Hole Farm Community Woodland

Sustainability Statement Hole Farm

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1 Executive Summary

- 1.1.1 This Sustainability Statement reports sustainable opportunities from a project delivery and engineering perspective in-line with the Brentwood Local Plan 2016-2033. It outlines a Sustainability Strategy which puts forth the approach, objectives and targets for the Project. This includes sustainable energy and carbon reduction measures more specifically, the expected building performance standards, how the Scheme will balance solar gain against overheating risk, the approach to minimising energy demand through careful building design, efficient heating solutions and the renewable energy supply.
- 1.1.2 This Statement also describes how the Project will adapt to climate change, this applies to both the built and external environment and how they interact. It then goes on to detail site waste management, use of materials, biodiversity and ecological improvements, health and wellbeing improvement measures as well as mitigation measures for both air quality and noise.

2 Introduction

2.1 Purpose

- 2.1.1 This Sustainability Statement reports sustainable opportunities from a project delivery and engineering perspective for the hard-infrastructure elements of a community woodland facility ('the Project'), in order to implement initiatives in line with the Brentwood Local Plan 2016-2033 (Brentwood Borough Council, 2022).
- 2.1.2 The Hole Farm Community Woodland project will be designed and constructed in accordance with Forestry England's 'Growing the Future' Plan (Forestry England, 2021) which provides implicit principles for good sustainability performance.
- 2.1.3 Information related to the Project design can be found in Section 1.2 and the proposed Site Layout is provided in Appendix A.

2.2 Project Description

2.2.1 The creation of a community woodland facility comprising: vehicular access into a 94-space car and coach park, with overflow area; gated access to a Public Right of Way; substation; an open sided visitor shelter; a modular café with covered outdoor seating area, bin store, cycle parking and WC facilities; demolition of a grain store and development of a community building including staff welfare and office facilities and outdoor terrace; informal coach, car and cycle parking; demolition of an agricultural machinery store and construction of a Forestry England Barn; service yard and vehicle turning circle; surfaced and unsurfaced woodland paths; creation of ponds; countryside heritage and interpretation and informal natural play areas at Hole Farm Lane, Great Warley, Brentwood, Essex CM13 3JD.

3 Policy Review

3.1 Sustainability Policy and Legal Considerations

- 3.1.1 There are several sustainability policy and legal considerations which form the overarching framework for the Hole Farm project, that it should be designed in accordance with. These are contained within:
 - The National Planning Policy Framework (Ministry of Housing, Communities and Local Government, 2021);
 - The Climate Change Act 2008 (UK Public General Acts, 2008); and
 - Brentwood Local Plan 2016-2033 (Brentwood Borough Council, 2022)

National Planning Policy Framework

- 3.1.2 The National Planning Policy Framework (NPPF) published in 2012 and updated in 2021, sets out the Government's planning policies for England and how these are expected to be applied. The NPPF sets out government planning policy for England and describes ways in which the challenge of climate change can be met.
- 3.1.3 Chapter 14 of the NPPF highlights that planning plays a key role in meeting the challenge of climate change. The Policy also includes the requirements for local authorities to adopt proactive strategies to mitigate and adapt to climate change in line with the provisions and objectives of the Climate Change Act 2008 and co-operate to deliver strategic priorities which include climate change. The Framework also states that local planning authorities should:
 - Adopt proactive strategies to mitigate and adapt to climate change taking full account of flood risk, coastal change and water supply and demand considerations.
 - Limit inappropriate development in areas at risk of flooding, but where development is necessary, making it safe without increasing flood risk elsewhere.
 - Support the move to a low carbon future, by supporting energy efficient improvements to existing buildings and set out requirements consistent with zero carbon building policy.
 - Help to increase the use and supply of renewable and low carbon energy.
 The policy also promotes radical reductions in greenhouse gas emissions,
 minimising vulnerability and providing resilience to impacts of climate
 change, and support the delivery of renewable and low carbon energy and
 associated infrastructure. It also emphasises driving and supporting
 sustainable development and good design.
- 3.1.4 The NPPF also sets out a number of principles which should underpin both plan-making and decision-taking, of which many are relevant to this Sustainability Statement more specifically, planning should:
 - Promote healthy and inclusive places that encourage social interaction, enhance healthy lifestyles and are safe and accessible;

- Seek to secure a high-quality of design and a good standard of amenity for occupants;
- Help conserve and enhance the natural environment, achieve net gains in biodiversity and reduce the impact of all forms of pollution;
- Plan and manage development to make full use of public transport, walking and cycling; and take into account the emerging changes in, and requirements of, the transport industry around electric vehicles and other ultra low emission vehicles; and
- Support the expansion of high quality communications networks which are seen as integral to economic growth and wellbeing (for example the application of full fibre internet connections to the building).

