firs Wood Close / Hook Lane residents, who chose to make this journey.
- 7.1.15 provision of electric golf buggies on-site to help residents move around the Site.
- 7.1.16 provision of onsite cycle parking for residents and staff, with the resident bays sufficiently sized to accommodate adapted bicycles or mobility scooters.
- 7.1.17 Access to the Site will be provided through the extension of Firs Wood Close to the north, which in turn connects to the adopted highway at Coopers Lane Road.
- 7.1.18 It has been demonstrated that the Firs Wood Close / Coopers Lane Road priority junction is appropriate and forms a safe and suitable form access for the proposed development, in NPPF terms.

## 8 USE OF NATURAL RESOURCES AND MINIMISING WASTE

8.1.1 Activities undertaken onsite from the concept stage through to final completion can have an impact on the use of natural resources and production of waste associated with the development. This section highlights how the development will attempt to reduce the use of natural resources through material procurement, potential re-use or recycling of materials, water use and waste minimisation.

### Materials Use

8.1.2 The materials specification will detail, where possible, materials that are A or A+ rated under BRE's Green Guide, in order to select resources with lower environmental impacts throughout their lifecycle. In addition, all timber for the site will be responsibly sourced and selected from Forest Stewardship Council (FSC) sources.

8.1.3 Materials used within the building fabric have a high impact on the energy performance of the development. Therefore, materials will be selected with good thermal performance properties. All materials used on site will aim to have low conductivity values in order to achieve high insulation standards for all building elements. In addition, emphasis will be given to thermal mass of all materials used in order to achieve high thermal comfort levels.

8.1.4 All insulation materials used as part of the project will have a low Ozone Depletion Potential (ODP) as well as a low Global Warming Potential (GWP).

8.1.5 The building will be constructed with light grey to white precast concrete panelling system. In addition, the material selected will consider any adverse effects that they may have on the environment in either the manufacture or the construction process.

### Water Use

8.1.6 The construction phase of the development has the potential to use a large amount of water. Whilst much of the water is essential for building activities, and cannot be reduced, water would be monitored to ensure that it is not wasted unnecessarily. A Construction Environmental Management Plan (CEMP) will be produced by the contractor and will include proposals for monitoring water use during construction and include procedures for ensuring that leakages are minimised across the construction site.

8.1.7 The design of the site would aim to reduce potable water used within the development, ensuring compliance with Building Regulations, through the specification of water efficient sanitary fittings such as low flush WC's and flow restrictors where it is feasible to do so. These will include:

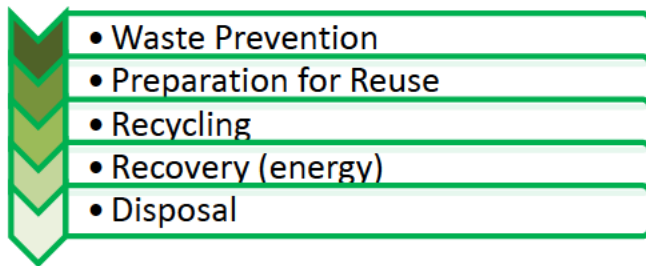
- WCs: 4 (partial) by 6 (full flush volume)
- Wash hand basin taps: 5 l/min
- Kitchen taps: 5 l/min
- Showers: 11 l/min

- Baths: 200 litres capacity to overflow
- Dishwashers: 1.25 l/place setting
- Washing machine: 8.17 litres / kg

8.1.8 During the operational phase of the proposed development, water use would be monitored.

### Minimising Waste

8.1.9 All products and services have environmental impacts, from the extraction of raw materials for production to manufacture, distribution, use and disposal. Following the Waste Hierarchy will lead to the most resource-efficient and environmentally sound choice on waste management.



**Figure 7: Waste Hierarchy (most favourable option on top)**

8.1.10 During the construction phase of the development low levels of waste production will be targeted. A Site Waste Management Plan (SWMP) will be developed and implemented during the construction phase in order to meet local authority waste requirements. The SWMP will contain a benchmark for resource efficiency, i.e. less than 6.5 tonnes of construction waste per 100m<sup>2</sup> of gross internal floor area. The SWMP will detail how methods / practices on site will be in accordance with the Waste Hierarchy, which indicates an order of preference for actions to reduce and manage waste.

8.1.11 The amount of non-hazardous waste generated on site by the proposed development would be minimised in line with best practice levels. Waste would be appropriately disposed of within the correct landfill facility. The SWMP would additionally outline the procedures to follow for the appropriate removal and disposal of any hazardous waste. A target for the diversion of construction waste from landfill will also be set.

8.1.12 Where possible on site, the recycling and re-use of the existing building and construction materials will be considered in order to minimise construction and demolition waste associated with the proposed development.

8.1.13 In addition, consideration will be given to the operational waste of the site, hence waste facilities will be provided, in line with the guidance and advice set out in the Council's SPD on Refuse and Recycling Storage Requirements. The site will be designed to provide appropriate waste and recycling segregation storage facilities in a designated area.

