



JANUARY 2026

Sustainability Statement

GA2, Land north of Great Ashby

Iceni Projects Limited on behalf of
Picture Estates Limited

January 2026

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ON BEHALF OF PICTURE
ESTATES LIMITED

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Sustainability Statement
GA2, LAND NORTH OF GREAT ASHBY

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1. INTRODUCTION

- 1.1 Icen Projects Ltd has been commissioned by Picture Estates Limited to produce a Sustainability Statement to accompany the planning application for the proposed development of the land at GA2, Land north of Great Ashby.

Report Objective

- 1.2 This document details the sustainable design and construction measures adopted by the proposed development and gives an overview of the design proposals that will ensure the development operates in a sustainable manner over the lifespan of the scheme. The Sustainability Statement report headlines will provide a framework for the project team to operate consistently within sustainability guidelines set out by North Hertfordshire District Council.
- 1.3 The report is structured to meet these guidelines as follows:
- Section 2 discusses the planning context and policies which are relevant to sustainability;
 - Section 3 discusses the development response to the policy drivers for sustainability; and
 - Section 4 summarises the development's design response.

Site and Surroundings

- 1.4 The application site (Appendix A1) is located in Great Ashby, to the north east of Stevenage, approximately 4.75km to the north east of Stevenage train station. To the north, the site is bound by areas of woodland and arable land, with Tile Kiln Farm located immediately adjacent to a section of the northern boundary of the site. Woodland and arable land also form the eastern boundary of the site, with an area of ancient woodland abutting the western boundary, and further arable land present beyond this. The parish of Great Asby forms the southern boundary of the site, with areas of ancient woodland and a local wildlife site located in proximity to the southeastern corner.
- 1.5 The application site itself currently comprises arable fields and areas of woodland. The arable fields within the site are demarcated by hedgerows, woodlands, and copses, and a number of footpaths and bridleways run through and adjacent to site. Arable farmland comprising woodland and hedgerows are found adjacent to the site to the north and the east. The surrounding area is predominantly rural in nature to the north, east and west, whilst the area to the south is dominated by low density dwellings associated with the parish of Great Ashby. The approximate location and boundaries of the site are shown in Figure 1.1 below.

Figure 1.1 The site

 Approximate site boundary



The Proposed Development

- 1.6 The description of development is as follows:

“Hybrid application for a residential-led development comprising residential (Use Class C3), educational use (Use Class F1), a community hub (Use Class F2) with associated new internal roads, access, parking, cycling infrastructure, landscaping and other associated infrastructure.

Full application comprises the construction of vehicle access and an active travel link via Mendip Way, with associated landscaping and drainage works.

The outline application, for which all matters are reserved except for means of access, comprises the erection of up to 640 dwellings (Use Class C3), a site for a primary school, further land reserved for educational use (Use Class F1), a site for a community hub (Use Class F2), with associated infrastructure.”

- 1.7 The image below shows the illustrative masterplan, whilst a site location plan is provided in Appendix A1.

Emergency vehicles, cycles and pedestrians only

The Bungalows

Habitat creation area/BING

Reserved land for educational uses

Proposed Allotments

Primary School Site

Community Hall

Existing public right of way retained along Site boundary

Central Open Space (amenity grass)

Central Open Space (semi-natural character)

Dane End Farm

Remainder of field retained in arable use

New Drainage Basin

Claypit Hills Spring

Brooches Wood

Central Open Space (parkland character)

Pedestrian and cycle link

Cleveland Way

Great Ashby Neighbourhood Centre

Round Diamond Primary School

St Nicholas Park

Great Ashby Way

Watercourse Lane

Grampton Place

Cromwell Way

Merrick Close

Mendip Way

Replacement Play Area

Active travel route: 3m wide cycleway and 2m wide footway

New Spring

Longdell Wood

Tile Kiln Wood

Parsons Green Wood

Tile Kiln Farm

Pedestrian link

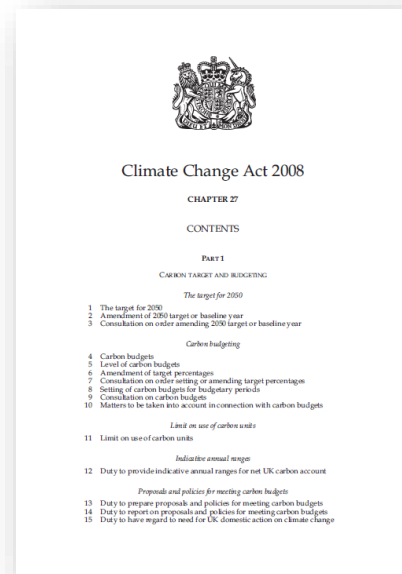
2. PLANNING AND REGULATORY CONTEXT

- 2.1 Built environment sustainability is incorporated within policy and regulation at a national and local level, as set out below.

National

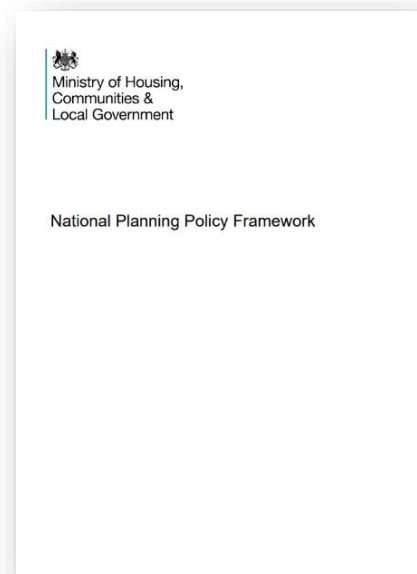
Climate Change Act 2008

- 2.2 On 26th November 2008, the UK Government published the Climate Change Act 2008; the world's first long-term legally binding framework to mitigate against climate change. Within this framework, the Act sets legally binding targets to increase greenhouse gas emission reductions through action in the UK and abroad from the 60% target set out in the Energy White Paper, to 80% by 2050.
- 2.3 As required under Section 34 of the Climate Change Act, the Sixth Annual Carbon Budget was accepted by the Government in April 2021. This sets out a budget for UK emissions for the period 2033 – 2037.
- 2.4 Following a commitment in June 2019, the Climate Change Act has been amended to target net zero carbon emissions by 2050.



National Planning Policy Framework

- 2.5 The Ministry of Housing, Communities & Local Government determines national policies on different aspects of planning and the rules that govern the operation of the system. Accordingly, the National Planning Policy Framework (NPPF), which came into force in March 2012 and was updated in February 2019, aims to strengthen local decision making. Additional updates have since been made through the latter half of 2020 and in January and July 2021 to reflect changes related to use classes, permitted development rights, the calculation of housing need, and requirements to achieve beauty alongside sustainability. Further updates were made in September and December 2023 with respect to onshore wind



development, and beauty, design, infrastructure, neighbourhood and the environment, respectively. In December 2024, the NPPF was revised in response to reforms to the Framework, and consultations on other changes to the planning system.

- 2.6 Paragraphs 10 and 11 of the NPPF confirm that at the heart of this document is a “*presumption in favour of sustainable development*”, and that development proposals that accord with an up-to-date development plan should be approved without delay.
- 2.7 Paragraph 7 states that the purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs.
- 2.8 Achieving sustainable development means that the planning system has three overarching activities, which are interdependent and need to be pursued in mutually supportive ways, so that opportunities can be taken to secure net gains across each of the different objectives:
- **An Economic Role** – ensuring the provision of land and infrastructure needed to help build a strong, responsive and competitive economy.
 - **A Social Role** – supplying the required amount of housing while at the same time ensuring and building strong, vibrant and healthy communities. Ensuring that the built environment is sited around accessible local services which help support a community’s health, social and cultural well-being.
 - **An Environmental Role** – ensuring development contributes to the protection and enhancement of the natural, built and historic environment through the improvement of biodiversity, minimising the use of natural resources and production of pollution / waste, and guaranteeing sufficient adaptation to climate change.

Regional

- 2.9 Within Hertfordshire County Council, key sustainable development principles for economic, environmental and social improvement are set out below:

Sustainable Hertfordshire Strategy (2022; Revised 2023)

- 2.10 Following the declaration of a Climate Emergency in July 2019, Hertfordshire County Council committed to develop a Sustainable Hertfordshire Strategy to set out policies and strategies enabling the embedding of sustainability across all Council operations and services throughout the county.



- 2.11 The Strategy focuses on the environmental aspirations of sustainability, and has been developed based upon three levels of influence:

- Lead in Council operations – e.g. how the Council work, how the Council provides services, and how the Council manages its buildings.
- Enable a sustainable County with the Council's programmes, policies and decisions – e.g. through planning policies and how waste is disposed of within the County.
- Inspire businesses and residents to take action – e.g. helping residents to lead a sustainable life, and support businesses to grow by partnering with other leading organisations to take action together.

- 2.12 The Strategy sets out policies and objectives to achieve the following ambitions for the County:

- Carbon neutral for all Council operations by 2030.
- All Council operations and services ready for future climates.
- Improve biodiversity on Council land by 20% by 2030.
- Divert all waste from landfill by 2030.
- Become a net zero greenhouse gas County before 2050.
- Ensure the County's communities are ready for future climates.
- Improve wildlife in the County's land and water by 20% by 2050.
- Provide clean air for all by 2030.
- Increase resource efficiency threefold in the County by 2050.

Local

- 2.13 In determining the local context, the North Hertfordshire Local Plan 2011 – 2031 (November 2022) sets out policy relevant to sustainability.

North Hertfordshire Local Plan 2011 – 2031 (November 2022)

- 2.14 The Local Plan seeks to address the key issues facing North Hertfordshire and will set a strategic vision and spatial strategy for the District over the period 2011 to 2031. Policies of relevance to this project in the context of sustainability are as follows:

- **Policy SP1: Sustainable development in North Hertfordshire** states that this Plan supports the principles of sustainable development within North Hertfordshire. We will:
 - Maintain the role of key settlements within and adjoining the District as the main focus for housing, employment and new development making use of previously developed land where possible;
 - Ensure the long-term vitality of the District's villages by supporting growth which provides opportunities for existing and new residents and sustains key facilities;
 - Grant planning permission for proposals that, individually or cumulatively:
 - i. deliver an appropriate mix of homes, jobs and facilities that contribute towards the targets and aspirations in this Plan;
 - ii. create high-quality developments that respect and improve their surroundings and provide opportunities for healthy lifestyle choices;
 - iii. provide the necessary infrastructure required to support an increasing population;
 - iv. protect key elements of North Hertfordshire's environment including biodiversity, important landscapes, heritage assets and green infrastructure (including the water environment);
 - v. secure any necessary mitigation measures that reduce the impact of development, including on climate change; and



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- vi. Support neighbourhood plans and other local planning initiatives where they are in general conformity with the strategic policies of this Local Plan.
- **Policy SP6: Sustainable transport** states that we will deliver accessibility improvements and promote the use of sustainable transport modes insofar as reasonable and practicable. We will:
 - a) Comply with the NHDC Transport Strategy and the provisions of the Local Transport Plan and other supporting documents as relevant;
 - b) Encourage development in locations which enable sustainable journeys to be made to key services and facilities;
 - c) Work with Hertfordshire County Council, neighbouring authorities, Highways England and service providers to ensure that a range of sustainable transport options are available to all potential occupants or users. This may involve new or improved pedestrian, cycle and passenger transport (including rail and/or bus) links and routes;
 - d) Seek the earliest reasonable opportunity to implement sustainable travel infrastructure on Strategic Housing Sites and other development sites in order to influence the behaviour of occupiers or users, along with supporting Travel Plans in order that sustainable travel patterns become embedded at an early stage;
 - e) Assess development proposals against the parking standards set out in this Plan and having regard to relevant supplementary advice;
 - f) Require applicants to provide assessments, plans and supporting documents to demonstrate the safety and sustainability of their proposals; and
 - g) Protect existing rights of way, cycling and equestrian routes and, should diversion be unavoidable, require replacement routes to the satisfaction of the Council.
 - **Policy SP9: Design and Sustainability** states that the Council considers good design to be a key aspect of sustainable development. We will:
 - a) Support new development where it is well designed and located and responds positively to its local context;
 - b) Require Strategic Masterplans to be produced for Strategic Housing Sites and other significant development. Significant development generally comprises residential development of 100 dwellings or more. Exceptionally, developments under 100 dwellings will be considered significant if there are site specific complexities and sensitivities that require a masterplan-led approach. In some circumstances a Strategic Masterplan may also be required to consider the cumulative impact of more than one site to support a co-ordinated and integrated approach to place-making and design.

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- c) Require Strategic Masterplans and planning applications for Strategic Housing Sites and significant development to (as applicable):
- i. create buildings, spaces and streets which positively reflect and respond to the local landscape, townscape and historic character
 - ii. create integrated, accessible and sustainable transport systems with walking, cycling and public transport designed to be the most attractive forms of transport and effectively linking into the surrounding areas;
 - iii. provide a clear structure and hierarchy of pedestrian friendly streets and well-connected footpaths and cycleways integrate with the wider built and natural environment and communities;
 - iv. plan for integrated and mixed-use communities with walkable locally accessible community, employment and retail facilities;
 - v. positively integrate with adjacent rural and urban communities and positively contribute to their character and the way the area functions, including addressing cumulative, cross boundary planning and infrastructure matters;
 - vi. create and accessible multi-functional green infrastructure network that provides:
 - a key structuring and functional place-making feature supporting healthy lifestyles, sport, play and recreation linking into the wider Green Infrastructure Network; and
 - a high-quality integrated network to support ecological connectivity, biodiversity net gain, climate adaptation and mitigation linking into the wider Ecological Network.
 - vii. ensure the effective use of sustainable urban drainage and sustainable water management;
 - viii. ensure a hierarchy of linked, high quality and attractive public spaces and public realm that is safe, attractive and supports social interaction for all age groups; and
 - ix. design to last with a clear stewardship, management and maintenance strategy.
- d) Ensure Strategic Masterplans are informed by a technical and design evidence base and include the following for Strategic Housing Sites and where applicable for other significant development:
- i. Site specific vision and place-making principles;

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- ii. Masterplan setting out the quantum, scale, type, mix and distribution of land uses, housing and community facilities;
 - iii. Green Infrastructure Framework identifying the scale, distribution, type and design of green spaces, biodiversity net gain, strategic drainage and on and off-site linkages;
 - iv. Movement Framework setting out the key access points, strategic highways, street hierarchy and footways and cycleways (on and off site);
 - v. Urban Design Framework and design principles identifying how the site responds to local character and context and key structuring elements and layout principles (including heights and densities);
 - vi. Sustainability & Energy Framework identifying site-wide and building scale opportunities for low and zero carbon;
 - vii. Illustrative Masterplan Layout; and
 - viii. Infrastructure Delivery, Phasing & Management Strategy.
- e) Encourage the submission of Strategic Masterplans for the Council's consideration and agreement before the submission of a planning application. We will also confirm the scope and contents of individual Strategic Masterplans with applicants in pre-application discussions. Planning applications must be accompanied by a Strategic Masterplan. Where applications have already been submitted to the Council a Strategic Masterplan should be agreed with the Council prior to or as part of the grant of planning permission. Adherence to the Strategic Masterplan will be secured through planning conditions and/or legal agreement.
- f) Assess proposals against detailed policy requirements set out in this Plan and have regard to the Design SPD; and
- g) Adopt the Government's additional technical standards for the size of new homes, water efficiency and, in specified circumstances, accessibility.
- **Policy SP11: Natural resources and sustainability** states that this Plan seeks to meet the challenges of climate change and flooding. We will:
 - a) Support proposals for renewable and low carbon energy development in appropriate locations;

