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Dunton Garden Suburb Consultation

Sustainability Appraisal and Habitats Regulations Assessment Commentary

Final Report
Prepared by LUC
November 2014

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1 Introduction

Dunton Garden Suburb consultation document

- 1.1 The Localism Act 2011 requires Local Planning Authorities to cooperate on strategic, cross boundary planning matters.
- 1.2 In November 2014, Basildon Borough Council and Brentwood Borough Council, as Local Planning Authorities, jointly signed a 'Memorandum of Understanding' to work together when considering cross boundary strategic planning issues. The Dunton Garden Suburb Consultation document investigates whether land to the west of Laindon (in Basildon Borough) and to the east of West Horndon (in Brentwood Borough), has any potential for meeting some of the development needs of both Councils through a cross boundary development opportunity.
- 1.3 The consultation document sets out the context, opportunities, and constraints which both Councils have discussed through the Duty to Cooperate. Basildon Borough Council and Brentwood Borough Council are now seeking public and stakeholder views on whether the initial concept for a "Dunton Garden Suburb" generated from those discussions should be taken any further by both Councils as part of Local Development Plan preparation, in accordance with the National Planning Policy Framework, and through the Duty to Cooperate.
- 1.4 The consultation document does not constitute part of the emerging Local Development Plan of either Council in its own right, but following the results of the consultation it could lead to the establishment of a joint project between the Councils to carry out further testing and assessment against their evidence base as part of their plan-making responsibilities.

Sustainability Appraisal

- 1.5 The planning system includes a statutory requirement to carry out Sustainability Appraisal (SA) of Local Plans. In addition, the Environmental Assessment of Plans and Programmes Regulations 2004 (hereafter referred to as the SEA Regulations) introduced the requirement for Local Planning Authorities (LPAs) to carry out Strategic Environmental Assessment (SEA) of certain plans and programmes. As such, Basildon Borough Council and Brentwood Borough Council are required to undertake SA and SEA of their Local Plans but these two requirements can be addressed through a joint process and reported in a single 'SA Report', provided it is clearly set out how the SEA procedural and reporting requirements have been met within the SA Report. From here on, when we refer to SA it should be taken as incorporating the requirements of SEA as well.

Habitats Regulations Assessment

- 1.1 The requirement to undertake Habitats Regulations Assessment (HRA) of development plans was confirmed by the amendments to the "Habitats Regulations" published for England and Wales in July 2007 and updated in 2010¹ and again in 2012². HRA refers to the assessment of the potential effects of a development plan on one or more European sites, including Special Protection Areas (SPAs) and Special Areas of Conservation (SACs). Potential SPAs (pSPAs)³, candidate SACs (cSACs)⁴, Sites of Community Importance (SCIs)⁵ and Ramsar sites should also

¹ The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007. HMSO Statutory Instrument 2007 No. 1843. From 1 April 2010, these were consolidated and replaced by the Conservation of Habitats and Species Regulations 2010 (SI No. 2010/490).

² The Conservation of Habitats and Species (Amendment) Regulations 2012. Statutory Instrument 2012 No. 1927.

³ Potential SPAs are sites that have been approved by Government and are currently in the process of being classified as SPAs.

⁴ Candidate SACs are sites that have been submitted to the European Commission, but not yet formally adopted.

⁵ SCIs are sites that have been adopted by the European Commission but not yet formally designated as SACs by the Government.

be included in the assessment. For ease of reference during HRA, these designations are collectively referred to as European sites, despite Ramsar designations being at the international level. HRA of development plans is undertaken in stages and should conclude whether or not a proposal would adversely affect the integrity of the European site in question.

Purpose of this SA and HRA commentary

- 1.2 Given the requirements for SA and HRA of Local Plans and the potential future inclusion of Dunton Garden Suburb into the emerging Basildon Borough and Brentwood Borough Local Plans, Basildon Borough Council and Brentwood Borough Council have commissioned LUC to prepare an initial SA and HRA commentary on the Dunton Garden Suburb potential development opportunity.
- 1.3 The SA commentary provides an initial, high level assessment of the likely effects of a potential new urban extension on land to the west of Laindon (in Basildon Borough) and to the east of West Horndon (in Brentwood Borough), known as the Dunton Garden Suburb, on baseline conditions, in terms of a variety of social, economic and environmental objectives. The SA draws on earlier work carried out on the Basildon Borough Local Plan Core Strategy. At this stage, reasonable alternatives to the Garden Suburb are not considered, but these will be addressed as appropriate during subsequent stages of the SA in the plan making process.
- 1.4 Similarly, the HRA commentary provides an initial, high level assessment of the potential for Dunton Garden Suburb to have likely significant effects on any European site. It is not intended to constitute a formal HRA Screening report and does not, for instance, consider other plans and projects and the potential for the effects of development of the Dunton Garden Suburb to act in combination with them.
- 1.5 Rather than meeting regulatory requirements for SA and HRA, the role of this commentary is limited to helping inform the Councils' joint decision making in relation to the potential Dunton Garden Suburb, allowing them to take into account potentially significant sustainability effects and potential significant effects on European sites at an early stage. Ultimately there may be a need to appraise Dunton Garden Suburb as one option amongst a series of alternatives, at which point it would be important to ensure that alternatives are appraised to a similar level of detail.

