

Environmental Statement - Volume 3 - Non-Technical Summary

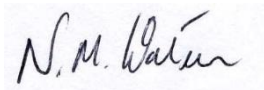
**Barratt Homes, C J Trembath and Buildings Farm Partnership
Land West of Woodside Way, Great Dunmow
20 December 2013**

Quality Assurance

Site name: Land West of Woodside Way, Great Dunmow
Client name: Barratt Eastern Counties
Type of report: Environmental Statement Non-Technical Summary

Prepared by: Neil Waterson BA (Hons) DipTP MRTPI AIEMA

Signed



Date 20 December 2013

Reviewed by: Andrew Balckwell MRTPI

Signed



Date 20 December 2013

A copy of the Environmental Statement and Appendices may be viewed at Uttlesford District Council, London Road, Saffron Walden, Essex CB11 4ER.

This Non-Technical Summary is available free of charge. Paper copies of the Environmental Statement and Supplementary Environmental Statements, together with the technical appendices can be purchased from Bidwells at a cost of £520.00. Alternatively, a CD containing the documents can be provided at a cost of £15 (prices are inclusive of VAT). The Non-Technical Summary is available free of charge.

Comments on the application proposals and the Environmental Impact Assessment should be directed in writing to Uttlesford District Council.

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1 Introduction

- 1.1 Barratt Homes, C J Trembath and The Buildings Farm Partnership are seeking outline planning permission for land to the west of Woodside Way, Great Dunmow, Essex. The planning application is for: up to 790 homes; community buildings; a one form entry primary school; playing fields with ancillary buildings (dual use with local schools and the local community); allotments and supporting road and drainage infrastructure. The application is submitted in outline, with all matters reserved for subsequent approval.
- 1.2 The Local Planning Authority (LPA), Uttlesford District Council (UDC), considers that the proposals constitute EIA Development for the purposes of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 ('the EIA Regulations') and, as such, an Environmental Statement (ES) is required.
- 1.3 An assessment of the potential environmental effects of the proposed development has therefore been undertaken and the detailed assessment and its results are presented in the Environmental Statement (ES) (Volume 1) and Technical Appendices (Volume 2). This report is the Non-Technical Summary (NTS) of the Environmental Statement, which briefly outlines the background to the proposals and the EIA process and then summarises the potential environmental effects which may arise as a result of the proposed development.

2 The Site and its Context

The Site and its surroundings

- 2.1 The application site is located on the western edge of Great Dunmow approximately two kilometres from the town centre. The site comprises circa 53 hectares (ha) of land to the west of Woodside Way and north of Stortford Road, Great Dunmow. The site is currently undeveloped and is arable agricultural land.
- 2.2 The Site is roughly square in shape and is bounded by natural and man-made features: to the southern boundary is Stortford Road – the B1256, formerly the A120; to the east is Woodside Way; adjacent to the north-eastern site boundary is Hoglands Wood, a Local Wildlife Site recognised for its ancient deciduous woodland; to the north are hedgerows and a small watercourse. High Wood Site of Special Scientific Interest (SSSI) borders the western boundary.
- 2.3 Vehicular access to the site is obtained via Woodside Way to the east which provides access to the A1256 Stortford Road to the south. The application site boundary includes a strip of land to provide new access junctions on to Woodside Way and Stortford Road. A public footpath runs through the Site from Stortford Road to Woodside Way, following the line of existing field boundaries.
- 2.4 When viewed in the wider context, Great Dunmow is located at an important interchange on the A120 which provides direct links with the M11 to the west, A12 to the east, and the B1008 (formerly the A130) which runs southward towards Chelmsford.
- 2.5 The Site itself is characterised by gently undulating farmland. It is a generally open landscape with scattered trees and a network of hedgerows, tracks and ditches along its field boundaries.