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- b) Take a risk based approach to development and flood risk, directing development to areas at lowest risk in accordance with the NPPF and ensuring the provision of Sustainable Drainage Systems (SuDS) and other appropriate measures;
 - c) Support the principles of the Water Environment (Water Framework Directive) Regulations 2017 and seek to protect, enhance and manage the water environment;
 - d) Give consideration to the potential or actual impact of land contamination and support proposals that involve the remediation of contaminated land; and
 - e) Work with utilities providers, East Hertfordshire District Council and relevant agencies to ensure additional wastewater treatment capacity is delivered without harm to protected European sites.
- **Policy SP12: Green infrastructure, landscape and biodiversity** states that we will accommodate significant growth during the plan period whilst ensuring the natural environment is protected and enhanced. We will:
 - a) Protect, identify, manage and where possible enhance a strategic multi-functional network of green infrastructure;
 - b) Consider and respect landscape character, scenic beauty and locally sensitive features, particularly in relation to the Chilterns Area of Outstanding Natural Beauty;
 - c) Protect, enhance and manage designated sites in accordance with the following hierarchy of designations and features:
 - i. Internationally designated sites;
 - ii. Nationally designated sites;
 - iii. Locally designated sites; and
 - iv. Non-designated sites that include important habitats and species.
 - d) Protect, enhance and manage biodiversity networks including wildlife corridors, ancient woodlands and hedgerows, wetland and riverine habitats, Local Geological Sites, protected species, priority species and habitats, and non-designated sites of ecological value and ensure measurable net gains for biodiversity; and
 - e) Protect other open spaces and support provision of new and improved open space.
 - **Policy D1: Sustainable design** states that planning permission will be granted provided that development proposals:
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- a) Respond positively to the site's local context;
 - b) Take all reasonable opportunities, consistent with the nature and scale of the scheme, to:
 - i. create or enhance public realm;
 - ii. optimise the potential of the site by incorporating Sustainable Drainage Systems (SuDS);
 - iii. reduce energy consumption and waste;
 - iv. retain existing vegetation and propose appropriate new planting;
 - v. maximise accessibility, legibility and physical and social connectivity both internally and with neighbouring areas;
 - vi. future proof for changes in technology and lifestyle;
 - vii. design-out opportunities for crime and anti-social behaviour; and
 - viii. minimise the visual impact of street furniture and parking provision.
 - c) Have regard to the Design SPD, and any other relevant guidance.
- **Policy D4: Air Quality** states that planning permission will be granted provided that development: proposals
 - a) Give consideration to the potential or actual impact on local air quality, both during the demolition/ construction phase and as a result of its final occupation and use;
 - b) Propose appropriate levels of mitigation to minimise emissions to the atmosphere and their potential effects upon health and the local environment; and
 - c) Carry out air pollution impact assessments, where required, to determine the impact on local air quality of the development.

Where an air quality impact assessment demonstrates that a development is unacceptable from a local air quality perspective the development will be refused.

Where air pollution impact assessments are not required there will still be a requirement on developers to provide appropriate levels of mitigation to address emissions of pollutants to the atmosphere.

- **Policy NE1: Strategic green infrastructure** states that planning permission will be granted provided that development:

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- a) Protects, conserves and where possible enhances the strategic green infrastructure network;
 - b) Avoids the loss, fragmentation, severance or negative impact on the function of the strategic green infrastructure network;
 - c) Creates new strategic green infrastructure where appropriate and is accompanied by a plan for its long-term maintenance and management; and
 - d) Has suitable mitigation measures or appropriate replacement to satisfactorily address adverse impacts on the strategic green infrastructure network.
- **Policy NE4: Biodiversity and geological sites** states that planning permission will only be granted for development proposals that appropriately protect, enhance and manage biodiversity in accordance with the hierarchy and status of designations and features listed in Policy SP12.
 - a) All development should deliver measurable net gains for biodiversity and geodiversity, contribute to ecological networks and the water environment, and/or restore degraded or isolated habitats where possible. Applicants should, having regard to the status of any affected site(s) or feature(s):
 - b) Submit an ecological survey that is commensurate to the scale and location of the development and the likely impact on biodiversity, the legal protection or other status of the site;
 - c) Demonstrate that adverse effects can be avoided and / or satisfactorily minimised having regard to the hierarchy of protection below:
 - i. locating on an alternative site with a less harmful impact;
 - ii. providing adequate mitigation measures; or
 - iii. as a last resort compensated for.

The acceptability of approach(es) to avoidance, mitigation and compensation will be commensurate with the status of the asset(s) likely to be affected by the application; Compensation is unlikely to be an appropriate solution for proposals affecting nationally or internationally designated sites other than in the most exceptional circumstances.

- d) Include appropriate measures to manage construction impacts by demonstrating how existing wildlife habitats supporting protected or priority species will be retained, safeguarded and managed during construction;
- e) Integrate appropriate buffers of complimentary habitat for designated sites and other connective features, wildlife habitats, priority habitats and species into the ecological

mitigation and design. The appropriateness of any buffers will be considered having regard to the status of the relevant habitat. 12 metres of complimentary habitat should be provided around wildlife sites (locally designated sites and above), trees and hedgerows. It may be necessary to exceed this distance for fragile habitats such as ancient woodland or to provide appropriate root protection for mature trees; and

- f) Provide a long-term management and monitoring plan including mitigation measures as necessary.

Local Geological Sites are ratified by the Herts & Middlesex Wildlife Trust (HMWT) and are afforded the same protection as Local Wildlife Sites.

- **Policy NE7: Reducing flood risk** states that planning permission for development proposals will be granted provided that (as applicable):
 - a) Development is located outside of medium and high-risk flood areas (flood zone 2 and 3) and other areas affected by other sources of flooding where possible;
 - b) Where (a) is not possible, application of the sequential and exception tests is demonstrated where development is proposed in areas of flood risk using the Strategic Flood Risk Assessment (SFRA) and Environment Agency flood maps;
 - c) A FRA has been prepared in accordance with national guidance that considers the lifetime of the development, climate change impacts and safe access and egress;
 - d) It will be located, designed and laid out to ensure the risk of flooding is reduced whilst not increasing flood risk elsewhere;
 - e) The impact of any residual flood risk will be minimised through flood resistant, resilient design and construction;
 - f) Any flood protection and mitigation measures necessary will not cause harm to nature conservation, heritage assets, and/ or landscape and recreation and, where possible, will have a positive impact in these respects; and
 - g) Overland flow routes and functional floodplain areas are protected from all development other than that which is “water compatible” and this must be designed and constructed to remain operational and safe for users during flood events, resulting in no net loss of flood plain storage and not impeding water flows or increasing flood risk elsewhere.
- **Policy NE8: Sustainable drainage systems** states that planning permission for development will be granted provided that:

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- a) The most appropriate sustainable drainage solution is used taking into account technical, viability and design issues to reduce the risk of surface water flooding, enhance biodiversity, water quality and provide amenity benefits;
 - b) It aims to mimic the natural drainage patterns and processes as far as possible; and
 - c) Drainage solutions follow the SuDS hierarchy.
- **Policy NE9: Water quality and environment** states that planning permission for development proposals will be granted provided that they make appropriate space for water, including (as applicable):
 - a) Maintaining a minimum 8 metre wide undeveloped buffer zone from all designated main rivers;
 - b) Maintaining a minimum 5m wide undeveloped buffer zone for ordinary watercourses; and
 - c) River restoration and resilience improvements where proposals are situated close to a river or considered to affect nearby watercourses.
 - **Policy NE10: Water conservation and wastewater infrastructure** states that planning permission for new development will be granted provided that;
 - a) It does not result in the deterioration of any watercourse in accordance with the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (WFD);
 - b) It helps contribute towards the Water Framework Directive (WFD) actions and objectives;
 - c) It helps achieve the objectives set out in the Anglian and Thames River Basin Management Plans;
 - d) Mechanisms for delivering any necessary new or improved water and/ or wastewater infrastructure are secured under the requirements of Policy SP7; and
 - e) Adequate foul water treatment and disposal already exists or can be provided in time to serve the development.

New development around Stevenage within the Rye Meads Sewage Treatment Works Catchment will need to demonstrate that additional potable water supply and consequential wastewater treatment capacity can be achieved and implemented ahead of development without significant environmental impact, including adverse effects on designated sites.

North Herts Sustainability Supplementary Planning Document (September 2024)

2.15 The North Herts Sustainability Supplementary Planning Document (SPD) sets out the standards required to meet the visions, objectives and policies of the North Herts Local Plan as sustainably as possible. The SPD sets out the Council's sustainability expectations when applying the Local Plan policies. Specifically, the SPD identifies:



- The main sustainable construction requirements under both 'mitigation' to climate change (i.e. ways of reducing greenhouse gas emissions – mainly CO₂) and adaptation to predicted climate change;
 - The design and energy-saving/efficiency measures that can result in a development minimising greenhouse gas emissions and energy use and waste. It aims to create places that are amenable to biodiversity and adaptable to a changing climate (including through the integration of green infrastructure);
 - Guidance on renewable and low-carbon energy solutions, for reduced reliance on fossil fuels and finite energy sources, and for efficient use of national grid energy;
 - Potential solutions to water shortages and efficiencies requirements;
 - The materials and methods used in construction; and
 - Clear guidance for anyone applying for planning permission, or wishing to comment upon a planning application, as well as providing a consistent approach to assessing planning applications.
- 2.16 Three standards – bronze, silver and gold – are set out within the SPD to assist in the application of a holistic approach to sustainability. Measures are set out within checklists to across the following eight themes:
- Optimising passive design & fabric performance;
 - Achieving low carbon energy;
 - Minimising carbon footprint;
 - Healthy placemaking;
 - Promoting biodiversity;
 - Sustainable travel;

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- Conserving water; and
 - Incorporating sustainable drainage.

North Herts Council Climate Change Strategy: 2022 – 2027

- 2.17 The North Herts Council Climate Change Strategy: 2022 – 2027 sets out the Council's plans and commitments relating to the mitigation of and adaptation to climate change. The Strategy sets out what the Council will do to first reduce its own carbon emissions to a carbon neutral position by 2030, and then to help achieve a net zero carbon District by 2040. This is to be achieved through the setting out of policies to enable a reduction in carbon emissions, whilst also encouraging residents and businesses to reduce their own emissions.
- 2.18 Three key areas of focus are set out, which are considered to offer the greatest scope to influence emissions:
- Reducing emissions from the District Council's estate and operations.
 - Reducing the need to travel and improving use of sustainable transport in operations.
 - Reduction consumption of resources, increasing recycling and reducing waste.

Other Considerations

Declaration of a Climate Emergency (December 2018)

- 2.19 On the 21st May 2019, North Hertfordshire District Council declared a climate emergency, and set a target to attain zero carbon emissions by 2030. In doing so, the Council agreed to:
- 1) Join other councils in declaring a Climate Emergency;
 - 2) Ask the Leader to write to the Secretary of State requesting that they provide the necessary powers and resources to make local action on climate change easier;
 - 3) Request that, in light of the IPCC report, officers review the council's Climate Change Policy with the aim of bringing a report to Council in autumn of 2019, after consideration by Overview and Scrutiny. The review should include an action plan to achieve a target of zero carbon emissions by 2030 and proposals for regular reporting to Overview and Scrutiny Committee of the progress with the plan;
 - 4) Ask officers to ensure that, as the Council's policies are routinely reviewed, specific consideration is given to how policies and our related decisions and actions, affect our contribution to climate change, and where necessary, update these policies to reduce our impact wherever possible;

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- 5) Ask officers to investigate the most appropriate training for Members and officers about how to promote carbon neutral policies for consideration by Council;
 - 6) Continue to work with partners across the district, county and wide region to deliver widespread carbon reductions.

3. SUSTAINABILITY STATEMENT

- 3.1 The sustainability strategy for the proposed development has been developed using North Hertfordshire District Council guidance and policy, including the North Herts Sustainability Supplementary Planning Document. This enables a holistic sustainability approach for the proposed development. The principle of sustainable design and construction is referenced within the North Hertfordshire Local Plan 2011 – 2031 and the North Herts Sustainability Supplementary Planning Document, and these documents therefore represent best practice guidance to meet high standards of sustainable design and construction.

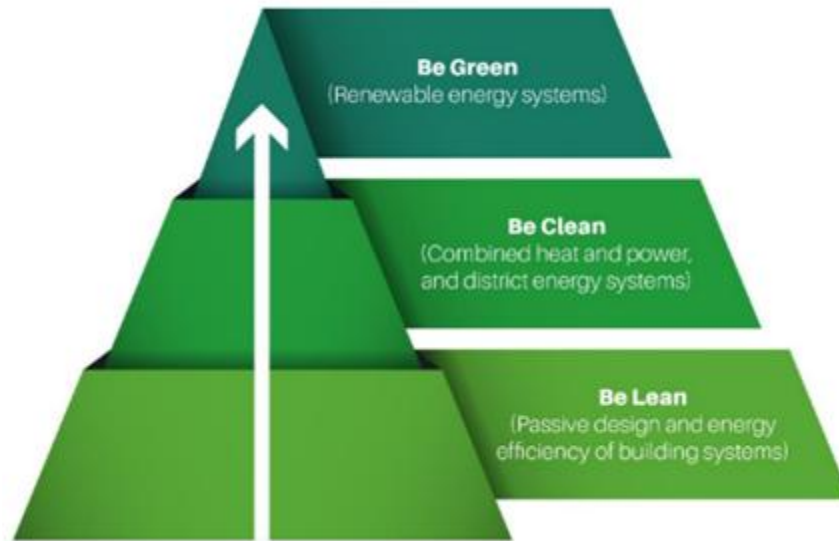
Sustainable Design and Construction

- 3.2 The sustainability features of the proposed development are outlined below in line with the themes set out within the North Herts Sustainability Supplementary Planning Document.