Approach

- 1.6 Early on in the SA process for the Basildon Borough Local Plan Core Strategy, a number of Housing Broad Locations and Employment Broad Locations were subject to SA. The appraisal of each of these Broad Locations was then used to inform development of Policy Areas of Development and Change (PADCs) which were proposed in the Basildon Local Plan Core Strategy Revised Preferred Options Report (January 2014).
- 1.7 One of the preferred PADCs, PAD5: West Basildon Urban Extension includes an area that is being jointly looked at as part of the Dunton Garden Suburb proposal. This proposal considers extending the area to be developed westwards into land in the Brentwood Borough to the east of West Horndon.
- 1.8 The earlier SA and HRA of PAD5 have therefore informed this commentary on Dunton Garden Suburb. As part of the area for Dunton Garden Suburb falls within Brentwood Borough it was not covered by the original SA and HRA work for the Basildon Borough Local Plan Core Strategy. LUC therefore asked URS, the consultants carrying out the SA and HRA work for the Brentwood Borough Local Plan, to provide a high level assessment in terms of Brentwood Borough specific issues and objectives. The resulting comments helped to inform and validate LUC's assessment for Dunton Garden Suburb as a whole.
- 1.9 This SA commentary has assessed the emerging proposals for Dunton Garden Suburb against the same framework of SA objectives contained within the Basildon Borough SA Scoping Report 2013 used for the SA of the Basildon Borough Local Plan Core Strategy. Reference should be made to that earlier SA work to understand the process by which these sustainability objectives were arrived at and their intended use.

- 1.10 The HRA commentary has assessed the emerging proposals for Dunton Garden Suburb in terms of their potential to have likely significant effects on any of the European sites scoped into the HRA of the Basildon Borough Local Plan Core Strategy. Reference should be made that earlier HRA work to understand the process by which European sites was scoped into the HRA, the reasons for designation of those sites and their vulnerabilities from development.
- 1.11 The findings and judgements regarding the SA and HRA are based on an understanding of the context and baseline established through SA scoping work and also described in the Dunton Garden Suburb Consultation document. They also rely on the descriptions and illustrative diagrams provided in the Dunton Garden Suburb Consultation document. In particular it has been assumed that all of the 'potential principles' described in that document and listed in the box below will, in fact, be implemented; should any of these features not be incorporated then the assessment results would need to be revisited.

Potential principles of Dunton Garden Suburb

- A garden suburb to the west of Laindon, creating a place where people want to live, work and relax
- 4,000- 6,000 different sizes for sale and rent including affordable homes
- Job opportunities and apprenticeships through new commercial /industrial land
- New Gypsy and Traveller pitches
- Integration with the existing community, including investment towards Laindon Town Centre regeneration
- Possibility for a new railway station and other integrated transport Improvements
- Local cultural, social and community facilities in walkable neighbourhoods
- Generous green space, including a surrounding belt of countryside to east following Eastlands Spring connecting Thorndon Country Park to Langdon Hills Country Park
- Land set aside for biodiversity areas
- Well connected and biodiversity-rich public parks
- Options for community ownership, long term stewardship of assets and self-build plots

- 1.12 The SA and HRA do not make any other assumptions about the specifics of the development, for example the development mix or community infrastructure to be provided or adherence to any 'garden suburb principles' other than those listed above. In addition, the SA and HRA do not take into account draft policies in the two emerging Local Plans, as these are subject to change. Since there may be scope to provide mitigation through the masterplanning and detailed design of the development or through Local Plan policies, the high level approach taken to the SA and HRA is therefore precautionary with respect to identification of significant effects.

Next steps

- 1.13 The Councils will consult Natural England, English Heritage and the Environment Agency as the prescribed statutory bodies on the findings of this initial SA and HRA commentary. The consultation document and this SA and HRA commentary will also be available for other stakeholders and the public to comment on.
- 1.14 The proposal has been assessed on its own merits and does not consider its sustainability performance relative to other possible alternative developments. Should the Councils wish to take forward the potential development of the Dunton Garden Suburb following the results of the public consultation, it will need to be subject to further testing including the consideration of reasonable alternatives in order to decide whether it should be incorporated into their Local Plans.

These Local Plans, the proposals within them and reasonable alternatives will be subject to formal SA and HRA that meet the regulatory requirements for those assessment processes as appropriate.