The Climate Change Act 2008

3.1.5 The Climate Change Act 2008 (UK Public General Acts, 2008) is the basis for the UK's approach for tackling and responding to climate change. It originally set a binding target to reduce the UK's carbon emissions by at least 80% in 2050 from 1990 levels, with 15% of UK energy to come from renewable sources by 2020. In June 2019, this target was replaced with achieving net zero emissions by 2050.

Brentwood Local Plan 2016-2033

3.1.6 Brentwood Local Plan (Brentwood Borough Council, 2022) provides a 17-year plan. The below section outlines the key Sustainability and Climate Change objectives that will be addressed within this Statement:

Strategic Policy BE01: Carbon Reduction and Renewable Energy

- 3.1.7 Development must meet the minimum standards of sustainable construction and carbon reduction, more specifically:
 - New Non-residential development will be required to achieve a certified 'Excellent' rating under the BREEAM New Construction (Non-Domestic Buildings) 2018 scheme, or other equivalent standards.
- 3.1.8 Major development is required to provide a minimum of 10% of the predicted energy needs of the development from renewable energy.
- 3.1.9 Part 3 of this Policy outlines those issues to be covered within a Sustainability Statement, namely:
 - Adaptation to climate change;
 - Carbon reduction;
 - Water management;
 - Site waste management;
 - Use of materials; and
 - The consideration of how the proposal will meet all other policies relating to sustainability.

Policy BE02: Water Efficiency and Management

3.1.10 Sets out the minimum standards for water efficiency, outlines that best practice wastewater and sewage practices should be utilised and ensures that all developments have a general regard to the quality of water (utilised by the Project and in the surrounding area).

Policy BE03: Establishing Low Carbon and Renewable Energy Infrastructure Network

3.1.11 Provides support for the use of innovative approaches to renewable energy infrastructure/decentralised energy usage.

Policy BE04: Managing Heat Risk

3.1.12 Outlines the necessity for development proposals to consider the potential for internal heat gain/overheating as a result of rising temperatures.

Policy BE05: Sustainable Drainage

3.1.13 In accordance with this Policy, all developments should incorporate appropriate Sustainable Urban Drainage Systems (SuDS) that meet the outlined design criteria (Essex County Council SuDS Guide (2020)), achieve a greenfield runoff rate (where applicable), submit a water Drainage Strategy and steps to be taken if the development is in a Critical Drainage Area.

Policy BE09: Sustainable Means of Travel and Walkable Streets

3.1.14 Sustainable modes of transport should be prioritised in new developments to promote accessibility and integration with the wider community and existing networks. Priority should be given to cycle and pedestrian movements and access to public transport.

Policy BE11: Electric and Low Emissions Vehicles

3.1.15 Development proposals should wherever possible maximise the opportunity of occupiers and visitors to use electric and low emission vehicles, and maximise the provision of electric vehicle charging/plug-in points and/or the space and infrastructure required to provide them in the future.

Strategic Policy NE01: Protecting and Enhancing the Natural Environment

3.1.16 This policy outlines the requirement for development proposals to use natural resources prudently and protect and enhance the quality of the natural environment. All proposals should, wherever possible, incorporate measures to secure a net gain in biodiversity, protect and enhance the network of habitats, species and sites (both statutory and non-statutory) and avoid negative impacts on biodiversity and geodiversity.

Strategic Policy NE02: Green and Blue Infrastructure

3.1.17 Outlines the need for proposed development to maximise opportunities to enhance and/or restore existing GBI provision and/or create new provision.

Strategic Policy NE08: Air Quality

3.1.18 Outlines the requirements surrounding air quality and a development proposal's ability to minimise exposure to existing poor air quality and where possible, improve local air quality.

Strategic Policy NE09: Flood Risk

3.1.19 Development proposals should avoid areas of flood risk. A site-specific Flood Risk Assessment (FRA) must assess all potential sources of flooding.