Optimising Passive Design & Fabric Performance

- 3.3 The energy strategy for proposed development, which is set out in more detail within the Energy Statement prepared by Icen Projects and submitted alongside this application, is based upon the principles of the Energy Hierarchy on the basis that it is preferable to reduce carbon dioxide emissions through reduced energy consumption above decarbonisation through alternative energy sources.
- 3.4 The tiers of the Energy Hierarchy are:
- Be Lean Reduce energy demand through the passive design and layout of the scheme, using natural lighting and ventilation
 - Be Clean Supply energy efficiently using either combined heat and power or district energy systems
 - Be Green Use renewable energy systems to further reduce emissions

Figure 3.1 The Energy Hierarchy



3.5 Within the first stage of the energy hierarchy, it is proposed to incorporate high levels of passive and energy efficient design measures in order to reduce the development's energy consumption and associated CO₂ emissions, utilising a 'fabric first' approach to reduce energy demand. The measures proposed to optimise passive design and fabric performance under the 'Be Lean' tier of the Energy Hierarchy include:

- Consideration of the orientation of plots and buildings to maximise passive design, which utilises daylight, solar energy, shading and stack or wind driven ventilation to illuminate, heat, shade where necessary and ventilate/cool buildings, thus requiring less (mechanical) energy to achieve the performance standards for health and wellbeing of future residents and occupants. In particular, whilst the orientation of buildings will be dictated by plot orientations that give the overall scheme a cohesive design approach, the distances between buildings will be optimised to ensure sufficient access to natural daylight and passive solar gains, whilst also maximising opportunities to naturally shade without resulting in excessive levels of overshadowing. Whilst the detailed design of the buildings will be confirmed as part of a subsequent Reserved Matters Application(s), the orientation of the plots will allow for the delivery of properties within which habitable spaces may be provided on elevations that will benefit most from increased levels of daylight and sunlight, to provide natural lighting and solar heat gains, and therefore reduce energy consumption associated with artificial lighting and space heating. This will be balanced with the need for shading, to ensure that the risk of overheating within these spaces is sufficiently mitigated, without the need to introduce active means of cooling. To further aid in the mitigation of overheating risk, extensive green and blue infrastructure will be woven throughout the proposed development, providing shading and passive cooling opportunities. During the detailed design stage, opportunities to provide additional passive cooling measures, such as overhangs, external shading and high ceilings, will be considered.

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- The thermal massing of the buildings will be considered during the detailed design stage, with materials employed to be considered in light of both thermal mass properties and embodied carbon. The design of the buildings will consider opportunities to deliver high levels of thermal mass to aid in preventing overheating in the summer, and to reduce space heating requirements in the winter. This will be balanced with the need to consider the embodied carbon emissions associated with construction materials.
 - High levels of building fabric efficiency will be targeted, through the provision of insulation to minimise heat loss and reduce energy demand associated with space heating. This will also aid to reduce heat gains during the summer, which will help to mitigate the risk of internal overheating. Insulation will be provided to aid in the achievement of low u-values associated with the main building elements, including ground floors, external walls and roofs, in addition to the employment of double or triple glazed windows. Further to this, during the detailed design stage, consideration will be given to the incorporation of insulation within the proposed building systems, such as hot water pipes, to minimise heat losses and to ensure the efficient operation of these systems.
 - High levels of air tightness will also be targeted to ensure that air infiltration between the internal and the external environment will be largely controlled. This will aid to further reduce energy demands associated with space heating and, where relevant, cooling.
 - At the detailed design stage, the form factor of the buildings to be delivered as part of the proposed development will be considered. Where appropriate, a low form factor ratio will be targeted, aiding to reduce the area of the external envelope of the buildings compared to the area of the internal usable space. This will aid to minimise heat losses through the surface area of the buildings, and therefore reduce energy demand associated with space heating.
 - Where appropriate, buildings will be provided with openable windows to enable the employment of natural ventilation strategies. Where possible, openable windows will be provided on multiple facades to facilitate cross ventilation, where feasible, and to provide fresh air to habitable spaces without increasing the risk of overheating. Where required, including for the non-domestic spaces to be delivered as part of the proposed development, mechanical ventilation with heat recovery (MVHR) may be employed to deliver outside air to internal spaces. To mitigate the risk of overheating in spaces that employ MVHR, systems with summer bypass modes will be considered.
 - Highly efficient systems and low energy LED lighting will be provided within the buildings to minimise energy demand as well as artificial lighting energy consumption. Energy management systems, such as smart meters, will be installed in all dwellings and buildings to enable future residents, occupants and building managers to monitor energy usage, and therefore aid in reducing energy consumption. In addition, all future residents will be provided with a Home User Guide, and building managers with a Building User Guide, or equivalent, to ensure all plant and

equipment provided is used correctly and to enable efficiency of use to be maximised. Systems will also incorporate suitable controls to minimise energy consumption and allow for user flexibility.

3.6 Through the incorporation of the measures set out above, the proposed development will target a 'Silver' level of performance relating to Optimising Passive Design & Fabric Performance. Specifically, the proposed development will:

- Target the achievement of an EPC Rating of B for at least 80% of the dwellings, and an EPC Rating of C for the remaining 20% of the dwellings.
- Maximise solar gain through the layout of the proposed development, and the orientations and design of the proposed buildings to optimise energy efficiency.
- Embed measures to prevent overheating, preferentially through passive means, or where this is not possible, through the employment of highly efficient cooling systems.
- Submit an Energy Statement that demonstrates:
 - Lower carbon alternatives to gas boilers have been considered to serve the space and water heating demands of the proposed development.
 - Carbon dioxide emissions savings of at least 50% compared to the Part L:2021 Building Regulations baseline will be targeted, with at least 10% of these savings to be made through the employment of fabric efficiency measures.
 - An Energy Usage Intensity (EUI) of no more than 60 kWh/m²/year and a Space Heating Demand (SHD) of no more than 40 kW/m²/year will be targeted. It is also noted that, where required, the non-domestic elements of the proposed development will seek to target a BREEAM Rating of 'Excellent', where feasible.

3.7 The principles of the interventions listed above are set out in the Energy Statement prepared by Iceni Projects that accompanies this submission, and the details of their implementation and the associated performance of the proposed development will be confirmed through the submission of an Energy Statement(s) submitted as part of subsequent a Reserved Matter Application(s). This will include the undertaking of detailed energy modelling, the provision of internal and roof layouts for the proposed dwellings and non-domestic spaces, and the setting out of the green and blue infrastructure that is to be delivered as part of the proposed development to aid in the mitigation of overheating.

Achieving Low Carbon Energy

- 3.8 As detailed within the Energy Statement prepared by Iceni Projects, the proposed development has given consideration to renewable energy technologies that may be incorporated to deliver low and zero carbon energy.
- 3.9 The proposed development will seek to incorporate renewable energy technologies, and will target a 'Silver' level of performance relating to Achieving Low Carbon Energy. Specifically, the proposed development will:
- Seek to meet at least 75% of the energy demand of the proposed dwellings through the provision of renewable technologies. At this stage, it is expected that technologies such as air source heat pumps (ASHPs) and photovoltaic (PV) panels will be employed.
 - Include for dwellings and non-domestic buildings with roof shapes and orientations that are optimised to maximise the outputs of PV panels.
 - Ensure electricity generated by renewable technologies delivered on-site is used effectively, for example through the connection of PV panels to thermal stores associated with communal heat pump systems, where provided and appropriate.
 - For the non-domestic element of the proposed development, it is intended that at least 20% of the energy demand be met through the provision of on-site renewable technologies, such as PV panels.
- 3.10 The principles of the interventions listed above are set out in the Energy Statement prepared by Iceni Projects that accompanies this submission, and the details of their implementation and the associated performance of the proposed development will be confirmed through the submission of an Energy Statement(s) submitted as part of subsequent a Reserved Matter Application(s). A Feasibility Study is also included within the Energy Statement prepared by Iceni Projects, setting out the renewable technologies that may be appropriate for inclusion within the proposed development. Further details relating to the suitability of renewable technologies, and how they will be implemented on the site, will be provided with an Energy Statement(s) submitted as part of subsequent a Reserved Matter Application(s), which will also provide calculations to demonstrate the proportion of the energy consumed on-site that is generated via renewable or low carbon sources.

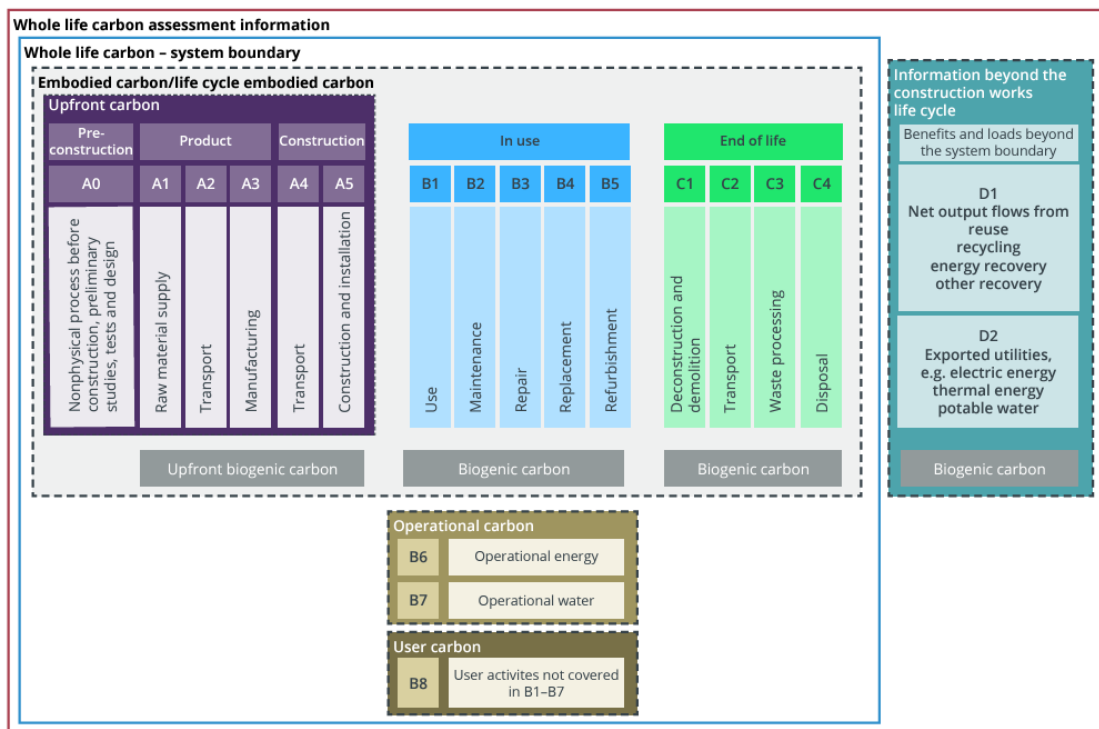
Minimising Carbon Footprint

Whole Life Carbon Assessment

- 3.11 Approximately 40% of the UK's carbon emissions are associated with the built environment, with construction and demolition activities consuming vast quantities of raw materials whilst also generating substantial volumes of waste and emissions. Addressing the greenhouse gas emissions associated with both the construction and operation of buildings is therefore of great importance in the achievement of net zero carbon targets.

- 3.12 The measures set out in the 'Optimising Passive Design & Fabric Performance' and 'Achieving Low Carbon Energy' will aid to minimise the greenhouse gas emissions associated with the operation of the proposed dwellings and non-domestic buildings to be delivered as part of the proposed development. This will be achieved through the minimisation of energy demand associated with space heating and cooling, water heating, ventilation, lighting and equipment, as well as through the employment of low carbon and renewable technologies on-site.
- 3.13 Embodied carbon, however, relates to the emissions released during the lifecycle of the materials employed in the construction of the proposed development. This includes their extraction, manufacturing, transport, construction and disposal, and is broken down into the following components, which are also set out in Figure 3.2 below:
- Upfront embodied carbon (Modules A1 to A5) – emissions associated with the production of materials employed in construction, and the emissions associated with the construction phase of a development prior to its operation.
 - In-use embodied carbon (Modules B1 to B5) – emissions associated with materials and processes to maintain the building during its operation, such as maintenance and refurbishment works.
 - End-of-Life embodied carbon (Modules C1 to C4) – emissions associated with the decommissioning of a building, its demolition, and the disposal and transportation of materials at the end of a building's life.

Figure 3.2 Building and infrastructure life cycle stages



Source: Royal Institution of Chartered Surveyors (RICS; 2024) – "Whole life carbon assessment for the built environment; 2nd edition"

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- 3.14 As the detailed design of the proposed development continues, measures will be considered and implemented to reduce the whole life carbon emissions associated with the scheme. In doing so, it is expected that, through the optimisation of the design, the volumes of raw materials employed will be reduced, and low and zero carbon products preferentially employed, where appropriate and viable. In addition, it is expected that materials will be responsibly sourced by the main contractor, and specified to have a low embodied impact. At this stage, it is recommended that materials with a low embodied impact, as defined within the BRE Green Guide to Specification, be selected for use in the building design and construction. It is highlighted that the selection of materials is determined by a variety of factors, such as the architectural context, design rationale, embodied carbon and maintenance requirements. For the proposed development, it is expected that consideration will be given to the lifecycle environmental performance with materials selected in consideration of the BRE's Green Guide to Specification, aiming for A or B rated materials wherever possible.
- 3.15 Further to this, it is recommended that the use of locally sourced materials be prioritised wherever possible to reduce the impacts associated with the transportation of materials. Using materials produced in the local area will also aid in developing the identity of the development, by ensuring it is in line with the local character and context. For the proposed development, there will be a focus on sustainable design, with materials selected that are in keeping with the local vernacular and landscape character, aiming for locally sourced materials where possible.
- 3.16 The proposed development will seek to embed measures to reduce embodied and operational emissions, and will target a 'Silver' level of performance relating to Minimising Carbon Footprint: Whole Life Carbon Assessment. Specifically, the proposed development will:
- Seek to comply with relevant policies and the Building Regulations, including Part Z should this come forward.
 - Consider whole life carbon emissions and methods to reduce this during the technical design stages.
 - Where required, undertake Pre-Demolition Audits, the findings of which would be incorporated within a Whole Life Carbon Assessment(s) to be undertaken for the proposed development at the detailed design stage.
 - Update the Whole Life Carbon Assessments undertaken at the detailed design stage at the pre-commencement (Stage 4) and pre-occupation (Stages 5 and 6) stages, demonstrating alignment with the following targets:
 - Upfront embodied carbon (Modules A1 to A5) – no greater than 675 kgCO₂/m²GIA for dwellings, and no greater than 625 kgCO₂/m²GIA for the proposed school(s)

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- In-use and end-of-life embodied carbon (Modules B1 to B5 and C1 to C4) – no greater than 325 kgCO₂/m²GIA, and no greater than 210 kgCO₂/m²GIA for the proposed school(s)

3.17 As detailed above, it is intended that a Whole Life Carbon Assessment(s) be undertaken at the detailed design stage, and submitted as part of subsequent a Reserved Matter Application(s). This would include a calculation of the whole life carbon emissions associated with the proposed development, in line with British Standard BN EN15978 and the guidance set out by the Royal Institution of Chartered Surveyors (RICS). This Assessment(s) would then be updated at the pre-commencement (Stage 4) and pre-occupation (Stages 5 and 6) stages.

Circular Economy Principles

3.18 To aid in the minimisation of material consumption and waste generation, circular economy principles will be embedded within the design of the proposed development. A Circular Economy may be defined as:

"An economic system based on the reuse and regeneration of materials or products, especially as a means of continuing production in a sustainable or environmentally friendly way".

3.19 As demonstrated in Figure 3.3 below, the circular economy model seeks to share, lease, reuse, repair, refurbish and recycle existing materials and products as long as possible. This aids to extend the life cycle of materials and products, and to reduce waste to a minimum. Through the implementation of the circular economy model, when a product reaches the end of its life, its constituent materials are kept within the economy, where possible, through reuse and recycling. This ensures the materials can be productively uses again, therefore creating further value. Further to this, through the reuse and recycling of materials, the use of natural and virgin materials is reduced, and in turn landscape and habitat disruption is minimised, aiding to limit biodiversity loss. The use of recycled and reused materials also aids to reduce the emission of greenhouse gases, as less energy and resource consumption is required compared to the use of virgin materials, therefore also reducing the environmental impact of a product during its design phase.