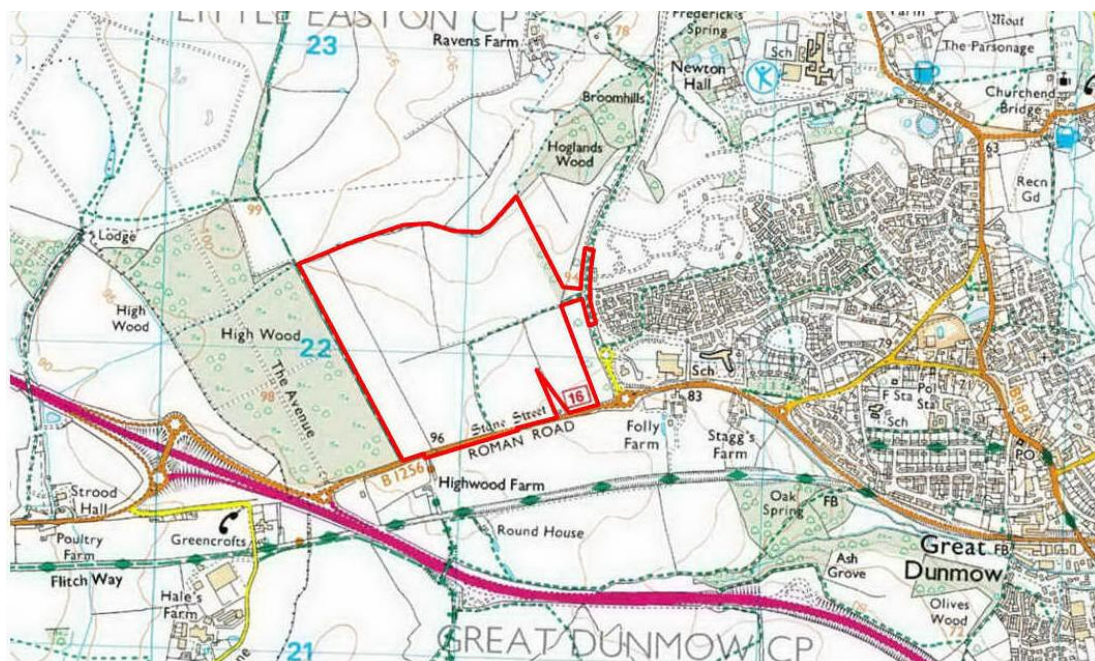


Image 1: Site Plan

- 2.6 The Site is on the road frontage of B1256 which is Roman Stane Street running from Braughing to Colchester and is one of the major Roman highways in Essex. There are no visible, above-ground heritage assets on the site, however, there are a number of areas of potentially significant archaeology which have been identified through the geophysical survey. There are no Scheduled Monuments or Registered Battlefields on or directly adjacent to the Site. However, there are two Listed Buildings located within 500 metres of the Site.
- 2.7 The Site does not contain any surface water bodies and is located within Flood Zone 1 on the Environment Agency flood map, which indicates that the site is at a low risk of flooding.
- 2.8 A strategic oil pipeline, delivering fuel to Stansted Airport, passes through the western half of the site from north to south. For technical reasons nothing can be built on top of the service route.

Planning Context

- 2.9 The Uttlesford Draft Local Plan was published for consultation in June 2012 and set out the District's housing, employment and other needs for the period to 2028. With regard to housing the Plan seeks to provide a total of at least 9,780 new homes within Uttlesford during the period, from 2001 to 2028, including a residual requirement for 3,314 additional dwellings to be provided for within the District by 2028.
- 2.10 In order to meet these requirements, the Draft Local Plan seeks to direct the majority of this growth to the market towns within the District, particularly the main towns of Great Dunmow and Saffron Walden. Accordingly, Draft Policy SP6 'Housing Strategy' seeks to secure the development of a minimum of 1,150 new dwellings on the southern and western edges of Great Dunmow. In accordance with this strategic requirement, Draft Great Dunmow Policy 1 allocates Land north of Stortford Road and west of Great Dunmow for a minimum of 850 residential dwellings.

- 2.11 As part of the development of its Local Plan, UDC published a Local Plan Position Statement in March 2013 which indicated the Council's intention to make a number of changes to the Draft Local Plan in response to previous consultation responses. This included changing the end date of the plan from 2028 to 2026, removing references to a minimum number of dwellings within the various site allocation policies and a number of minor amendments to Draft Great Dunmow Policy 1.



Image 2: Extract from the Local Plan Position Statement – Great Dunmow Policy Area 1 – Land West of Woodside Way

3 The Proposals

- 3.1 The outline planning application seeks permission for up to 790 homes, including primary school, community buildings, open space including playing fields and allotments plus associated infrastructure. The Proposed Development includes the access points onto Stortford Road and Woodside Way. All other matters, including internal access, layout, scale, appearance and landscaping are reserved for future determination.
- 3.2 The planning application would deliver 790 new dwellings as part of the wider Draft Local Plan Great Dunmow Policy Area 1 allocation, which provides for a minimum of 850 units to the west of Woodside

Way, Great Dunmow. The proposed allocation contains land adjoining the north-east of the application site which falls within different ownership. The proposals for development on the adjacent site would come forward as part of a separate planning application but the Conceptual Masterplan shows that it would be capable of being delivered as a comprehensive development over the entire policy area.