4 Sustainability Approach

4.1 Introduction

- 4.1.1 In order to set standards of good management, this Sustainability Strategy sets out the approach, objectives and targets in line with the Brentwood Local Plan 2016-2033. The primary objective of this Document is to develop the Sustainable Development Strategy from a project delivery and engineering perspective by highlighting opportunities where the Project should implement initiatives.
- 4.1.2 The following sections set out the sustainable design and construction initiatives and the commitments of the project in relation to the policy objectives and key sustainability drivers.

4.2 Sustainable Energy and Carbon Reduction

4.2.1 This section outlines the building performance standards expected, how the Project will balance solar gain against overheating risk, the approach to minimising energy demand through careful building design, efficient heating solutions and renewable energy supply.

The Energy Hierarchy

4.2.2 The Energy Hierarchy (see Figure 3.1) underpins the entire approach to building performance for this development, thus prioritising a reduction in the demand for energy through thermally efficient, easily controlled, well designed and orientated buildings.

Conservation: Behaviour change to reduce demand and waste

Demand Efficiency: Improved thermal design and orientation, energy efficiency measures and technologies.

Zero Carbon: Exploitation of renewable sources of energy.

Low Carbon: Exploitation of non-sustainable sources using low carbon technologies (biomass, heat pumps etc.)

Conventional Sources: Fossil fuel use.

Figure 3.1: The Energy Hierarchy

Least Preferred Option

- 4.2.3 The building is designed for high thermal performance with form and orientation laid out to receive sunlight along the long south side and through the clerestory fenestration in the roof pitch, providing natural light and warming the thermal mass of the north wall. The north side of the building has limited openings in order to retain thermal mass.
- 4.2.4 The large scale fenestration on the south-west corner of the community space and the clerestory glazing above, provide good daylighting from dawn to dusk throughout the year.
- 4.2.5 Designs, development studies and further information surrounding the orientation, sunlight and daylighting of the Project can be found in the Design and Access Statement.

Energy Efficient Building Envelope

Thermal Elements

4.2.6 The buildings would be energy efficient structurally to maintain comfortable temperatures while minimising energy demand. To facilitate this, the individual elements (wall, roof and floor) would be thermally efficient, and the construction would ensure that thermal bridges are minimised through considered and good design. The warm nature of timber construction is beneficial in the minimising of thermal bridges in the building construction.

Ventilation and Air Tightness

- 4.2.7 The air tightness of a building is also important in reducing heat loss and the prevention of draughts. The target for the Project would be to ensure buildings are built with an air permeability level of 5m³ /m²@50Pa or less. This will help reduce the size of the required heating system; thus, reducing energy use and associated carbon emissions.
- 4.2.8 The drive for air tightness will need to be matched by correctly designed ventilation. For example, the tower to east above the main entrance lobby not only reflects the existing grain store tower but provides passive ventilation for the office space. Actuated openable rooflights in the tower roof work in conjunction with louvres to the internal wall to the office, pulling air through the building utilising the stack effect for passive ventilation.

Residual temperature management and water heating

4.2.9 The passive heating and cooling strategy minimises energy requirements for heating and cooling. Residual requirements for further heating and for hot water are to be met with low energy systems utilising Air or Ground Source Heat Pumps (ASHP) in conjunction with Mechanical Ventilation Heat Recovery (MVHR) where further ventilation is required for toilets, kitchens and the office.

Renewable Technology and Energy Supply

- 4.2.10 Local Plan policy BE01 requires that <u>major</u> development proposals provide a minimum of 10% of the development's predicted energy needs from renewable energy. The proposals for Hole Farm constitutes a major development (being over 1,000m2 in floor area) and is therefore required to meet this target.
- 4.2.11 The Community Building has made provision for 24 solar photovoltaic (PV) panels and the Forestry Barn 102 PV panels. This is expected to generate approximately 36,750 kWh/m²/year.

Lighting, Fixtures and Fittings

- 4.2.12 Further energy savings would be made by maximising the efficiency of appliances, lighting, fixtures and fittings.
- 4.2.13 All electric lighting would be energy efficient. All appliances installed would be high efficiency, further minimising the use of both electricity and hot water.
- 4.2.14 At present, no street lighting is proposed. However, if there were to become a necessity for street lighting for the associated access road it would use LED technologies to further minimise lifetime energy use and associated emissions. Furthermore, the lighting design would be focused on areas where lighting is necessary and where practicable, avoid upward lighting, this would reduce the potential for glare as a result of street lighting.