## 9 MANAGEMENT

9.1.1 Early stakeholder engagement ensures that key project stakeholders are identified and engaged to determine end user requirements and operational adaptability, allowing them to be taken into account throughout the project. Adopting integrated design and engagement processes has been demonstrated to result in improved operational performance, greater project efficiencies, and reduced risks to performance, time and cost. Following an integrated design process, maximises the opportunities for performance and minimises risks of design conflicts appearing later in a project when risks to time and cost are higher.

### Sustainability Champion

9.1.2 For Northaw development, a commitment to delivering a development that incorporates sustainability aspects is demonstrated through the appointment of sustainability consultants, RPS, early with the design stage process. Their remit is to provide sustainability advice on a holistic scale for the development, through best practice and where feasible, by setting exemplary standards.

9.1.3 RPS operated as BREEAM Accredited Professionals (AP) offering 'scheme-related' expertise to design teams, specifiers, constructors and other key stakeholders. This will inform decision-making and therefore identify opportunities to maximise performance and work towards a targeted rating in the most cost-effective, timely and solutions-orientated way. RPS has been appointed to oversee and develop the BREEAM assessment.

### Responsible Construction Management

9.1.4 Through effective management of the construction activities, any short-term disruption to the existing community, including local residents would be minimised. The lead contractor for the construction of the scheme would subscribe to the Considerate Constructors Scheme (CCS) and aim to achieve a minimum score of 35 under CCS.

9.1.5 The lead contractor will also introduce measures for reducing the social and environmental impact of their activities. Measure could include:

- Construction operations would be restricted to core working hours of the industry to minimise the potential disturbance impacts upon the public through associated noise, vibration and dust emissions and increased traffic;
- Best practice measures to protect the water quality and all natural water sources on and close to the site. Monitoring of water quality would also be undertaken;
- Appropriate storage of construction materials and chemicals alongside a spillage response plan to minimise potential pollution incidents;
- Deliveries of construction materials and equipment would access the site along routes as agreed with the Local Highway's Agency to minimise disruption upon road users; and
- Traffic management measures would be implemented by the contractor to ensure traffic is appropriately managed during construction and that where possible potential impacts on other users of the local highway network and the local community are minimised.



### General Resource Management

- 9.1.6 The development will seek to provide water and energy metering (during both construction and operation) to enable the appropriate level of monitoring and management of these resources. During the construction phase, this will be achieved through the setting of projected targets, reporting and reviewing of results.
- 9.1.7 The development will seek to encourage building users to develop a water and energy management system to minimise the use of these resources (throughout building occupation) and to improve general environmental management. As part of this, a Home User Guide will be produced covering topics such as:
- Building Services Information.
  - Emergency Information.
  - Energy and Environmental Strategy.
  - Water Use.
  - Transport Facilities.
  - Materials and Waste Policy.
  - Reporting Provision.
  - Training.
  - Links and References.

## 10 CONCLUSIONS

- 10.1.1 Sustainability is a broad concept, covering a wide range of environmental, social and economic considerations (known as the three pillars of sustainable development or the triple bottom line). Sustainable design and construction principles have been considered for this scheme from its conception and many of the issues referenced within this report have been considered separately and in greater depth, within further technical reports.
- 10.1.2 This Sustainability Statement has been prepared to describe the key sustainability principles incorporated in the design and those principles that will be undertaken during construction. Consideration has been given to the three pillars of sustainable development, relevant national and local planning policies demonstrating how the proposals contribute to the delivery of sustainable development.
- 10.1.3 As set out in this report, the proposed development has been designed to take account of a number of fundamental design concepts to create a sustainable development. This report demonstrates that the principles of good sustainable design have been incorporated in the development and good sustainable practices would be followed during the construction phase. These include among others:
- A commitment that the main contractor on site will sign up to the Considerate Constructor's scheme (or equivalent) and that the score achieved will be recognised as being above best practice (35 or above);
  - The maximisation of daylight to reduce the demand on artificial lighting and create a healthy internal environment for the occupants;
  - The development will be accessible to a range of services and facilities by transport modes other than the car.
  - Community transport, through the implementation of Travel Plans where appropriate (for example including measures that will promote car pools, car sharing and voluntary community buses, community services and cycle schemes).
  - Maintenance / enhancement of the site's ecological value through retention of existing features of ecological value and planting scheme designed to enhance the number of species on site;
  - The sourcing of the major building elements and materials from responsible local sources where practical;
  - Specification of materials rated as A or above under the Green Guide and use of responsibly sourced timber;
  - Minimisation of construction waste stream quantities and targets for diversion of non-hazardous construction waste from landfill;
  - Implementation of a Site Waste Management Plan on site;
  - Minimisation of the generation of construction waste and of the waste that is generated, ensuring a high percentage is diverted from landfill;

- Reduction of water use on site through the specification of water saving sanitary items;
- Effective surface water management;
- Reduction of CO<sub>2</sub> emissions, through the incorporation of high insulation standards, very efficient building services and LZC technologies.
- Incorporation of energy efficient internal and external lighting.

10.1.4 It can therefore be concluded that the proposed sustainability measures meet the Hertfordshire County Council planning policy requirements at national, regional and local levels. These have been considered at an early stage of the development process, which will enhance the effectiveness of the measures proposed.

10.1.5 The sustainability principles detailed within this statement cover aspects from design to construction and operation of the site and ensure that best practice procedures have been incorporated.