Image 3: Conceptual Masterplan

3.3 The Proposed Development incorporates the following principal components:

- Residential development of up to 790 dwellings;
- One Form Entry Primary School;
- Community buildings;
- Amenity greenspace, natural and semi natural greenspace, sports pitches, playspace provision for children and young people, and allotments;
- Access improvements including the provision of a new, three-arm roundabout junction on Stortford Road and a T-junction on Woodside Way;
- On-site roads, pedestrian and cycle routes;
- Associated on-site facilities and service infrastructure including strategic surface water attenuation and other sustainable drainage measures (SuDS), utilities and related infrastructure.

4 Assessment Approach

Legal Requirements

- 4.1 The Environmental Impact Assessment (EIA) has been carried out in accordance with the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011 (as amended). An assessment of the likely significant environmental effects of the proposed development has been made and measures to reduce adverse effects proposed.

Scoping

- 4.2 In order to ensure that the EIA provides an assessment of all likely significant impacts a scoping exercise has been undertaken during the course of the pre-application consultation. As part of this process, the potential environmental issues and impacts arising from the proposed development have been the subject of significant discussion and consultation with UDC, Statutory consultees and other stakeholders.
- 4.3 The Scoping process commenced in January 2013 with the submission to UDC of a formal request for a 'Scoping Opinion' in order to establish the environmental issues that should be considered as part of the EIA.
- 4.4 UDC adopted their Scoping Opinion on 28 January 2013. UDC's Scoping Opinion highlighted that the Proposed Development had the likelihood of giving rise to a number of environmental issues which should be considered as part of the EIA. These included potential impacts in relation to Transport, Noise, Air Quality, Ecology, Heritage and Archaeology, Agriculture, Ground Conditions and Contamination, Flood Risk and Drainage, Waste, Service Infrastructure along with Landscape and Visual character and Socio-Economic impacts.
- 4.5 These have therefore been addressed within the ES and addressed as part of the planning application.

Methodology

- 4.6 Specialist consultants within the various fields were appointed to consider the impacts of the proposals on the environmental issues identified through the scoping exercise. The consultants assessed the potential impacts using recognised quantitative techniques and professional judgement and recommended measures to reduce any adverse impacts (mitigation) or to enhance the existing situation.

5 The Environmental Effects and how they will be minimised

- 5.1 A summary of the findings of the technical assessments and the main environmental effects identified is detailed below.

Socio-Economic Impacts

- 5.2 An assessment of the potential impacts arising from the proposals in relation to socio-economic issues has been undertaken. This has included an assessment of the likely housing provision and associated population arising from the Proposed Development and the potential impacts of the new population upon social infrastructure including schools, health and community facilities and recreation and open space provision. Employment impacts have also been considered.
- 5.3 The Proposed Development will provide a new community of approximately 2,125 people and provide approximately 84 new Full Time Equivalent jobs. Without mitigation, the introduction of these new residents could place pressure on the capacity of existing services and community facilities.

- 5.4 The proposals therefore incorporate various facilities to meet the needs of the new population and ensure that the community is as self contained and sustainable as possible and does not place undue pressure on existing facilities elsewhere in the town. These include the provision of a new primary school, extensive areas of public open space and new community facilities to serve the day-to-day needs of residents.
- 5.5 Consequently, following implementation of these mitigation measures it is considered that impacts on social infrastructure in the town will be negligible whilst the employment opportunities created during the construction phase and by the new school will result in minor beneficial impacts on the local economy. Additionally, the significant areas of accessible public open space proposed within the site will result in a further minor beneficial impact. Any residual adverse impacts are likely to be outweighed by the various beneficial impacts identified.
- 5.6 As a result, overall it is therefore considered that the Proposed Development would have a **negligible impact** in relation to community infrastructure and the local economy.