Sustainable Transport Options

- 4.2.15 Local Plan policy BE09 requires that new development proposals prioritise sustainable modes of transport to promote accessibility and integration with the wider community and existing networks.
- 4.2.16 The site at Hole Farm satisfies these requirements, being in an accessible location for the local community and beyond to take advantage of the green space.
- 4.2.17 There is a surfaced path specifically connecting the visitor hub to the nearest bus stop on the B186 integrated into the woodland design to provide an off road sheltered route to access the Project away from the road traffic. The nearest bus stop is on Great Warley Street and is approximately 410m south of the proposed site access road which are serviced by buses which run between St Helens School and Grays Bus Station. Brentwood Rail Station is approximately 13 minutes away by bus.
- 4.2.18 There are opportunities for cycling from Brentwood and other local areas. Cycle parking will be provided on site in line with local requirements: a bike store will be available for secure cycle parking.

Provision of Electric Vehicle Charging Points

- 4.2.19 Increasingly, energy and transport systems are becoming interlinked as the nation transitions from the use of petrol and diesel vehicles to zero emission solutions based around electric vehicle (EV) charging and cleaner, hydrogen-based fuels.
- 4.2.20 Local Plan policy BE11 encourages developers to maximise the provision of EV charging and/or the space to provide them in the future. The Applicant has therefore committed to designing and incorporating a minimum of 14 EV Charging Points for both employee and customer usage.

Construction Energy

- 4.2.21 Site-wide construction emissions should be minimised where practicable. To ensure this, a BREEAM pre-assessment has been undertaken. The BREEAM pre-assessment evaluates the Project against the BREEAM criteria to identify a suite of credits that could be achieved. The Project would be required to be BREEAM 'Excellent'. Specific measures through which this will be achieved are outlined within the BREEAM pre-assessment submitted with this Application.
- 4.2.22 The Principal Contractor shall be required to provide and submit all necessary evidence to the appointed BREEAM Assessor; and where the design is the responsibility of the Contractor or where design information has changed, the Contractor shall be required to demonstrate compliance with the relevant BREEAM assessment criteria, to the satisfaction of the appointed BREEAM assessor. This would ensure that working methods are implemented that would reduce energy consumption and aim to continually improve energy efficiency.
- 4.2.23 In order to demonstrate a compliance with targets for energy consumption, the Principal Contractor is required to report the total carbon dioxide emissions (total kgCO₂/project value) from the construction process via the BREEAM Assessment Scoring and Reporting tool.
- 4.2.24 The Principal Contractor is also required to register with the Considerate Constructors Scheme (CCS) and achieve scheme certification and a CCS score of a minimum of 13 points per section and 39 overall.

4.3 Adaptation to Climate Change

- 4.3.1 Predictions suggest that London and surrounding areas, such as Brentwood, will face warmer, wetter winters and hotter, drier summers with increased incidences of storm and flooding (Met Office, 2018 (UKCP18)). Therefore, the ability of the Project to adapt to anticipated future changes in the climate is an important aspect of its longevity. The principle of adaptation applies to both the built and external environment, and indeed how they interact.
- 4.3.2 The Brentwood Local Plan requires that development proposals include measures to adapt to climate change through careful and considered design. This section details how the Applicant is addressing this for the Hole Farm project.

Reducing Overheating Risk through Design

- 4.3.3 As outlined in Section 4.2, large scale fenestration on the south-west corner of the community space and the clerestory glazing above provide daylighting from dawn to dusk throughout the year.
- 4.3.4 Overheating and glare have been modelled and found to not be a risk due to the orientation of the building. The fenestration was informed and tailored in an iterative design process utilising 3D modelling of site daylighting throughout the year and working with MEP modelling software to review.

The Multiple Benefits of Open Space and Vegetation

- 4.3.5 The Project would provide multiple benefits in a changing climate. From a microclimatic perspective, the trees would help provide a comfortable external environment in hot periods whilst reducing heat gain in buildings, therefore decreasing the need for mechanical cooling.
- 4.3.6 The trees would also contribute to the reduction of wind speeds thus improving comfort levels via a reduction in air infiltration into buildings on windier days. Trees also sequester Carbon Dioxide (CO₂) and improve air quality through dry deposition of gases (including Nitrogen Oxide (NO_x), Sulphur Oxide (SO_x), Particulate Matter 10 (PM10) and Ozone (O₃) whilst also helping reduce levels of ambient noise.
- 4.3.7 Retaining mature trees and hedgerows, providing additional native planting and adding bird boxes and hedgehog friendly features will also help enhance the Site's biodiversity.
- 4.3.8 The increased woodland cover that would be provided by the additional planting is also anticipated to sequester more soil carbon through the natural development of humus.
- 4.3.9 Section 3.9 outlines the human health and wellbeing benefits of open space and vegetation.