Figure 3.3 The circular economy model



Source: European Parliament Research Service

3.20 During the detailed design of the proposed development, it is recommended that the following six circular economy principles form a principal part of the design process:

- Building in layers, to ensure that different parts of the buildings are accessible and can be maintained and replaced, where necessary.
- Designing out waste, to ensure that waste reduction is planned into the project from inception to completion.
- Designing for longevity.
- Designing for adaptability or flexibility.
- Designing for disassembly.
- Using systems, elements and materials that can be reused and recycled.

3.21 It is intended that materials be responsibly sourced by the main contractor, and be specified to have a low embodied impact. As detailed above, it is expected that materials with a low embodied impact, as defined within the BRE Green Guide to Specification, will be selected for use in the building design

and construction. For the proposed development, consideration will be given to the lifecycle environmental performance with materials selected in consideration of their sourcing, and it is recommended that re-used materials and those with a high recycled content being employed preferentially, where feasible and appropriate. Further to this, during the detailed design of the building fabric, it is intended that consideration be given to minimising the environmental impact of materials, by selecting non-toxic and robust materials to ensure longevity and a minimal impact on the health of occupants. This may include, for example, the use of organic paints for the internal finishes of the buildings. Finally, as detailed above, it is expected that materials will be ethically sourced, and in consideration of sustainability certification. This may include, for example, the sustainable sourcing of all structural timber elements along with any timber used for temporary uses, such as scaffolding, e.g. from FSC and/or PEFC sources.

- 3.22 Waste will be managed on-site in line with the waste hierarchy, shown in Figure 3.4 below, during both the construction and operation of the proposed development. During the construction phase, the principal contractor will be required to implement a Site Waste Management Plan (SWMP), which will detail who will be responsible for resource management, which types of waste will be generated, how the waste will be managed (e.g. reduced, reused or recycled), which contractors will be used, and how the quantity of waste generated by the project will be measured. At this stage, it is anticipated that, during the excavation, enabling and construction phase, a target to divert at least 80% of the total volume (m³) of non-hazardous materials from landfill will be targeted. Whilst these targets are subject to confirmation at the detailed design stage, it is recommended that materials arising from any excavation and/or enabling works undertaken to facilitate the delivery of the proposed development will be preferentially re-used or recycled on-site or in the surrounding area. This may include the use of excavated materials elsewhere on the site to contribute to the levelling of the site, or as backfill material.

Figure 3.4 The waste hierarchy



Source: European Commission

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- 3.23 Further to this, actions to maximise the volume of waste to be diverted from landfill during the operation of the proposed development have been identified as follows:
- Provision of waste bins, with waste segregation at source to be considered;
 - Separate bin storage for recyclable waste to be provided;
 - Provision of a central bin storage area on the ground floor level; and
 - Bin removal strategy and access to bin stores to be considered.
- 3.24 Details of the waste storage provision for the dwellings and non-domestic buildings to come forward as part of the development will be provided at the Reserved Matters stage, however it is expected at this stage that, in order to encourage a greater proportion of the operational waste to be diverted from landfill dedicated spaces of sufficient size and convenient locations for each of the new dwellings and non-domestic buildings will be provided. Internal storage will be considerate of Part H of the Building Regulations, as well as Council policies, British Standard (BS) 5906:2005, and other relevant requirements. Dedicated external waste storage areas for refuse and recycling will also be allocated for each house and non-domestic building.
- 3.25 The proposed development will seek to embed circular economy principles within the design, and will target a 'Silver' level of performance relating to Minimising Carbon Footprint: Circular Economy Principles. Specifically, the proposed development will:
- Ensure Pre-Demolition and Pre-Redevelopment Audits are undertaken, where applicable.
 - Demonstrate how excavated materials will be used beneficially, for example through reuse or recycling.
 - Be accompanied by a Circular Economy Statement at the detailed design stage, prepared in line with the Waste Hierarchy approach to target:
 - A minimum of 30% of construction materials being re-used materials, where feasible.
 - The design of 50% of materials for re-use.
 - The diversion of 80% of non-hazardous demolition, excavation and construction waste materials from landfill for re-use, recycling or recovery.
 - The sourcing of 80% of materials from ethical and responsible supply chains,
- 3.26 As detailed above, it is intended that a Circular Economy Statement(s) be prepared at the detailed design stage, and submitted as part of subsequent a Reserved Matter Application(s). This would set out the circular economy principles to be embedded within the design of the proposed development,
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as well as the measures that will be employed to enable the achievement of the targets set out above in relation to the sourcing of materials and diversion of waste from landfill.

Healthy Placemaking

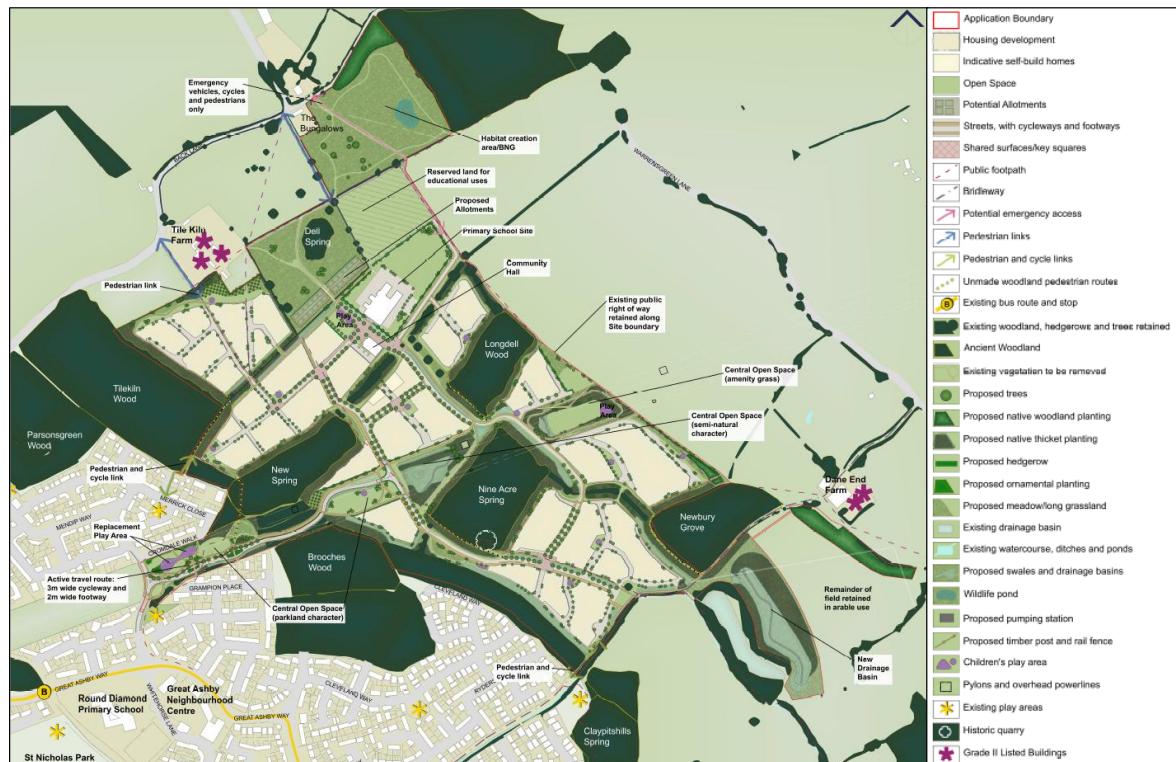
Green & Blue Infrastructure and NHS Health into Place Principles

- 3.27 Green infrastructure comprises the network of natural and semi-natural features, including the water environment, that is present within and between urban and rural areas. It refers to features of this type at multiple scales, from trees and soft verges present within streetscapes to large open spaces, such as parks and public gardens. Specifically, green infrastructure may be defined as:

"A network of multi-functional green and blue spaces and other natural features, urban and rural, which is capable of delivering a wide range of environmental, economic, health and wellbeing benefits for nature, climate, local and wider communities and prosperity".

- 3.28 Well-designed green infrastructure should be multi-functional, offering a range of benefits both to people and the natural environment. The integration of green infrastructure within new development aids to create high quality and attractive spaces, as well as encouraging healthy and active lifestyles. Habitat creation, enhancement and connectivity may also be delivered through the provision of green infrastructure, in addition to ensuring development is adaptable to climate change, and able to mitigate the potential effects associated, for example through the alleviation of flood risk and soil erosion.
- 3.29 As part of the proposed development, a comprehensive Landscape Strategy will be delivered. The Illustrative Masterplan, prepared by Icen Projects and shown in Figure 3.5 below, demonstrates how the proposed development may be integrated into the landscape setting of the site. Extensive areas of public open space and green infrastructure would be integrated throughout the proposed development, aiding to create various characters.

Figure 3.5 Illustrative Masterplan



3.30 Key landscape elements and character areas have been included for within the Illustrative Masterplan prepared for this application. At this stage, these features and character areas, which will continue to be considered throughout the detailed design stage and confirmed at the Reserved Matters stage(s), include:

- The provision of a Central Open Space, designed to include for play facilities and areas of amenity grassland to facilitate informal play within the northern portion, and separated from adjoining properties through the integration of hedging and ornamental or structural planting, in addition to appropriate structural boundaries, such as railings or fencing. The southern portion of the Central Open Space may be designed with a parkland character, including for new foot and cycle paths that lead through an area of retained trees and thickets, as well as providing new wildflower meadow planting. Similar to the northern portion of the Central Open Space, the southern portion may be separated from adjoining properties through the introduction of structural vegetation. Across the remaining length of the Central Open Space, a variety of characters should be designed in, creating different habitats and recreational opportunities. The area to the north of Nine Acre Spring should have a more informal, naturalistic character. This may be achieved through the incorporation of structural shrub planting around and wildflower grass and emergent planting within the proposed drainage basin, and structural vegetation at the base of the pylon located here, in order to filter views. An east-west link within this section of the Central Open Space may be provided through the provision of new foot and cycle paths, and an additional area of amenity grass may allow for informal recreation. The easternmost end of the Central Open Space should be designed to provide both formal and informal play areas, with

the proposed housing in this part of the site set back from the public footpath to ensure the existing view corridor towards the south is retained. New native hedgerow planting may be incorporated to mark the edge of the built form, with the adjacent open space providing a link to the wider countryside. Furthermore, a play area and amenity grassland, in addition to scattered trees, may be delivered in this part of the Central Open Space.

- Areas of parkland may be delivered adjacent to the western end of the proposed access road, which may include for amenity grassland for informal play. A community orchard may also be located here, which would aid to create interest and deliver new habitat. Foot and cycle paths may also be integrated within this area of open space, leading through the southern portion of the parkland, with potential to incorporate swales planted with meadow grass species to provide seasonal interest. Street trees may also be delivered along the proposed road to add structure to this space, which would be enclosed by the existing woodland located at the southwestern boundary of the site.
- Parts of the woodland buffer areas to be incorporated may include for shorter grass, which would allow views into the retained areas of woodland, as well as limited access in proximity that could be used for recreational purposes, such as picnicking space or informal walking.
- Where open space is to be incorporated between the built form of the proposed development and Tile Kiln Farm to the north, it should be informal in character. Opportunities to incorporate new areas of thicket and orchard planting, alongside meadow grassland, should be explored. This would aid to soften the settlement edge in this location.
- Dell Spring, located in the northern portion of the site, should be retained as long grass, and managed to increase the quality of the existing habitats, with the potential to incorporate mown paths. The southern portion of Dell Spring may be designed with a country park character, incorporating play areas that employ natural materials, and an area of amenity grassland that could link to the adjoining Community Hub space.
- An open settlement edge should be incorporated along the eastern boundary of the site, in consideration of the relationship between the proposed development, Dane End Farm, and the wider countryside. New dwellings should be set back from the countryside edge, with new native, managed hedgerow integrated on the western side of the existing public footpath. This will allow for both intervisibility between the proposed dwellings, the path and the countryside, whilst also clearly marking the edge of the settlement. there is potential to deliver a new area of woodland planting adjacent to Newbury Grove, which would aid to create a visual separation between Dane End farmhouse and nearby proposed dwellings.
- The attenuation basin to be incorporated within the southern section of the site should incorporate thicket planting on the banks, and wet wildflower grass and emergent planting at the bottom of the basin. This will aid to minimise the impact of this basin on the Green Belt and the

character of the area within which the existing basin that the new basin will connect to is situated. A new area of native broadleaved woodland may also be delivered to the north to aid in the achievement of a net gain in biodiversity, and to provide privacy to Dane End Farm from the south.

- An informal character should be applied to the area of open space to be incorporated along to the southwest of Longdell Wood. This may be achieved through the provision of meadow grass around the retained trees and within swales between the primary street and the foot and cycle paths. This would create an attractive space to walk through which, whilst overlooked by adjoining houses, would feel slightly removed from the built development of the proposed development. This corridor of open space could also serve to convey the existing overland flow route, that currently runs within this area.

3.31 Within the NHS's 'Putting Health into Place' guidance, several principles are set out to deliver opportunities to enhance the health and wellbeing of those living within new developments, with the following relevant to the proposed development:

- **Create compact neighbourhoods.** Through the provision of compact, walkable and mixed-use neighbourhoods, new development can create conditions that allow for social and economic connections to be established. The proposed development will make efficient use of land, seeking to deliver appropriate levels of density, and including for multiple uses on-site, including community facilities. A range of routes will be provided to connect new homes, services, amenities and open spaces, both within the site, and in the surrounding area, with access provided via a range of means, including walking and cycling. The proposed development will be designed in consideration of inclusivity, ensuring access for people of all ages, abilities and needs. This will include the delivery of a range of house types and sizes, and the considered design of public open spaces and associated facilities. Multifunctional green spaces will be integrated throughout the proposed development, which will aid to: contribute to the good mental and physical health of future residents; encourage physical activity; reduce air pollution; ensure resilience to the effects of climate change, such as alleviating flood risk and mitigating overheating; delivering opportunities for biodiversity; and including provision for local food growing.
- **Maximise active travel.** New development can support the uptake of active and sustainable modes of transport, which can aid to improve physical and mental health, foster social cohesion, and reduce air pollution. Through the provision of extensive foot and cycle paths throughout the proposed development, it is envisaged that the uptake of active transport modes will be encouraged. The street layout to be integrated within the proposed development will also seek to encourage active and sustainable modes of transport.
- **Inspire and enable healthy eating.** Encouraging healthy eating within new development can aid to address the causes of ill health. There is potential for community allotments to be provided

as part of the proposed development, to the south of the Dell Spring. This will provide opportunities for future residents and the wider community to grow food. This will provide opportunities to learn about horticulture and healthier eating, gain access to affordable vegetables and fruit, connect to nature, foster social connections, engage in physical activity, and enhance the appearance of the surroundings.