Traffic and Transportation

- 5.7 An assessment has been undertaken of the potential impacts of the proposed development in relation to traffic generation and transportation issues. The assessment considers the potential additional traffic generation associated with the proposals and the likely effects on the surrounding transportation network.
- 5.8 The Proposed Development will create additional traffic which has the potential to result in various impacts on the surrounding road network. The impact of the Proposed Development in relation to potential Severance, Pedestrian Amenity, Fear and Intimidation, Road Safety and Accidents and Pedestrian and Driver Delay have been assessed based on conditions relating to the future baseline situation with and without the proposed development.
- 5.9 The baseline flows on the surrounding road network, and used in the assessment of the environmental effects associated with the Proposed Development, have been established using data from traffic count surveys at various junctions within the study area.
- 5.10 With regard to the likely impacts of the Proposed Development the majority of the surrounding highway network will experience an increase in traffic of less than 10%, as a direct consequence of the proposed development, resulting in a minor adverse impact. There are four other junctions that experience an increase of less than 30%, but greater than 10%, as a direct consequence of the proposed development, resulting in a moderate adverse impact without mitigation. These are:
- A120 Eastbound Off-slip at B1256 Junction;
 - A120 Westbound Off-slip at B1256 Junction;
 - B1256 West of Site Access;
 - Woodside Way between Pines Roundabout and Site Access.
- 5.11 A series of mitigation measures are therefore proposed to minimise these potential impacts. These include off-site highway works and junction improvements along with an extensive range of measures proposed as part of the Travel Plan to encourage travel by means other than the car and thereby minimise car borne journeys.

5.12 The effects of the development-related road traffic, along with the proposed mitigation, have been taken into account and the assessment concludes that, following the implementation of these mitigation measures, the residual traffic and transport effects will be of **negligible** significance.

Noise and Vibration

5.13 An assessment has been undertaken of the potential impacts of the proposals in relation to potential noise and vibration impacts. This assessment has considered the suitability of the site for the proposed development and the potential effect of noise and vibration from the proposed development on existing and proposed receptors.

5.14 The construction and operation of the proposed development has the potential for noise and vibration impacts on nearby sensitive properties including:

- Noise and vibration impacts during the construction phase of the proposed development;
- Noise impacts from site plant and machinery during the operation phase of the proposed development; and
- Noise impacts due to increases in road traffic related to the operation of the proposed development.

5.15 These impacts have been predicted and assessed using plant noise emission data and projected traffic flow data.

5.16 The assessment has shown that the site is suitable for the Proposed Development, although dwellings or other sensitive uses should be avoided within 10 metres of the B1256. The sound reduction performances required of the building materials for the various uses have been determined; compliance with these requirements should ensure that the internal noise climates meet Uttlesford District Council's criteria.

5.17 The construction works have the potential to lead to **minor to moderate adverse impacts** at properties in the vicinity of Larch Way and Canada Cottages, where the works are close to the properties. There may also be perceptible levels of off-site vibration during heavy ground works near these properties also. These adverse impacts will be temporary.

5.18 Noise limits have been identified for any items of fixed plant that may be proposed as part of the development. Compliance with these limits will result in a **negligible impact**.

5.19 The assessment of off-site road traffic noise suggests that development-generated traffic is likely to lead to **minor adverse impacts**, which will be long-term in nature.

Air Quality

5.20 An assessment has been undertaken of the potential impacts of the proposed development in relation to potential air quality impacts on the amenity of existing and proposed residential properties within proximity to the site. The assessment has considered potential impacts of airborne dust and combustion emissions.

5.21 The nearest Air Quality Management Area (AQMA) where there is an exceedance of the annual mean nitrogen dioxide (NO₂) objective limit is located over 20 km from the Site. Air quality in Great Dunmow is currently expected to meet the UK Air Quality Objectives.

5.22 It is inevitable that with any development, demolition and construction activities will cause some disturbance to those nearby. Dust arising from most construction activities can be dispersed by the wind

leading to soiling of property including windows, cars, external paintwork and laundry. However, as well as giving rise to annoyance due to soiling of surfaces from dust emissions, there is evidence of major construction activities causing increases in long term Particulate Matter concentrations and in the number of days exceeding the short term air quality objectives for Particulate Matter.