4.4 Flooding and Water Management

- 4.4.1 Climate change is likely to impact water supply and management due to increasing irregularity in precipitation patterns and a higher likelihood of droughts. Protecting and conserving water supplies and resources in a sustainable manner is seen as an urgent priority.
- 4.4.2 The Design team would seek to protect and enhance the water environment through careful design. This would include identifying drains, designing operational pollution prevention measures and incorporating sustainable drainage systems where practicable and appropriate. The design should take steps so that no new pathways are opened up that could cause migration of pollutants from the site.
- 4.4.3 A Flood Risk Assessment (FRA) has been conducted to support the application. The FRA considered all sources of flood risk, surface water and groundwater flooding were both considered to be potential.
- 4.4.4 The FRA assesses the risk of flooding to the Project from all potential sources and demonstrates how the Project is designed to be resilient to flooding over its lifetime whilst not increasing flood risk to third party land. It also reviews the development proposals for compliance with NPPF and local flood risk management policies.
- 4.4.5 Flood risk mitigation measures have been identified and comprise the following:
 - The Environment Agency's Climate Change Allowances (Environment Agency, 2022) would be incorporated in the highway drainage design.
 - The vertical alignment of the access road would be designed such that surface water runoff can freely drain to a discharge point under gravity.
 - The level of impermeable surfaces would be set high enough to allow runoff to freely drain to a discharge point under gravity.

- The retention pond would have sufficient freeboard to accommodate Upper end peak rainfall intensity allowance for a 1 in 100 year event.
- Watercourse connectivity would be retained.
- The use of culverts would only be included where unavoidable.
- The access road and the floor level of new structures would be raised or protected to mitigate groundwater flood risk.
- 4.4.6 Hole Farm and the surrounding area is not identified as within a 'Critical Drainage Area' in the Brentwood Local Plan. However, in-line with Policy PE05 the Project would incorporate appropriate Sustainable Urban Drainage Systems (SuDS) that meet the outlined design criteria (Essex County Council SuDS Guide (Essex County Council, 2020)). The Drainage Strategy accompanying this Application reflects these requirements, detailing how surface water flows will be managed through the integration of permeable hard and soft surfacing. The Drainage Strategy should be referred to for full details in this regard.
- 4.4.7 Where practicable, the Drainage Strategy will aim to maximise opportunities for biodiversity net gain. For example, the Drainage Strategy uses vegetated SuDS and ties aesthetically with landscaping proposal to provide biodiversity benefits along with satisfying hydraulic requirements.

4.5 Site Waste Management

- 4.5.1 The Principal Contractor would manage waste in accordance with the waste hierarchy. The waste hierarchy gives the highest priority to preventing waste from arising and shall be incorporated by the Client, Designer and Principal Contractor where practical into all stages of the project. The Principal Contractor is expected to adopt waste minimisation practices to prevent and minimise waste as far as possible throughout the construction phase, this will include:
 - Providing site induction and training to staff.
 - Identifying waste streams and planning for their management.
 - Identifying suitable locations for the efficient separation and storage of waste prior to removal from site to encourage higher levels of recycling.
 - Identifying opportunities for the on-site reuse of materials including excavated materials.
 - Re-using scaffolding, hoarding and other such materials on subsequent construction projects.

- 4.5.2 Operational waste would be minimal and recycling facilities would be included within the Project for employee and customer waste. Once the facilities are operational, the quantities of waste generated are not expected to increase to a level which would impact local waste facilities and would be managed under an operational site waste plan.
- 4.5.3 Waste minimisation will be underpinned by education and awareness throughout all levels of the project team, from the design team to site contractors who handle the construction materials via site inductions and monthly toolbox talks which all contractors and site workers should be expected to attend.

4.6 Use of Materials

- 4.6.1 Materials to be used on the development would be sourced using suppliers that have recognised environmentally focused accreditations and management systems such as ISO:14001. All timber would be sustainably sourced with full FSC or PEFC accreditation, and materials derived from recycled or reused products would be specified where appropriate.
- 4.6.2 Local suppliers of materials would be used where viable, and the buildings would be designed with a palette of materials that is both appropriate and in keeping with the local architectural vernacular. As such the form of construction would not require the use of unusual materials, those with significant environmental impact or those that require significant off-site processing and development.