- **Foster health in homes and buildings.** Opportunities to deliver high quality, health and efficient homes may be realised through the delivery of new development. The proposed development will seek to provide new dwellings that are designed to be adaptable to the projected effects of climate change. This includes ensuring the buildings are resilient to both flooding and water scarcity, as well as being suitably warm during the winter months, whilst also mitigating the risk of overheating in the summer. The proposed Energy Strategy for the proposed development, set out within the Energy Statement prepared by Icen Projects, sets out the principles that may be embedded within the design of the buildings to ensure they are energy efficient, and to reduce energy demand associated with space and water heating, preferentially through passive means. It is also intended that Overheating Assessments be undertaken at the detailed design stage to ensure the risk of overheating within the proposed dwellings is sufficiently mitigated, and that passive means of doing so are prioritised. As detailed within Chapter 6: Air Quality, prepared by Waterman, of the Environmental Statement which accompanies this submission, a number of mitigation measures will be put in place to ensure that nuisance dust, vehicle and plant emissions associated with the construction of the proposed development are reduced as far as possible. This will include the preparation of a Construction Environment Management Plan (CEMP), which will include for measures set out within the Institute of Air Quality Management (IAQM) guidance for high-risk sites. These measures may include, but are not limited to: the installation of green infrastructure and measures to deal with spillages; the prevention of burning materials on-site and the provision of a waste or recycling plan; and the prevention of vehicle idling. Further to this, construction traffic logistics will be agreed with North Hertfordshire District Council, via a Construction Logistics Plan (CLP) or similar, with the intention of avoiding, or limiting the use of, traffic routes in proximity to sensitive uses, where possible. The assessment contained within Chapter 6: Air Quality of the Environmental Statement demonstrates that, once operational, the proposed development would have a negligible effect on existing and future receptors with respect to local air quality, and no additional mitigation is therefore required. This will be achieved through the following measures, embedded within the design of the proposed development:
 - Location of sensitive residential and school receptors away from heavily trafficked roads and localised sources of air pollution;
 - Provision of cycle parking spaces and electric vehicle charging infrastructure.
 - Delivery of new pedestrian and cycle paths to promote walking, cycling and the use of sustainable and active modes of transport.

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- Integration of public and private landscaping, including amenity space, which will include for a mix of trees, mass planting and lawn areas.

- **Enable healthy play and leisure.** Healthy behaviours relating to play, leisure and community life may be fostered within new development through the provision of good quality public spaces, community facilities and play opportunities. As detailed above, the proposed development will incorporate extensive areas of open space and associated play facilities that are accessible to those across a range of ages and with differing abilities.

3.32 The proposed development will seek to incorporate extensive green and blue infrastructure, provide play areas, amenity and food growing areas and embed the key aspects of healthy placemaking to target a 'Gold' level of performance relating to Green & Blue Infrastructure and NHS Health into Place Principles. Specifically, the proposed development will:

- Deliver levels of open space that are in compliance with relevant policies and standards.
- Submit a Landscape Strategy that sets out the locations of play areas and amenity food growing areas, and which will also define proposed character areas. Strategies relating to play, food and active frontages will be set out, and Fields in Trust distances will be accounted for in the location of play areas. The proposed development will also seek to deliver community allotments to encourage communal food growing on-site.
- Deliver extensive green and blue infrastructure that provides links to strategic green infrastructure to compliment the Nature Recovery Network, where appropriate, and which follows the Green Infrastructure Principles set out by Natural England.
- Embed the key aspects of healthy placemaking that are set out within the NHS 'Putting Health into Place' guidance.
- Submit an Air Quality Assessment that sets out the measures proposed to target the achievement of 'air quality positive' in the post-development context.
- Be accompanied by an Overheating Assessment at the detailed design stage, which will be undertaken in line with the Chartered Institution of Building Services Engineers' (CIBSE) TM59 assessment methodology and will demonstrate compliance with the requirements of Part O of the Building Regulations. The proposed development will seek to prioritise passive measures to mitigate the risk of overheating, employing mechanical and active systems only where necessary. An acoustic assessment will also be undertaken at the detailed design stage to demonstrate the proposed development's performance against the relevant acoustic criteria set out within Part O. The proposed development will also seek to ensure that all dwellings comply with Part M4(1) of the Building Regulations, where feasible and appropriate.

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- 3.33 The principles of the interventions relating to green infrastructure and landscaping listed above are set out in the Design and Access Statement prepared by Icen Projects that accompanies this submission, and the details of their implementation and the associated performance of the proposed development will be confirmed through the submission of relevant documents submitted as part of subsequent a Reserved Matter Application(s). An Air Quality Assessment, prepared by Waterman, has also been submitted as part the Environmental Statement prepared for this application, and it is intended that further detail will be provided within an Air Quality Assessment(s) to be submitted as part of subsequent a Reserved Matter Application(s). In addition, as detailed above, it is intended that an Overheating Assessment(s) be prepared at the detailed design stage, and submitted as part of subsequent a Reserved Matter Application(s). This would set out the measures to be employed within the proposed development to mitigate the risk of overheating, and would present the results of assessments to demonstrate compliance with the requirements of Part O of the Building Regulations. The principles of matters relating to accessibility are set out within the Design and Access Statement prepared by Icen Projects that accompanies this submission, with further details to be submitted following the detailed design stage as part of subsequent a Reserved Matter Application(s).

Urban Greening Factor (UGF)

- 3.34 Due to the nature of the proposed development, it is not considered feasible to achieve a UGF of 0.4 for the residential elements, nor 0.3 for the non-domestic elements.
- 3.35 The proposed development will therefore target a 'Bronze' level of performance relating to Urban Greening Factor (UGF).

Promoting Biodiversity

Ecological Surveys & Assessments

- 3.36 It is highlighted within the North Herts Sustainability SPD that a wide range of habitats, including hedgerows, wildflower meadows, orchards, ponds, lakes, reed beds, ancient woodlands and chalk streams, are present within the District. Many of these habits contribute to important wildlife corridors, both at a local and District level, with a number of statutory and non-statutory designated sites located within North Herts.
- 3.37 As detailed within Chapter 8: Ecology & Biodiversity, prepared by CSA Environmental, of the Environmental Statement which accompanies this submission, the following ecological surveys have been undertaken:
- **Desk Study:** an ecological desk study has been undertaken, reviewing online resources and biological records centre data. This included a review of the location of ecological designations, their distance from and connectivity to, the site, and the reasons for their designation. This was used to inform whether they may be located within the proposed development's Zone of Influence (ZOI).

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- **Field Surveys:** a UK Habitat Classification survey was carried out to map and classify the habitats present within the site boundaries. This survey included targeted botanical surveys of the following habitats: woodland; grassland; arable; and hedgerows.
 - **Further Survey Work:** additional field survey work was undertaken with respect to the following: habitats and flora; bats; badger; dormouse; birds; reptiles; Great Crested Newts' and invertebrates.

3.38 The Desk Study undertaken for the site confirms that there are no international, national or local statutory designations present within the site, nor the adjacent area. No international designated sites are present within a 3km radius of the site, and no national or local statutory designated sites are located within 10km. The following non-statutory designated sites are located within the site boundaries, or within a 1m radius:

- New Spring Local Wildlife Site (LWS), located within the southwestern area of the site;
- Brooches Wood LWS, located partially within, and adjacent to, the west and southwestern area of the site;
- Tilekiln Wood & Parsonsgreen Wood LWS, adjacent to the west of the site;
- Claypithills Spring Wood (Stevenage) LWS, adjacent to the south;
- Claypits Wood (N. of Stevenage) LWS, located 0.4km to the north of the site;
- The Warren (N.E. of Stevenage) LWS, located 0.4km to the southeast;
- Wellfield Wood LWS, located 0.5km to the south;
- Exeter Close LWS, located 0.5km to the south;
- Box Wood & Pryor's Wood LWS, located 0.7km to the south;
- Halls Green Grassland LWS, located 0.7km to the south;
- Stonesley Wood LWS, located 0.9km to the northwest;
- Weston Park North Meadow LWS, located 1km to the north; and
- Howell's Wood LWS, located 1km to the east of the site.

3.39 It is confirmed within Chapter 8 of the Environmental Statement that there will be no significant impacts on the LWSs present within the site boundaries and surrounding area as a result of the construction and operation of the proposed development. This will be achieved through the implementation of suitable mitigation measures, such as the employment of standard tree protection

measures during the construction phase, and the implementation of Ancient Woodland buffers, provision of recreational safeguards, and undertaking of long-term woodland management during the operation of the proposed development.

3.40 The following habitats are confirmed to be present within the site boundaries in the existing case: temporary grass and clover leys; cereal crops; other neutral grassland; modified grassland; dense scrub; developed land (sealed surface); lowland mixed deciduous woodland; other broadleaved woodland; other coniferous woodland; ponds; hedgerows; wet ditches; and scattered trees. Of these habitats, the arable field margins, lowland mixed deciduous woodland and native hedgerows are classified as Priority Habitats, and are therefore of ecological importance. Whilst the proposed development will result in the loss of existing habitats present within the site boundaries, it is confirmed within Chapter 8 of the Environmental Statement that the proposed development will not result in a significant effect on areas of lowland deciduous woodland, native hedgerows and mature trees during either the construction or operational phases. This will be achieved through the implementation of a number of mitigation measures including, but not limited to:

- The buffering of Ancient Woodland within the site by a minimum of 15m from adjacent residential development. During construction, this buffer will be temporarily fenced to allow for works to be undertaken in line with good arboricultural practice (BS5837:2012).
- Compensation of hedgerow losses through the creation of new, species-rich native hedgerows and the enhancement of existing hedgerows.
- Substantial planting will be delivered along key habitat corridors, such as between Nine Acre Spring and Newberry Grove woodlands. This would reinforce hedgerows for the movement and dispersal of wildlife.
- Delivery of hedgerow planting schemes and management, secured via detailed designs and/or suitably worded planning condition(s), including the provision of a site-wide Landscape Ecological Management Plan (LEMP).
- During the operation of the proposed development, permanent fencing will be included for within the 15m buffer to the Ancient Woodland, behind which a combination of natural regeneration and the planting of appropriate native shrub and climber species will be facilitated. Public access to the Ancient Woodlands will be controlled via the existing footpaths, with the routes along these paths to remain unsurfaced, but with fencing provided to demarcate the route. Waymarking and signage will also be provided to encourage users to remain on the footpaths, and to set out the value of the woodland to promote responsible recreation and the use of the extensive areas of open space to be provided within the site.

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- A 'den building' area will be provided within the existing coniferous woodland, to limit any similar but uncontrolled activity across the wider woodlands. This will include signage and the provision of timber arisings from woodland management works.
 - A Woodland Management Plan will be prepared for all on-site woodland, and agreed with North Hertfordshire District Council. This will include for a regime of long-term nature conservation woodland management, in addition to the exploration of opportunities to veteranize semi-mature trees away from public access and footpaths.

3.41 Surveys undertaken at the site indicate that the arable habitats present offer relatively limited opportunities for bats, but that the hedgerow network and woodland provide important potential for foraging and navigational purposes. Further to this, a total of four trees with 'Moderate', and six trees with 'Low', bat roost potential have been identified, in addition to twelve hedgerow trees with 'Moderate' or 'High' bat roosting potential. It is noted, however, that no confirmed bat roosts have been identified, including within the trees that are to be removed to facilitate vehicular and pedestrian access. It is highlighted, however, that updated bat survey work should be undertaken prior to the commencement of felling work to confirm the absence of roosting bats. Should roosting bats be discovered within trees that require felling, an appropriate mitigation licence will need to be sought from Natural England. Whilst the proposed development will result in a loss of habitat connectivity between key habitat areas, these losses will be compensated for through the provision of new habitats, and a range of additional measures, including: the provision of a habitat corridor between Nine Acre Spring and the woodland present to the north of Cleveland Way; the delivery of a new habitat corridor within the Central Open Space, including orchard, trees, SuDS and scrub habitats; and the reversion of an area of arable habitat to grassland, woodland and pond, providing new foraging habitats. Further to this, during the operation of the proposed development, a sensitively designed external lighting scheme will be implemented, to avoid light spill along existing hedgerows, woodland, retained vegetation and all enhanced and newly created habitats.

3.42 Badger activity at the site is confirmed to be high, with a number of setts present within the site, particularly within woodland or hedgerows. It is noted that the removal of a section of hedgerow will require the closure of a badger sett, and a mitigation licence will therefore be sought from Natural England. At this stage, it is anticipated that all other badger setts present on the site will be retained as part of the proposed development. Where construction works are required in proximity to these existing setts, it is proposed that these works also be covered by the mitigation licence, or a relevant separate licence, where required. The setts would be partially or temporarily closed during construction works, and reopened on completion of the works. To mitigate potential road traffic risks to badgers during construction, key badger 'crossover' points will be provided. A number of additional safeguards will also be implemented during construction including, but not limited to: the covering of open excavations or provision of escape ramps; the monitoring of the site for new sett excavation; and the avoidance of night time working within 50m of retained setts, where possible. During the operation of the proposed development, disturbance to badgers will be minimised through the

sensitive design of the external lighting scheme, and the provision of protective shrubs within the Ancient Woodland buffers around retained setts.

- 3.43 The majority of bird species recorded on the site fall within an arable assemblage, with some falling within a woodland assemblage, and some migrant birds also being recorded. The arable fields on the site are considered to provide foraging potential to some species of bird, whilst potential breeding opportunities have been noted to be present within the existing broadleaved woodland. To ensure potential harm to birds is avoided during the construction of the proposed development, any clearance of nesting habitat or features will be undertaken between March and August (inclusive), where possible. Where this is not possible, habitats will need to be checked for nesting birds by a suitably qualified ecologist prior to clearance with works only proceeding if no nesting evidence or behaviour are observed. In addition, to compensate for the loss of relevant habitats, mitigation will be provided within an off-site, set-aside area of land that is within the control of the applicant. This will comprise: new native hedgerow planting; the cessation of intensive arable cultivation; the creation of a shallow pond or scrape within the centre of the field; cultivation and sowing of wild bird seed mix, with annual cutting and sowing/reseeding; and the undertaking of ongoing management.
- 3.44 It is confirmed within Chapter 8 of the Environmental Statement that no evidence of dormice, otter, water vole, brown hare, hedgehog, harvest mouse, reptiles or Great Crested Newt was recorded during surveys undertaken at the site. Further to this, the invertebrate assemblage recorded at the site is not considered to be of ecological importance beyond the local level.
- 3.45 In addition to the mitigation measures set out above, the following ecological enhancement measures are also proposed for incorporation within the proposed development:
- Spatially significant habitats will be provided to the north and east of the site, to strengthen connectivity into the local landscape, and new pond, grassland and woodland habitat will be delivered to achieve a Biodiversity Net Gain (BNG) in excess of 10% on-site.
 - Restoration of former chalk pit habitat to benefit flora, invertebrates and other ecological interests.
 - Exploration of opportunities to veteranize healthy, semi-mature trees within woodland areas.
 - Installation of bird nesting, bat roosting and invertebrate features into new dwellings.
 - Installation of hedgehog friendly fencing within the development, with gaps maintained under fences or garden gates lifted to allow small mammal passage.
 - Inclusion of a range of native species within the landscaping to be delivered across the site, with appropriate wildlife friendly, near-native species to be included in formal settings.

- Designing of SuDS features to maximise their ecological interests, including for wet and dry grasslands, wetland scrub and areas of permanent water.

3.46 The Habitats and Ecology Framework for the proposed development, prepared by CSA Environmental, is shown in Figure 3.6 below.

Figure 3.6 Habitats and Ecology Framework



3.47 Assessments and surveys of the habitats present on the site will be undertaken, with the proposed development targeting a 'Gold' level of performance relating to Ecological Surveys & Assessments. Specifically, the proposed development will:

- Be accompanied by the submission of details of habitat and species surveys undertaken, which will enable the completion of metric baselines. These surveys will be undertaken in line with best practice, and will include a review of existing sources of relevant information, such as the Hertfordshire Environmental Records Centre. Habitats will be evidenced in photographs, which will include the local context of the site and surrounding area, where relevant.