- 5.23 Recently published guidance on assessing impacts on air quality from construction activities and determining the likely significance has been used to determine the risk of impacts occurring during the construction of the development and to identify appropriate mitigation measures that will be implemented on site to reduce dust emissions and associated impacts.
- 5.24 The assessment has shown that during construction of the Proposed Development releases of dust and Particulate Matter are likely to occur during site activities particularly during dry weather. However, through good site practice and the implementation of suitable mitigation measures that will be set out in the Construction and Environmental Management Plan (CEMP), the impact of dust and Particulate Matter releases may be effectively mitigated and the resultant impacts are considered to be negligible.
- 5.25 An assessment of the operational impacts associated with the Proposed Development has shown that it will result in a negligible impact on Nitrogen Dioxide and Particulate Matter (PM₁₀ and PM_{2.5}) concentrations at all human receptors in the vicinity of the Site.
- 5.26 Concentrations of all three pollutants are predicted to be below the relevant objective limits across the Site therefore the proposed residential properties and school will not be introduced into a location of poor air quality. Consequently, based on the above information, it is considered that the proposed development will not result in any adverse off-site impacts in respect of air quality and the site is therefore a suitable location for the development.
- 5.27 The impact of traffic emissions associated with the proposed development oxides of nitrogen (NO_x) and nitrogen deposition (N-deposition) at the adjacent Hog Wood Site of Special Scientific Interest (SSSI) and Hoglands Wood (Ancient Woodland and Wildlife Site) has also been undertaken.
- 5.28 The assessment found the change in NO_x concentrations at both sites to be negligible and the increase in N-deposition at the Hogland Wood would also be negligible. However, emissions associated with traffic along the B1256 from the proposed development are predicted to have a slight adverse impact on N-deposition at the High Wood SSSI along the southern boundary, although the impact would reduce to negligible within 3-4 m of the site boundary and would be negligible across the rest of the wood.

Ecology

- 5.29 Ecological surveys have been undertaken to make an assessment of the ecological resources of the site and its surroundings and ascertain the likely impacts of the proposed development on ecology and biodiversity. This has included a desk study, an extended Phase 1 survey and Phase 2 faunal studies.
- 5.30 A number of ecological designations are located in the nearby vicinity of the Site. Adjacent to the north-eastern site boundary is Hoglands Wood, a Local Wildlife Site recognised for its ancient deciduous woodland. In addition, High Wood Site of Special Scientific Interest (SSSI) borders the western boundary.
- 5.31 The ecological surveys of the site area identified that the majority of the site is of low conservation value, particularly in relation to arable farmland due to the intensive arable agriculture undertaken on site. However, the matrix of hedgerows and associated field boundaries along with the watercourse along the northern boundary and areas of plantation woodland within the site are important habitats that provide significant ecological potential. Important ecological features which could receive adverse impacts from the proposed development were identified during the surveys including reptiles, badgers, breeding and wintering birds, invertebrates, bats along with a number of Biodiversity Action Plan (BAP) Species,

hedgerows, rivers/streams, plantation woodland and the adjoining High Wood SSSI and Hoglands Wood LWS.

- 5.32 However, the ecological assessments undertaken to date have helped shape the master planning for the proposed development, which has allowed for the retention, protection and enhancement of existing features of ecological value within the scheme.
- 5.33 In addition, compensation and enhancement measures will result in positive or neutral residual effects being expected for all ecological receptors. For example, the sustainable drainage area in the north of the site, in combination with other retained / created habitats, is considered to provide positive effects in the medium to long term that will improve the conservation status of the local invertebrate, bird, reptile, common toad and bat populations on site as well as the biodiversity in general of this riparian corridor. The Proposed Development at the Site is considered to be in compliance with national and local planning policy as well as relevant wildlife legislation.
- 5.34 With the appropriate mitigation and enhancement measures, it is concluded that the development should have an overall positive impact on biodiversity following implementation of the proposed development.

Landscape and Visual Character

- 5.35 An assessment was undertaken to consider the potential effects of the proposed development on the landscape and on potential views of the Site. This assessment predicts impacts on landscape character, other landscape receptors and visual aspects of the proposals.
- 5.36 The development of a greenfield site will inherently result in the loss of openness and some change in landscape character. However, the design of the proposed development is landscape led.
- 5.37 The landscape and visual assessment concludes that with regard to landscape and visual receptors, the application site is suitable for the proposed development. The proposed development with mitigation measures (such as the 20m wide landscape buffer to the north and west of the application site boundary and retention of the majority of existing landscape features within the development layout) will have a limited effect on views and landscape character from the surrounding areas.
- 5.38 The proposed development will also have a limited effect on the existing landscape resource including trees, hedgerows, public rights of way and designated landscapes. The proposed development will affect landscape character of the land to be developed, but will not significantly alter the landscape character of the surrounding areas.
- 5.39 Due to the application site's location on the edge of Great Dunmow, the sensitive location of the development edge and the high quality design of the proposed development, the development will become part of the wider Great Dunmow character and therefore adverse effects will start to become neutral as the site becomes part of the fabric of the settlement.
- 5.40 In terms of landscape impact, the relatively contained visibility of the application site ensures that effects are predominantly within localised areas that include the application site or are in its immediate vicinity. Whilst there would be Major and Adverse direct effects on Broxted Farmland Plateau and Moderate-Minor indirect effects on Upper Chelmer River Valley, the effects quickly diminish with distance such that overall effects on these character areas are **Negligible**.
- 5.41 Based on the assessed viewpoints, the overall visibility of the Site is relatively well contained due to surrounding topography, existing tree and hedgerow vegetation within and in the surrounding context of the application site and the existing developments of Great Dunmow and Woodlands Park. The visual effects follow a similar pattern to the character effect, in that the viewpoints in close proximity will