4.7 Biodiversity and Ecological Improvements

- 4.7.1 The biodiversity mitigation hierarchy underlines the decision made during the design process. Each step of the hierarchy will be considered carefully from the top before moving to the next stage to ensure the best options are selected. The hierarchy is made up of the 3 stages: Avoidance, Mitigation and Compensation, with avoidance the preferred option and compensation the least preferred option. In addition, there is the opportunity to enhance the Site alongside the stages of the hierarchy.
- 4.7.2 The Ecological Impact Assessment outlines the mitigation strategy implemented for the potential impacts of the Project to species on site. It concludes that the Project will generate a BNG score of 92.7%, 7.05%, and 58.10% increase in area, linear, and river habitats respectively. This is mostly generated through the replacement of agricultural cropland with grassland and woodland, and the enhancement of pre-existing habitats.

4.8 Air Quality

- 4.8.1 During the construction phase, the Project is not likely to give rise to any pollutants which are hazardous, toxic or noxious. However, there would be dust and emissions for example, from construction vehicles which require consideration.
- 4.8.2 During Construction, air quality would be managed through best practice mitigation measures, limiting any potential effects on local receptors.

4.8.3 The Contractor would, as far as reasonably practicable, seek to control and limit dust, vehicle emission and other potential pollutant levels so that occupiers of affected residential properties and other sensitive receptors are protected from potential air quality impacts from the construction activities.

4.9 Health and Wellbeing

- 4.9.1 The Project utilises a landscape-led design approach that would protect and enhance an area of local environmental value, providing a biodiverse, clean and functional environment that would assist in providing biodiversity net gains.
- 4.9.2 In line with Public Health England's 'Improving Access to Greenspace' (Public Health England, 2020), greenspace can play an important role in promoting good public health. Increased exposure to a greener environment can have a range of favourable physiological and mental health and wellbeing outcomes. The Project would provide an accessible green space for local people and a facility that encourages social interaction. The Project would therefore promote a healthier and more active lifestyle for the local population.

4.10 Noise

- 4.10.1 Best Practicable Means (BPM) of noise control will be applied during construction works to minimise noise (including vibration) at neighbouring residential properties and other sensitive receptors arising from construction activities.
- 4.10.2 There could be temporary, indirect noise impacts resulting from construction traffic. The estimates of construction traffic by within the Transport Statement indicate flows would be low.
- 4.10.3 The Contractor would, as far as reasonably practicable, seek to control and limit noise and vibration levels so that occupiers of affected residential properties and other sensitive receptors are protected from excessive or prolonged noise and vibration from the construction activities.

5 Summary

- 5.1.1 This Sustainability Statement has been produced to detail how sustainable design features have been implemented on the development at Hole Farm.
- 5.1.2 Throughout this Statement, national and local planning policy objectives and standards have been addressed to demonstrate the Applicant's commitment to these issues.
- 5.1.3 A summary of the recommendations made in order to achieve relevant policy requirements are provided in Appendix B. Overall, the proposals for the development meet the requirements of the current planning policy framework in respect of energy and sustainable design.