3.48 Ecological surveys have been undertaken, with details of the findings of these surveys set out above, and in more detail within Chapter 8: Ecology & Biodiversity and the associated appendices, prepared by CSA Environmental, of the Environmental Statement which accompanies this submission. Further surveys will be undertaken throughout the detailed design process, and additional information submitted as part of subsequent a Reserved Matter Application(s).

Arboricultural Assessment

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- 3.49 An Arboricultural Impact Assessment has been prepared by CSA Environmental and submitted alongside this document. The Assessment considers the areas of woodland and the individual trees present at the site in the existing case, and confirms the presence of Ancient Woodland both within and adjacent to the site boundaries. As detailed above, in order to avoid negative effects on areas of Ancient Woodland, an appropriate buffer zone of semi-natural habitat of at least 15m should be left between the development and the woodland. Through the implementation of adequate buffers, it is considered that the proposed development will therefore not result in the loss of Ancient Woodland, and will avoid any potentially harmful effects on the areas of woodland located within and adjacent to the site boundaries.
- 3.50 The Arboricultural Impact Assessment also identifies trees present within the site that are covered by tree preservation orders (TPOs), or those which display attributes consistent with being 'Veteran'. And which may therefore be considered to be irreplaceable habitat that contribute to the site's biodiversity, cultural and heritage value. It is noted that, in order to facilitate the delivery of the proposed development, it will be necessary to remove some individuals and groups of trees. Details of the trees that require removal are set out within the Arboricultural Impact Assessment, alongside the measures that are to be employed to mitigate these losses, as well as measures to ensure potential harm to trees that are to be retained are minimised both during the construction and operation of the proposed development.
- 3.51 The proposed development will therefore target a 'Bronze' level of performance relating to Arboricultural Assessment, and a survey of the trees present on the site, and which identifies trees of value and the potential impacts of the proposed development on off-site trees, has been submitted as part of the planning application.

Biodiversity Net Gain (BNG)

- 3.52 Within the Environment Act 2021, a requirement is set out for new development to provide a minimum 10% BNG.
- 3.53 As set out within Chapter 8 of the Environmental Statement which accompanies this submission, a BNG Assessment will be undertaken to identify the quantum of compensation for any habitat losses that may be required. However, as detailed above, at this stage, it is expected that the proposed development will deliver a BNG that is in excess of 10% through on-site means. This will be achieved through the delivery of spatially significant habitats within the site, and the creation of new pond, grassland and woodland habitats.

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- 3.54 The proposed development will seek to achieve a net gain in biodiversity, and will target a ‘Silver’ level of performance relating to Biodiversity Net Gain (BNG). Specifically, the proposed development will:
- Complete the Statutory Metric to assess the baseline condition of the site, and to demonstrate how the mitigation hierarchy has been applied.
 - Target a minimum 10% net gain in biodiversity, with a plan to be submitted demonstrating the locations of the habitats to be retained, enhance and delivered as part of the proposed development.
 - Submit a Habitat Management and Monitoring Plan (HMMP) that sets out how the habitats the contribute to the achievement of a net gain in biodiversity are to be managed and monitored.
 - Deliver on-plot ecological enhancements, such as bat and bird boxes, to provide opportunities for wildlife.
- 3.55 A preliminary BNG Assessment has been undertaken, with results of this assessment set out above, and in more detail within the technical appendices of Chapter 8: Ecology & Biodiversity, prepared by CSA Environmental, of the Environmental Statement which accompanies this submission. Further assessments will be undertaken throughout the detailed design process, and additional information submitted as part of subsequent a Reserved Matter Application(s).

Ecological Buffers

- 3.56 As set out within both the Design and Access Statement, prepared by Icen Projects, and Chapter 8, prepared by CSA Environmental, of the Environmental Statement, which accompany this submission, 15m buffers will be provided to all areas of woodland, including those classified as Ancient Woodland, present within and adjacent to the site boundaries. These buffers will comprise of landscaping dedicated for nature conservation, with no formalised recreational use to be included within these areas, where appropriate. It is intended that defensive, thorny native planting be included within these buffers, and that the proposed development layout prevent the ‘backing on’ of private gardens to woodland, which will aid to prevent the dumping of garden waste. It is noted that an incursion into the 15m buffer to an area of Ancient Woodland will occur along the central section of the proposed access road off Mendip Way, however it is highlighted that the adjoining area of woodland is compromised in the existing case by the overhead powerlines that cross the site, and the need for maintenance access to these powerlines.
- 3.57 In addition to buffers to areas of woodland, the proposed development will incorporate 12m buffers from structural vegetation. Similarly, whilst no international, national or local statutory designations are present within the site, nor the adjacent area, it is intended that 15m buffers be maintained around identified non-statutory designated sites present within and adjacent to the site boundaries, including New Spring Wood LWS, Brooches Wood LWS, Tilekiln Wood and Parsonsgreen Wood LWS, and

Claypithills Spring Wood LWS. As noted above, buffers will include for permanent fencing, behind which natural regeneration of the woodland will be allowed to take place, in combination with the planting of appropriate native shrub and climber species. These planting schemes and their management will be secured via detailed designs and/or suitably worded planning condition(s), including the provision of a site-wide LEMP.

- 3.58 The proposed development will seek to incorporate sufficient ecological buffers with respect to relevant ecological features to target a 'Silver' level of performance relating to Ecological Buffers. Specifically, the proposed development will:
- Account for Natural England's Standing Advice to provide for 15m buffers to areas of Ancient Woodland and veteran trees, where possible.
 - Include for 12m buffers to Sites of Special Scientific Interest (SSSI), Local Wildlife Sites (LWS) and species-rich hedgerow, where feasible.
 - Ensure a 10m riparian zone buffer is provided to watercourses, where applicable.
- 3.59 Details of the ecological buffers to be integrated within the proposed development are set out within the Design and Access Statement prepared by Icen Projects, and Chapter 8, prepared by CSA Environmental, of the Environmental Statement, which accompany this submission. Further details will be submitted as part of subsequent a Reserved Matter Application(s), where relevant.

Sustainable Travel

Transport Statements, Assessments and Travel Plans

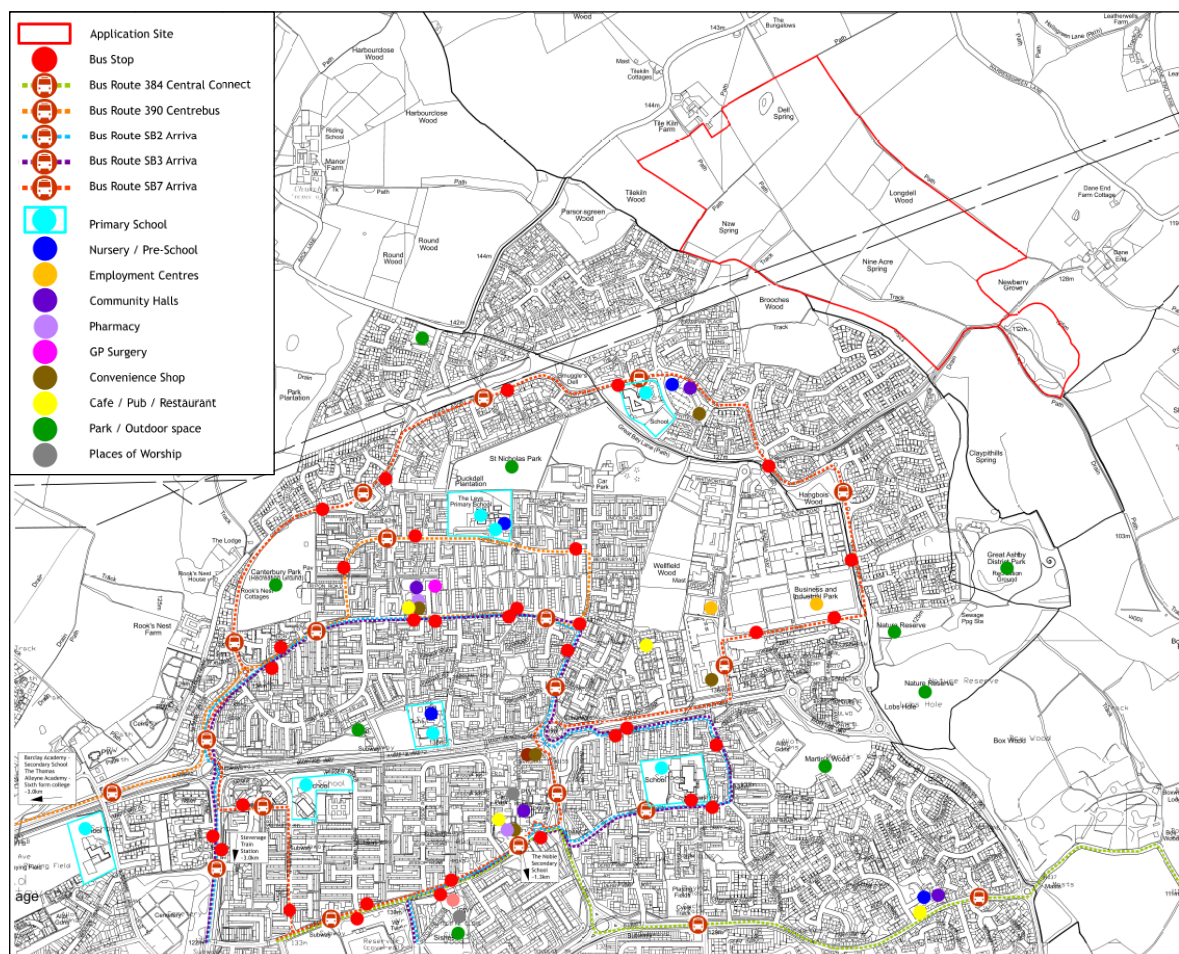
- 3.60 Accessibility to public transport connections contributes to the sustainability of a site's location. As highlighted in the Transport Assessment, prepared by Woods Hardwick, Stevenage railway station is located approximately 5km to the south of the site, in the western extents of Stevenage. This station is served by London North Eastern Railway (LNER), Great Northern and Thameslink services, providing access to a range of destinations including London Kings Cross, London Moorgate, Brighton, Horsham, Peterborough, Harrogate, Cambridge, Leeds and Letchworth Garden City.
- 3.61 Further to the above, the site is served by a number of bus stops, as follows:
- The Beacons, located to the southwest of the site, approximately 300m from the site access. This stop is served by route SB7, which provides access into and around Stevenage.
 - Fairfield Way, located approximately 700m south of the site access. This stop is also served by route SB7.
 - The Leys School, located approximately 1.2km from the site. This stop is served by route 390, which provides access between St Nicholas, Stevenage, and Ware Hertford Regional College.

- St Nicholas Centre, located 1.6km from the site. This stop is served by routes SB2 and SB3, which provide access between St Nicholas and Stevenage Bus Station via a circular route, in addition to route 390.

3.62 It is also highlighted that a wider range of bus services accessible from St4eveange Bus station, which is located approximately 5km to the south of the site, and is accessible via a 19-minute cycle or 13-minute bus journey, via the SB7 route which serves 'The Beacons' bus stop to the southwest of the site access. Stevenage Bus Station offers access to a wide range of destinations, including Hertford, Ware, Bragbury End, Watford, Hatfield, Pin Green, Poplars, Chells, Martins Wood, St Nicholas, Great Ashby, Bishops Stortford, Hitchin, Luton, Broadwater and Weston. Further to this, 'Stevenage Railway Station' bus stop, located approximately 4.8km to the south of the site and accessible within an 18-minute cycle or 11-minute bus journey, provides access to additional destinations, including Coreys Mill and Grange Estate.

3.63 Figure 3.7 below, adapted from the Accessibility Audit prepared by Woods Hardwick, shows the bus routes accessible from the site.