experience the greatest effects. Therefore, the worst affected receptors will be either footpath users or local residents who will have the highest inter-visibility with the proposed development. These viewpoints will experience **Major or Major-Moderate Adverse** effects 15 years from completion.

- 5.42 The overall visual effects of the proposed development are **Moderate-Minor** 15 years from completion and generally **Adverse or Neutral** in nature. The significant visual effects are localised being within 250m of the application site.
- 5.43 The overall effect 15 years after completion of the proposed development on existing trees and hedgerows is likely to be Minor and Beneficial. The existing landscape features will generally be retained, incorporated into the landscape structure of the proposed development and enhanced.
- 5.44 The overall effect on public rights of way will be Negligible as the visual effects of the proposed development are limited due to intervening topography and vegetation, with the exception of footpaths through the application site or in close proximity to the application site boundary.
- 5.45 As the proposed development has limited visibility within the Great Dunmow and other settlements in the study area, the overall effect of the proposed development on settlements is Negligible.

Heritage and Archaeology

- 5.46 An archaeological assessment has been undertaken to examine the historical background to and the date, extent and condition of archaeological features within the Site. An initial desk-based assessment was followed by aerial photographic survey, geophysical survey and fieldwalking of the Site.
- 5.47 There are no above-ground heritage assets within the Site or within the vicinity which could be affected by the Proposed Development. On the basis of the known archaeology identified during the Desk Top Assessment and Geophysical Survey, archaeology of medium significance exists within the Proposed Development, notably towards the northeast and southwest corners of the Proposed Development. The scale and extent of the archaeology will be further characterised by trial trench evaluation post consent.
- 5.48 Impacts to the identified archaeological resource of varying degrees of magnitude have been identified resulting from the building works and installation of services, roads.
- 5.49 The overall archaeological impact of the Proposed Development will be minimal. Where archaeological features (Heritage Assets) have been identified, the Proposed Development will have a localised, severe impact on these heritage assets without mitigation.
- 5.50 A programme of archaeological excavation and recording has therefore been discussed and agreed in outline with the Essex County Council Archaeologist to mitigate this effect. Each phase of development in the area would be stripped under archaeological supervision and identified features excavated and recorded. Such a mitigation programme should eliminate any adverse effects on archaeology such that, once construction work has been completed, any residual/cumulative impact upon the archaeological resource will be **minimal/ negligible**.

Agriculture

- 5.51 Given the agricultural nature of the site and the proposals, an assessment was undertaken of the potential effects of the proposed development in terms of agriculture.
- 5.52 The site is proposed for allocation in the Uttlesford Draft Local Plan, the basis for which is contained in the Council's evidence base which has been produced to support the spatial strategy and proposed allocation.

In principle the proposal accords with national and local planning policy relevant to the consideration of agriculture because the proposed scheme would deliver wider sustainability objectives.

- 5.53 In terms of the impact of the proposed development upon agricultural receptors, the ALC maps identify the application site as predominantly Grade 2 with some Grade 3 land in the north eastern corner of the site. As such, this land meets the definition of "best and most versatile land".
- 5.54 However, the area of land to be developed is 0.08% of the total area of Grade 2 land in Uttlesford District, and 0.07% of the total area of Grade 3 land in Uttlesford District. Therefore no significant weight should be afforded to the loss of Grades 2 or 3 agricultural land in this location. Moreover, given that the site is the subject of a draft allocation for development, the loss of a significant area of high quality agricultural land is unavoidable. It is, therefore, considered that residual impacts on agricultural land will be **negligible**.
- 5.55 The impact of the proposed development upon the viability of the existing farming businesses would be marginal since the land to be lost from agricultural production would represent only 10% of the agricultural landholdings held by the three farming businesses. Consequently, it is considered that the impact on these farming businesses will be **negligible**.