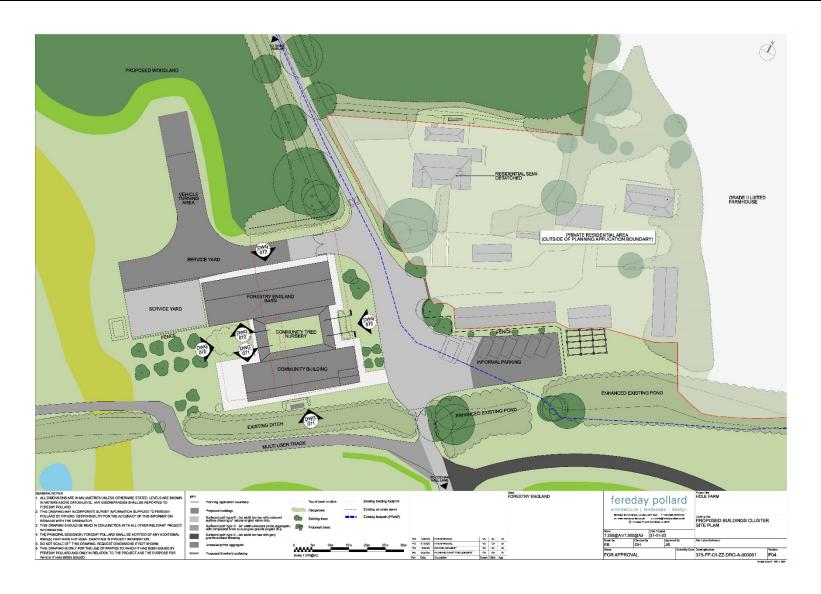
6 References

- Brentwood Borough Council (2022) Brentwood Local Plan 2016-2022.
 Available online:
 - https://www.brentwood.gov.uk/sites/default/files/documents/20124/533660/Brentwood+Local+Plan+2016-2033+Adopted+March+2022.pdf (Accessed: 3 November 2022).
- Environment Agency (2022) Flood Risk Assessments: Climate Change Allowances. Available online: https://www.gov.uk/guidance/flood-riskassessments-climate-change-allowances (Accessed: 1 February 2023).
- Essex County Council (2020) The Sustainable Drainage Systems Design Guide for Essex 2020. Available online:

(Accessed: 7 November 2022).

- Forestry England (2021) Growing the Future 2021-2026. Available online: https://www.forestryengland.uk/sites/default/files/documents/Growing%20the%20future_2021_26%20%283%29.pdf (Accessed: 7 February 2023).
- Met Office (2018) UK Climate Projections 2018. Available online: https://www.metoffice.gov.uk/research/approach/collaboration/ukcp (Accessed: 4 November 2022).
- Ministry of Housing, Communities and Local Government (2021) National Planning Policy Framework. Available online: https://www.gov.uk/government/publications/national-planning-policy-framework--2 (Accessed: 3 November 2022).
- Public Health England (2020) Improving Access to Greenspace: A new review for 2020. Available online:
 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904439/Improving_access_to_greenspace_2020_review.pdf (Accessed: 7 November 2022).
- UK Public General Acts (2008) Climate Change Act 2008. Available online: https://www.legislation.gov.uk/ukpga/2008/27/contents (Accessed: 3 November 2022).

Appendix A: Proposed Site Layout



Appendix B: Summary of Recommendations

Section		Policies Addressed	Key Recommendations
3.2	Sustainable	Brentwood	5 W W
3.2	Energy and Carbon Reduction	Policies BE01, BE03 and BE04	 Follow the priorities of the Energy Hierarchy. The individual elements (wall, roof and floor) would be thermally efficient, and the construction will ensure that thermal bridges are minimised through considered and good design. Air permeability levels should be 5m3 /m2@50Pa or less. Install energy efficient lighting and appliances. There is a provision for
			approximately 126 solar photovoltaic (PV) panels.
3.2	Sustainable Transport and Electric Vehicle Charging	Brentwood Local Plan Policies BE07,	 Provide a minimum of 14 electric vehicle charging points. An accessible footpath to a local bus stop would be developed.
	3 3	BE09 and BE11	 A secure bike shed would be provided.
3.3 and 3.4	Adaptation to Climate Change	Brentwood Local Plan	 The surrounding trees would help provide a comfortable external environment in hot periods whilst reducing heat gain in buildings.
		Policies BE01, BE04, BE05 and NE09	 Retain existing trees and hedgerows on the Site and plant additional native species throughout the Site.
			 Closely follow the FRA recommendations and mitigation measures as well as the Drainage Strategy.
3.5 and 3.6	Materials and Waste Management	Brentwood Local Plan	 Source materials from suppliers with environmental accreditations, using local suppliers where practicable.
		Policy BE01	 Ensure contractors implement strict waste management processes and

			commit to Considerate Constructor Scheme. - Consider opportunistic on-site reuse of materials where feasible.
			 Provide sufficient and accessible bin storage to facilitate waste management and recycling.
3.7	Biodiversity and Ecological Enhancement	Brentwood Local Plan Policy NE01	- The Project would lead to a biodiversity and ecological improvement. See the Ecological Impact Assessment for more detail.
3.8	Air Quality	Brentwood Local Plan	 During Construction, air quality would be managed through best practice mitigation measures.
		Policy NE08	 The Contractor would, as far as reasonably practicable, seek to control and limit dust, vehicle emission and other potential pollutant levels.