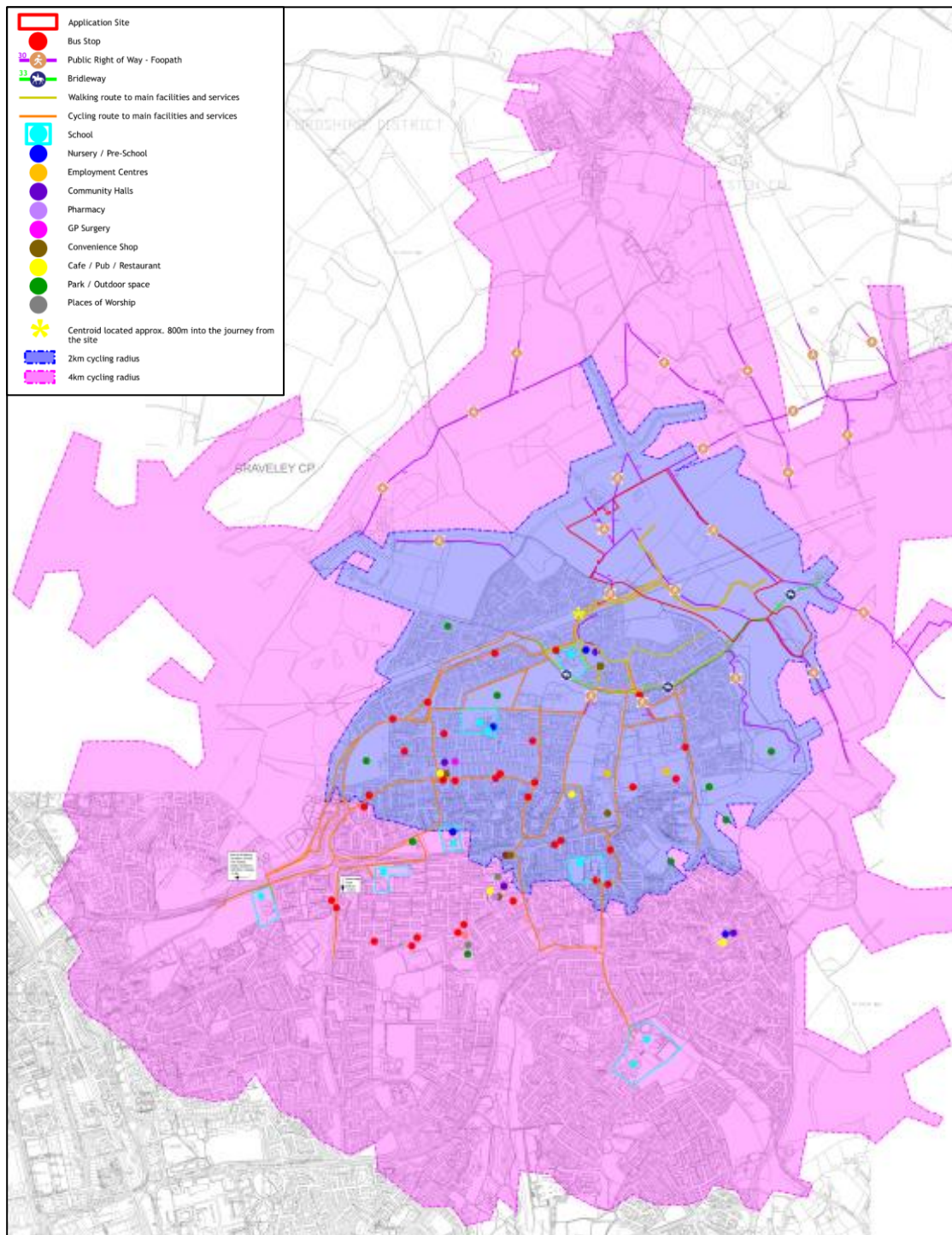
Figure 3.7 Bus Routes and Service Plan



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- 3.64 It is noted within the Transport Assessment that cyclists and pedestrians are generally able to follow the same routes as cars, which are easily navigable to the centre of the town. Pedestrians therefore benefit from the legible design of the roads within the area, and it is noted that the routes through existing residential areas are overlooked by dwellings, ensuring these routes are safe. The existing pedestrian infrastructure on Mendip Way, to the west of the site, extends northwards to Woodfield, and southwards to Pin Green and St Nicholas. This infrastructure provides access to a range of services and amenities, including a convenience store, park, primary school and community centre. As noted above, the existing pedestrian infrastructure on Mendip Way also facilitates access to public transport service, via 'The Beacons' bus stop. It is highlighted that the Highways Authority have requested that parking surveys be undertaken along the route, and where necessary, parking restrictions proposed, to ensure buses can pass through Mandip Way safely.
- 3.65 Further to this, a number of Public Rights of Way (PRoWs) are located at the boundaries of and/or run through the site. These include:
- Bridleway Weston 033, which runs southwest to northeast along the southeastern boundary of the site providing access from Dane End Farm to St Nicholas Park and the Pin Green employment area;
 - Footpath Weston 029, which runs northwest to southeast through the southwestern half of the site, connecting Tile Kiln Farm to Bridleway Weston 033, and linking to Footpath Weston 031 / Walkern 022 which provide an onward connection to the Beane Valley, east of Stevenage;
 - Footpath Weston 044, which delineates the northeastern boundary of the site;
 - Footpath Weston 027, which delineates the northwestern boundary of the site, linking Back Lane and Tile Kiln Farm to Warrens Green Lane;
 - Footpath Great Ashby 011, which connects from Great Ashbey District Centre cross the proposed access corridor to the southwestern edge of the site; and
 - Footpath Weston 026, which connects Merric Close along the eastern edge of Tile Kiln Farm to the junction of Back Lane and Warrens Green Lane through the northern end of the site.
- 3.66 As part of the proposed development, it is intended that the existing bus route SB7 be diverted through the scheme, travelling westbound along Ashby Way before entering Bray Drive and travelling eastbound along Mendip Way from where it will enter the proposed development. Once entering the proposed development, it is expected the service would perform a loop around the internal spine road. With a proposed frequency of 30-minutes, it is expected that this service would provide access to Stevenage Bus Station within 26 minutes, with Stevenage railway station located a 5-minute walk from here.

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- 3.67 In terms of cycling, it is noted that the entirety of Great Ashby, in addition to Stevenage, Shephall, Broadwater, Little Wymondley, Gravelly and Walkern are accessible within a 25-minute cycle of the site access. Furthermore, and as noted above, Stevenage railway station is located approximately 5km to the south of the site, and is therefore also accessible within a 25-minute cycle. This station provides 266 secure cycle storage spaces. In addition, National Cycle Route (NCR) 12 is located to the west of the site, running in a north-south direction through the western extents of Stevenage. NCR12 runs in sections from Enfield Lock to Spalding via Stevenage, St Neots and Peterborough, and facilitates access to nearby settlements including Letchworth Garden City, Sandy and Huntingdon.
- 3.68 Figure 3.8, adapted from the Accessibility Audit prepared by Woods Hardwick, shows the existing pedestrian and cycle infrastructure present within the area surrounding the site, in addition to the facilities and services accessible via these modes of transport.

Figure 3.8 Facilities and Services Plan



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- 3.69 As shown in the Illustrative Masterplan in Figure 1.2 above, it is intended that cycle and pedestrian links be provided into Cleveland Way during the early phases of the proposed development. Further to this, a non-vehicular link is to be provided into Public Bridleway 30, which is to be retained as part of the proposals, in the southwestern corner of the site. Additional non-vehicular links are to be provided to tie into the existing PRowS and pedestrian infrastructure set out above. In addition to this, following the undertaking of Walking Route Audit Tool (WRAT) Assessment, a number of potential improvement options for existing pedestrian routes off Mendip Way (Walking Route 1) and an existing Bridleway (Walking Route 2) are set out within the Transport Assessment including:
- Resurfacing and widening of Walking Route 1 along all its length on eastern side to 2.0m wide, in addition to the removal of overgrown vegetation and the replacement of the surfacing where required.
 - Potential replacement of the existing coloured carriageway surfacing and road markings near the pedestrian crossing by Round Diamond School and the dropped kerb paving on Mendip Way arm.
 - Resurfacing and widening of the Walking Route 2 along all its length to 3.0m wide, improving the street lighting, particularly in the areas of St Nicolas Park and near the Fairfield Way bus stop, and removing the overgrown vegetation.
 - Potential provision of a raised kerb for the Fairfield Way bus stop, and a tactile paving on the equestrian crossing near Fairfield Way bus stop.
- 3.70 Similarly, an audit of existing cycle infrastructure has been undertaken using the Cycling Level of Service Tool and Junction Assessment Tool, with the following potential improvements also set out for cycle routes off the site access to The Leys Primary School (Cycling Route 1) and from the site access to the Employment Area (Cycling Route 3) within the Transport Assessment:
- Cleaning, resurfacing, and widening of Cycling Route 1, improving the street lighting, particularly near schools, and removing the overgrown vegetation.
 - Potential relocation of the BT cabinet located near St Nicolas playground, and the widening of the cycleway in this location.
 - Potential provision of a more direct route by St Nicolas Playground, and the relocation of the bin from the footway on the turn to cycleway by Giles School.
 - Resurfacing, and widening of Cycling Route 3 (particularly through Industrial Estate on Wedgewood Way), improving the street lighting, particularly near schools, and removing the overgrown vegetation. New tactile paving could also be provided, where required.
- 3.71 A Green Travel Plan (GTP) has been prepared for the residential and school elements of the proposed development. This sets out a detailed assessment of the existing sustainable alternatives
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to the private car that are available in the existing case, and the measures that are proposed to achieve an overarching target of 50% of all journeys being made by sustainable modes of transport in the post-development context. Upon occupation, each household will receive a Residential Travel Information Pack, which will contain all relevant transport information, including walking and cycling routes, public transport routes and associated timetable information, and the details of potential bicycle user groups (BUGs), car share schemes and information on access to all educational establishments. The Travel Pack will also promote different ways in which residents can incorporate walking into their commute into work and school including 'National Walk to Work' day, in addition to promoting walking as a recreational or leisure activity to encourage residential to incorporate walking within their day-to-day lives. As noted above, existing BUGs will be promoted, or where none are available in the surrounding area, a site-specific user group will be promoted amongst future residents. This will allow both cyclists and potential cyclists to meet and discuss the best routes in and around their frequented areas of travel, as well as any problems they might encounter. The Travel Pack will also promote national initiatives such as 'Bike Week' and 'Cycle to Work Day'.

- 3.72 In order to promote the use of public transport services, the GTP and Travel Packs will set out several potential benefits of public transport use in lieu of driving. As detailed above, Residential Travel Information Packs will be provided to future residents, containing up-to-date details of bus and rail services, including route and fare information, service frequencies, and real-time mobile apps. Information will also be provided on the benefits of season ticket purchase schemes for bus and rail services. Information will be kept up-to-date by the nominated Travel Plan Coordinator, through regular liaison with bus operators and review of relevant information. Further to this, government initiatives, such as bus fare caps, will be communicated and promoted to encourage the use of public transport. To reduce single occupancy vehicle trips, the Travel Packs will also promote car sharing and its benefits to residents, including through the provision of details of the Liftshare website, which offers a car sharing online platform.
- 3.73 The proposed development will seek to encourage the use of sustainable and active modes of transport, and will target a 'Gold' level of performance relating to Transport Statements, Assessments and Travel Plans. Specifically, the proposed development will:
- Be accompanied by the submission of a Transport Statement and a Travel Plan that set out how the proposed development will facilitate sustainable transport and encourage active travel, with an aim of achieving 50% of local trips by active transport and 50% of all trips by sustainable modes.
- 3.74 The principles of the interventions to be embedded in the design of the proposed development to encourage the use of sustainable and active modes of travel above are set out in the Transport Assessment prepared by Woods Hardwick that accompanies this submission, and the details of their implementation and the associated performance of the proposed development will be confirmed

through the submission of relevant documentation submitted as part of subsequent a Reserved Matter Application(s).

EV Charging

- 3.75 As detailed within the Transport Assessment, prepared by Woods Hardwick, electric vehicle (EV) charging points will be provided in accordance with Part S1 of the Building Regulations.
- 3.76 The proposed development will seek to provide extensive EV charging facilities, and will target a 'Gold' level of performance relating to EV Charging. Specifically, the proposed development will:
- Provide at least one 7kW rated active EV charging point per dwelling.
 - Provide at least one 22kW (or higher) rated EV charging point at mobility hubs and destination locations.
 - Provide one 7kW EV charging point per 200 dwellings for a car club, disabled visitor and other visitor use, in addition to passive provision for an additional EV charging point per 200 dwellings for car club and visitor use.
- 3.77 The principles of the provision of EV charging facilities within the proposed development are set out above and within the Transport Assessment prepared by Woods Hardwick that accompanies this submission, and further details will be provided through the submission of relevant documentation submitted as part of subsequent a Reserved Matter Application(s).

Conserving Water

- 3.78 The majority of England is under water stress, with more water often being consumed than is available during dry weather. As the population continues to grow, and with changes to the frequency of rainfall events projected as a result of climate change, this situation will be further exacerbated, with even greater pressure exerted on the supply of potable water.
- 3.79 In order to actively mitigate against this, it is intended that water saving fittings and appliances shall be installed to target an internal water consumption rate of 105 litres or less per person per day for the residential elements of the proposed development, in line with Part G of the Building Regulations. This allows for an additional 5 litres per person per day for external uses.
- 3.80 It should be noted that methods such as rainwater harvesting and greywater recycling would not be required to achieve the indoor water usage targets associated with this development. Therefore, the installation of water butts for irrigation purposes may be a suitable solution if external water storage is required for the dwellings.

- 3.81 Table 3.1 details example consumption rates associated with the water efficient fittings that may be included within the proposed dwellings to achieve a water consumption rate of no more than 110 litres per person per day, subject to changes at later detailed design stages.

Table 3.1 Proposed water use

Fitting	Consumption per use
Low volume dual flush toilets	6 litres (full) / 3 litres (part)
Wash hand basin tap	3 litres per minute
Kitchen sink tap	4 litres per minute
Bath (where fitted)	180 litres capacity (to overflow)
Shower	8 litres per minute
Washing machine	Recommended – 17 litres/kg
Dishwasher	Recommended – 4.5 litres/place setting

- 3.82 For the non-domestic component of the proposed development, it is recommended that water-efficient fittings, such as low flush volume toilets and low water use spray taps, will be provided to aid the minimisation of internal water consumption. It is also recommended that rainwater harvesting be employed, with collected water used in toilet flushing and other non-potable applications, such as the irrigation of soft landscaping. Additional measures may also be considered for incorporation during the detailed design stage, such as the employment of leak detection systems and solenoid shut-off valves controlled with PIR systems. At this stage, it is expected that, where relevant, the non-domestic buildings to be brought forward as part of the proposed development will seek to achieve at least one credit under the WAT01 category of BREEAM.
- 3.83 At this stage, the proposed development will seek to achieve a minimum 'Bronze' level of performance relating to Conserving Water, with scope to improve this through the detailed design stage, once a nominated contractor is on-board. The measures proposed to achieve a minimum 'Bronze' level of achievement at this stage are as follows:
- Compliance with relevant policy requirements to achieve a level of water consumption that does not exceed 110 litres per person per day for the residential element of the proposed development.
 - Incorporation of measures to facilitate the achievement of at least one credit under the WAT01 category of BREEAM for the non-domestic element.

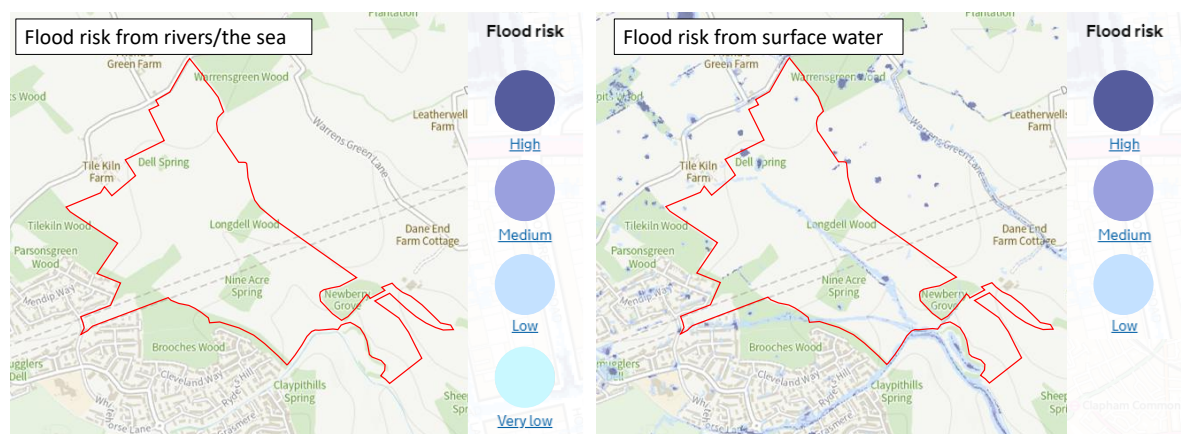
- 3.84 The principles of the provision of measures to minimise water consumption within the proposed development are set out above. Further details will be provided through the submission of a Sustainability Statement(s) submitted as part of subsequent a Reserved Matter Application(s).

Incorporating Sustainable Drainage

- 3.85 As detailed within the Interim Flood Risk Assessment and Drainage Strategy, prepared by Woods Hardwick, and confirmed within Figure 3.9 below, the site is located wholly within Flood Zone 1, indicating a very low risk of flooding from tidal and fluvial sources. The majority of the site is also shown to be at very low risk flooding from pluvial (surface water) sources. There are, however, surface water flow routes present that correlate with the natural valleys of the site. The proposed surface water drainage strategy, set out in more detail below, has been designed to account for these surface water flow routes, and the blue and green corridors to be integrated into the scheme will largely follow these natural flow routes. Where this is not possible, it is intended that surface water flows be diverted towards the features to be delivered as part of the proposed surface water drainage strategy. It is noted that the intention is to divert one of the existing flow paths present within the site to facilitate the proposed development. High level flow calculations have been undertaken for this flow path, which have been integrated into the proposed masterplan. It is also noted that overland flow paths will be taken into further consideration at the detailed design stage, and that flood routing will be measures for incorporation within the site layout, to ensure that surface water flows will be routed away from the most vulnerable areas of the site towards the proposed surface water drainage features.