Ground Conditions and Contamination

- 5.56 An assessment was undertaken of the potential effects of the proposals in relation to the existing underlying ground conditions at the site and any land contamination which may be present. The assessment included a desk-based assessment along with intrusive ground investigations and laboratory analysis.
- 5.57 The Proposed Development area is underlain by superficial deposits of Boulder Clay and the Kesgrave Catchment Subgroup, comprising sand, gravel and clay. This is overlying over consolidated clays of the London Clay Formation to unproven depth.
- 5.58 Perched groundwater has not been encountered at shallow depth and will not have a significant impact on the development.
- 5.59 The area largely has been under agricultural use and shallow soils may be affected by the use of pesticides and herbicides associated with these activities. Areas of potentially contaminated made ground are associated with the installation of the high pressure gas pipeline, the gas governor building. Investigations of the aircraft crash site have proven no contamination.
- 5.60 The assessment established that there is a very low risk that a pathway could develop with contaminated soils affecting construction groundworkers. The short-term risk to human health posed by any contaminants in the ground can be mitigated by adoption of appropriate health and safety procedures with no longer term residual effects. The mitigation measures identified should remove any future risk to human health such that the residual impact would be **negligible**.
- 5.61 There is no evidence of significant or extensive ground contamination on the development site. However, treatment and/or excavation of localised areas of ground contamination may be required. With implementation of appropriate mitigation measures it is considered that residual impacts from contaminated soils are likely to be **negligible**.
- 5.62 There is no evidence of widespread or significant groundwater contamination and the risk to either surface or groundwater is considered to be very low. It is concluded that previous activities on the site do not pose a risk to groundwater or surface water quality and it is unlikely that the proposals would impact the

quality of the water environment. Consequently, implementation of standard pollution control measures should remove any future risk to the water environment such that residual impacts would be **negligible**.

- 5.63 The risk of any ground contamination affecting the identified receptors is considered to be very low. Following implementation of appropriate mitigation measures, the pollution risk to both groundwater and to future residents and users of the Proposed Development will be reduced. Hence there will be no significant residual impacts from the completed development.

Flooding and Drainage

- 5.64 The potential impacts of the Proposed Development, in terms of flood risk and drainage, have been considered and a drainage strategy developed to reduce the risk of flooding and mitigate potential impacts in terms of drainage.
- 5.65 The risk of flooding from fluvial events is considered to be low given that the Site is located within Flood Zone 1, as designated by the Environment Agency. However, it is intended that sustainable urban drainage (SuDS) measures would be implemented in line with the phasing of the built development such that the Proposed Development would not worsen flood risk to the Site or surrounding areas.
- 5.66 The implementation of a Construction and Environmental Management Plan would include measures to control surface water during construction of the Proposed Development. Specific measures would be included to protect the integrity of the High Wood SSSI and Hoglands Wood LWS.
- 5.67 For the completed Proposed Development, a Surface Water Drainage Strategy would be implemented for the Site in order to manage surface water run-off on-site and minimise flood risks on and off-site. Detailed design of the surface water drainage will be submitted for approval prior to construction and will be subject to agreement with the Environment Agency and Uttlesford District Council.
- 5.68 It is proposed that surface water runoff rates within the Proposed Development are attenuated through the use of balancing ponds, swales, rainwater harvesting, permeable paving and green roofs where viable and appropriate. The surface water runoff rates from the Application Site would therefore be the same as the current greenfield run-off rates.
- 5.69 There would be a significant increase in demand for potable water and foul drainage treatment infrastructure. Foul drainage would be discharged via sewers to the Great Dunmow Waste Water Treatment Works where upgrades will commence in 2016. Further consultation would be required with the relevant service providers to ensure the demands and timescales for the Proposed Development can be met.
- 5.70 Taking all of these measures into account it is considered that overall impacts arising from the Proposed Development in relation to flood risk and drainage are considered to be **negligible**.

Infrastructure and Services

- 5.71 The potential impacts of the Proposed Development in terms of utilities and infrastructure have been considered and a strategy developed to reduce and mitigate potential impacts.
- 5.72 The baseline constraints with regard to potential existing utility (electricity, gas, potable water, sewers and telecommunications) diversions and/or protections both within and adjacent to the Site have been established and a strategy has been developed to progress such matters as the Proposed Development builds out.

- 5.73 Gas, electricity and potable water systems are situated running along Stortford Road to the south and Woodside Way to the west of the site and these have the potential to be extended to serve the site. However, there is currently no foul sewer in proximity to the site and a new foul drainage sewer would need to be provided to serve the proposed development. A strategic oil pipeline delivering fuel to Stansted Airport passes through the western half of the site from north to south. For technical reasons nothing can be built on top of the service route.
- 5.74 The mitigation measures proposed for the construction phase as part of the Construction and Environmental Management Plan will ensure that the residual effects of the Proposed Development will be **negligible** and **not significant**.
- 5.75 Investment in the utility and service infrastructure will provide the Proposed Development with a suitable and sustainable ability to use resources. The service supply companies are developing phased enhancements to their infrastructure, to ensure the availability of capacity and robustness of the network as the Proposed Development phases progress.
- 5.76 It is concluded that due to the manner in which statutory utility companies operate, the development will not be permitted to impact on the services provided to existing customers and enhancements to these systems will be provided to serve the Proposed Development. Assuming these enhancements are implemented it is considered that no significant environmental effects will result in relation to service supply from the proposed development and the impact will therefore be **negligible**.

Waste

- 5.77 An assessment of potential impacts in terms of increases in wastes arising from the proposed development has been undertaken having regard to national and local waste reduction targets.
- 5.78 Impacts will arise from the increased quantities of wastes that will result from the construction and operation of the Proposed Development, given that the current baseline levels of waste produced at the site are negligible.
- 5.79 It has been calculated that approximately 79,756 tonnes of construction waste will be generated by the Proposed Development, the majority of which will be created from undertaking foundation excavation and topsoil strip. This equates to approximately 0.08% of waste in comparison to the construction waste that is generated regionally.
- 5.80 Whilst operating the development will create approximately 827 tonnes of waste per year by 2022 and in comparison to regional figures, this equates to 0.011%.
- 5.81 Mitigation measures during the construction of the development will include the following:
- Re-using demolition waste, engineering material and remediation material (were possible);
 - Compiling and adhering to a Site Waste Management Plan; and
 - Considering waste management throughout the supply chain.
- 5.82 For the operation of the development, waste minimisation will be considered during the design of the Proposed Development by encouraging the segregation and recycling of waste.

Cumulative Impacts

- 5.83 The combined effects of the different types of residual impacts from the Proposed Development upon particular receptors have been considered during the construction phase. The majority of cumulative impacts arise from the interaction of dust, visual and noise and vibration impacts. These will be mitigated through the implementation of a Construction and Environmental Management Plan.
- 5.84 Cumulative impacts of the Proposed Development with a number of committed and proposed developments within the Great Dunmow area have been considered throughout the ES. The other developments considered were:
- Highwood Quarry;
 - Stansted Airport Expansion;
 - Woodlands Park, Great Dunmow;
 - Land North of Ongar Road, Great Dunmow; and,
 - Residential development on land South of Ongar Road.
 - Land West of Chelmsford Road, Great Dunmow;
 - Land north-east of Elsenham.
- 5.85 The cumulative effects have been taken into account in individual assessments, with both committed and proposed schemes either factored into the baseline modelling or accounted for as part of the assessment of overall impact (where appropriate). In this sense, the assessment of the likely impact of the Proposed Development constitutes a robust, worst-case precautionary approach to the assessment.

6 Conclusions

- 6.1 In accordance with the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011 (as amended), the Environmental Statement and associated Supplementary Environmental Statements (SES1, SES2 and SES3) have assessed the potential environmental impacts of the Proposed Development.
- 6.2 Whilst there are a number of negative effects associated with the construction phase, these are temporary and largely intermittent in nature and would end on completion of the development. Mitigation measures will be put in place to manage and reduce these impacts.
- 6.3 The most significant adverse effects of the Proposed Development relate to some visual and agricultural land impacts. Nonetheless, some impacts of this nature are considered to be inevitable given the undeveloped, greenfield nature of the Site. The adverse impacts are significantly outweighed by the positive landscape and biodiversity impacts of the scheme.
- 6.4 The EIA has shown that concerns relating to socio-economic effects, transport, noise, air quality, ecology, heritage and archaeology, agriculture, flood risk and drainage, services and infrastructure and waste will be effectively mitigated so that residual effects are **minor or negligible**.

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