Figure 3.9 Extract from the Environment Agency's online flood map

 Approximate site boundary

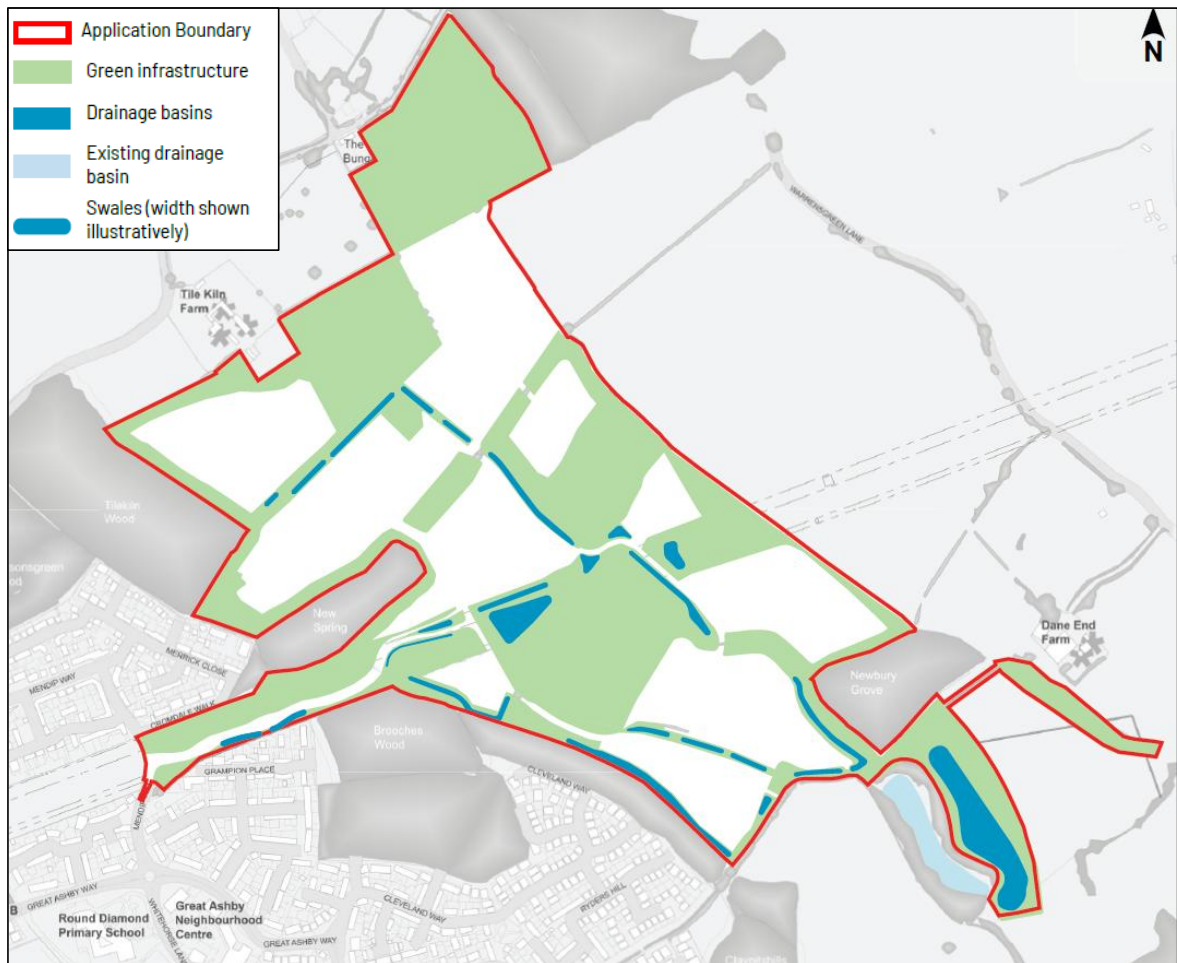


- 3.86 Further to the above, it is confirmed within the Interim Flood Risk Assessment and Drainage Strategy that no groundwater was encountered during drilling and monitoring undertaken by Geotechnical & Environmental Associated Limited. Standpipes were also found to be dry during this monitoring. It is therefore considered that the site is at limited risk of flooding from groundwater sources. In addition, Thames Water sewer records indicate that no existing foul water sewers are present within the site

boundaries, with the closest foul and surface water sewers located along Mendip Way to the west. A sewer flooding enquiry undertaken with Thames Water has also confirmed that there are no records of flooding within the vicinity of the site within the last 20 years. It is therefore considered that the site is not at risk of flooding from this source. Finally, it is also considered that the site and adjacent area is at no risk of flooding from reservoirs.

- 3.87 The proposed surface water drainage strategy, set out within the Interim Flood Risk Assessment and Drainage Strategy prepared by Woods Hardwick, seeks to manage surface water runoff generated within the site by attenuating surface water runoff within a range of sustainable drainage (SuDS) features, including permeable paving, swales and attenuation basins. At this stage, it is intended that three attenuation basins be provided, with the locations shown in the Proposed Drainage Framework Plan in Figure 3.10 below. Surface water runoff will be attenuated within the attenuation basins prior to its discharge to an existing ditch network via a combination of landscaped swales and a piped network at a rate restricted to the calculated Qbar runoff rate of 26 l/s. The proposed surface water drainage strategy has been designed to attenuate flows for storm events up to an intensity of 1 in 100 years + 40% climatic change, and includes for an allowance for urban creep. Details on the treatment of attenuated surface water runoff and the maintenance of the proposed sustainable drainage features are provided in the Interim Flood Risk Assessment and Drainage Strategy, which accompanies this submission.

Figure 3.10 Proposed Drainage Framework Plan



3.88 Through the incorporation of the sustainable urban drainage systems (SuDS) strategy summarised above, the proposed development will seek to target a ‘Silver’ level of performance relating to Incorporating Sustainable Drainage. Specifically, the proposed development will:

- Be accompanied by a SuDS strategy and maintenance plan that ensures surface water runoff generated in the post-development context is managed as close to its source as possible. The Strategy will also ensure that the risk of flooding is not increased downstream, and that a climate change allowance is applied.
- Employ the drainage hierarchy to avoid discharging surface water runoff to a combined sewer where possible.
- Achieve greenfield runoff rates in the post-development context.
- Integrate a SuDS Strategy that has been designed in accordance with DEFRA’s non-statutory SuDS technical standards, and which address the four pillars of SuDS.

3.89 The principles of the SuDS Strategy to be integrated within the proposed development are set out above and within the Interim Flood Risk Assessment and Drainage Strategy prepared by Woods

Hardwick that accompanies this submission, and further details will be provided through the submission of relevant documentation submitted as part of subsequent a Reserved Matter Application(s).

4. SUMMARY

- 4.1 This Sustainability Statement provides an overview as to how the proposed development of the land at GA2, Land north of Great Ashby contributes to sustainable development in the context of the strategic, design and construction considerations.
- 4.2 Consideration has been given to the North Hertfordshire Local Plan 2011 – 2031 and the North Herts Sustainability Supplementary Planning Document in the formulation of this statement. The overall development has been assessed using the guidance outlined in policies SP1 (Sustainable development in North Hertfordshire), SP9 (Design and Sustainability), SP11 (Natural resources and sustainability), SP12 (Green infrastructure, landscape and biodiversity), D1 (Sustainable design), D4 (Air Quality), NE1 (Strategic green infrastructure), NE4 (Biodiversity and geological sites), NE7 (Reducing flood risk), NE8 (Sustainable drainage systems), NE9 (Water quality and environment) and NE10 (Water conservation and wastewater infrastructure) of the North Hertfordshire Local Plan 2011 – 2031, as well as the checklists set out in the North Herts Sustainability Supplementary Planning Document, providing a holistic sustainability approach for the proposals.
- 4.3 Section 3 of this statement demonstrates that the siting and design of the proposals support relevant policy relating to sustainable development. The measures to be incorporated within the proposed development in the context of the themes set out in the North Herts Sustainability Supplementary Planning Document are summarised in Table 4.1 below.

Table 4.1 Sustainability measures to be incorporated within the proposed development

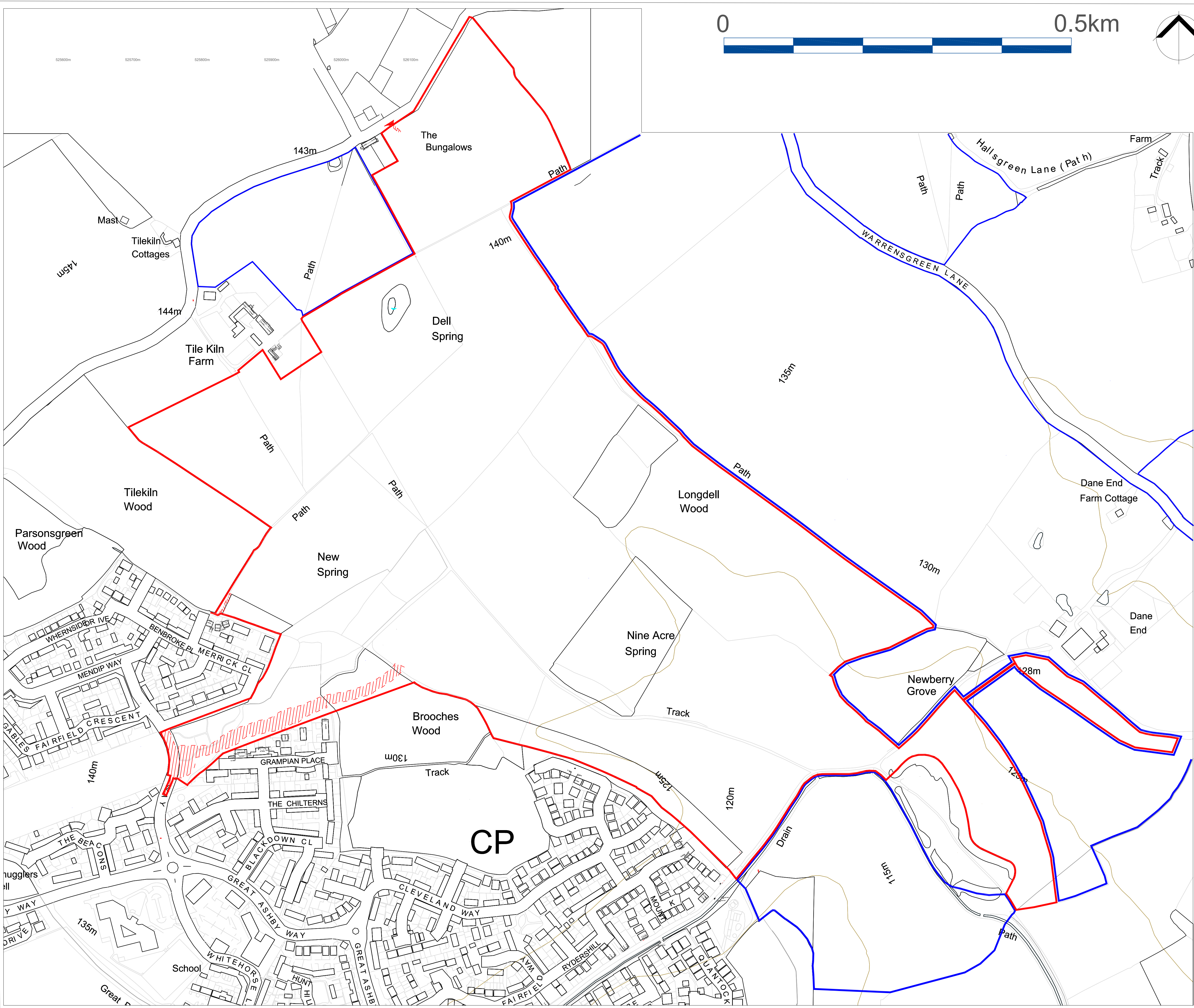
Theme	Targeted Level of Achievement	Proposed Measures
Optimising Passive Design & Fabric Performance	Silver	Targeting of high EPC ratings for all dwellings Submission of Sustainability Statement Targeting a minimum 50% reduction in carbon dioxide emissions over the relevant Building Regulations baseline Targeting of high levels of energy and space heating efficiency

Theme	Targeted Level of Achievement	Proposed Measures
Achieving Low Carbon Energy	Silver	Seek to meet at least 75% of the energy demand of dwellings through renewable technology, such as air source heat pumps (ASHPs) and photovoltaic (PV) panels Provision of roof spaces that have been optimised for the incorporation of PV panels
Whole Life Carbon Assessment	Silver	Provision of Whole Life Carbon Assessments, updated at pre-commencement and pre-occupation stages Targeting of low levels of embodied carbon both related to construction materials, and the operation of the scheme
Circular Economy Principles	Silver	Beneficial re-use of excavation materials on-site Submission of Circular Economy Statement
Green and Blue Infrastructure	Gold	Submission of a Landscape Strategy, mapping play areas, amenities and food growing areas Delivery of Green Infrastructure in line with Natural England's Green Infrastructure Principles, and which provides strategic links
Ecological Surveys & Assessments	Gold	Undertaking of Ecology Surveys supported by photographic evidence
Arboriculture Assessment	Bronze	Submission of Arboricultural Assessment
BNG	Silver	Target 10% BNG on-site Provision of on-plot ecological enhancements

Theme	Targeted Level of Achievement	Proposed Measures
Ecological Buffers	Silver	Implementation of sufficient ecological buffers, in line with National England guidelines
Transport Statement	Gold	Submission of Transport Statement that includes for measures to target 50% of local trips being undertaken by active and/or sustainable modes, such as car clubs and pedestrian / cycle infrastructure
EV Charging	Gold	Provision of EV charging facilities for all dwellings and within mobility hubs
Conserving Water	Bronze	Targeting of residential water consumption of no greater than 110 litres per person per day
SuDS Scheme	Silver	Targeting of greenfield runoff rates through implementation of site-wide SuDS strategy that addresses the four pillars of SuDS

- 4.4 Overall, the proposals for the scheme are in line with the principles of sustainable development as well as the policy requirements of the NPPF and North Hertfordshire District Council, and will provide a development that promotes these principles in operation.

A1. SITE LOCATION PLAN



-  Application Site Boundary: 62.90ha
-  Detailed Application Boundary: 0.80ha
-  Other land within the ownership of the Applicant or their parent company

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CLIENT
Picture Estates Ltd

PROJECT
GA2 - North East Stevenage

TITLE
Application Site Plan

DRAWN BY	SG	CHECKED BY	SG
SCALE @ A1	1:2,500	DATE	JULY_2024
PROJECT NO.	23_M004	DRAWING NO.	DL07
		REV.	D

iceni Projects accept no responsibility for any unauthorised amendments to this drawing.
Only figured dimensions are to be worked to.

A2. GENERAL NOTES

- A2.1 The report is based on information available at the time of the writing and discussions with the client during any project meetings. Where any data supplied by the client or from other sources have been used it has been assumed that the information is correct. No responsibility can be accepted by Iceni Projects Ltd for inaccuracies in the data supplied by any other party.
- A2.2 The review of planning policy and other requirements does not constitute a detailed review. Its purpose is as a guide to provide the context for the development and to determine the likely requirements of the Local Authority.
- A2.3 No site visits have been carried out, unless otherwise specified.
- A2.4 This report is prepared and written in the context of an agreed scope of work and should not be used in a different context. Furthermore, new information, improved practices and changes in guidance may necessitate a re-interpretation of the report in whole or in part after its original submission.
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