Structure of the report

- 1.15 This chapter provides an introduction to the SA and HRA commentary for Dunton Garden Suburb and an overview of the approach taken. The remainder of this report is structured into the following chapters:
- **Chapter 2 SA Commentary** – Summarises the significant positive and negative sustainability effects identified for the potential development of Dunton Garden Suburb.
 - **Chapter 3 HRA Commentary** – Considers the potential for Dunton Garden Suburb to have significant effects on any European nature conservation site.
 - **Appendix 1** – Sets out a detailed assessment of the potential effects of Dunton Garden Suburb on a range of sustainability objectives.

2 SA commentary for Dunton Garden Suburb

- 2.1 A summary of the likely effects of the potential development of Dunton Garden Suburb is provided below with performance against each SA objective shown in **Table 2.1**. The detailed appraisal, including justifications for scores, is provided in **Appendix 1**.

Positive effects

- 2.2 **Table 2.1** shows that a range of significant positive (++) and minor positive (+) effects (including those with some uncertainty and mixed effects) are predicted from the development of Dunton Garden Suburb. These are particularly in relation to the social and economic objectives, namely *SA objective 1: Landscape and Green Spaces; SA objective 3: Biodiversity; SA objective 4: Economic Growth; SA objective 5: Town Centres; SA objective 6: Education; SA objective 7: Housing; SA objective 8: Health & Wellbeing; SA objective 9: Vibrant Communities and SA objective 10: Regeneration*. Positive effects which are expected to be significant are as follows:

Objective 4: Achieve sustainable levels of prosperity and economic growth to stimulate economic regeneration.

- 2.3 In addition to the construction of up to 6,000 dwellings, which will bring new consumers and, temporarily, construction jobs into the area, new employment land would be provided. The new Garden Suburb would therefore be likely to have a significant positive effect on this objective.
- 2.4 It is notable that the potential development location is very well connected to the M25 so that demand for employment land is likely to be high. Consideration should therefore be given to the relative benefits of using more of the site for employment, rather than housing.
- 2.5 This location, at the south of the two districts, is in close proximity to Thurrock and the wider Thames Gateway where regeneration is a priority issue nationally. There is little reason to suggest, at this stage, that a scheme at this location would have a bearing on the achievement of regeneration objectives in the Thames Gateway, but this will need to be an issue that is the focus of ongoing investigation.
- 2.6 As set out in the overall approach to the SA, development of Dunton Garden Suburb has been assessed on its own merits. Should the proposal be taken forward then it will also be necessary to consider its sustainability relative to alternative locations in Basildon and Brentwood.

Objective 5: Ensure the Borough's Town Centres are promoted as sustainable locations for living, retail, leisure and related commercial development.

- 2.7 The eastern edge of the potential development location is located within walking distance of two of Basildon's local centres at Laindon and Great Berry and associated Public Rights of Way and bus stops. There is also good access to Brentwood Town Centre, via established bus-routes. The local centre of West Horndon and existing bus stops on Tilbury Road lie to the west of the site although it has been assumed in line with the indicative map that a wide area of green space and a watercourse would separate the developed area from these. The described development includes on-site employment opportunities and local cultural, social and community facilities in walkable neighbourhoods in addition to residential development. Improvements would also be made to highways and integrated transport would be provided.
- 2.8 Taking into account the described mix of likely uses, the ability of large scale residential development to support provision of services and facilities, the commitment to provision of local facilities rather than larger scale facilities that would compete with existing Town Centres and lead to unsustainable travel patterns, together with the described transport improvements, the potential development is judged likely to have a significant positive effect on this objective.

Objective 7: Ensure that everyone has the opportunity to live in a decent home and increase affordable provision to help those in most need locally.

- 2.9 The potential development would deliver 4,000-6,000 dwellings which would contribute significantly to Basildon Borough and Brentwood Boroughs' housing needs. The scale of development should also be capable of requiring developers to provide a significant number of affordable homes and the development description refers to "*well designed, mix tenure homes*". As such, the potential development is judged to have a significant positive effect against on this objective.

Negative effects

- 2.10 Negative effects (including those with some uncertainty and mixed effects) generally relate to the objectives for the natural and historic environment and are predicted in respect of *SA objective 1: Landscape and Green Spaces; SA objective 2: Cultural Heritage; SA objective 3 Biodiversity; SA objective 11: Access to Services; SA objective 12: Efficient Use of Land; SA objective 13: Flood Risk; SA objective 14: Climate Change Mitigation; SA objective 15: Pollution; and SA objective 19: Traffic Congestion*. Negative effects which are expected to be significant are as follows:

Objective 1: Conserving and enhancing the diverse natural and urban landscape, countryside and green spaces, of Basildon Borough.

- 2.11 The landscape of the potential development area predominantly features rectilinear grazed pastures and arable fields divided by fragmented hedgerows, tree lines and post and wire fencing plus Dunton Hills golf course to the south west. Overhead power lines cross the area. Eastlands Spring sits to the north of the site with a watercourse and an associated belt of trees running along the site's western edge. Existing development includes the Dunton Park Residential Caravan Park to the south east, sporadic roadside residential properties and a number of farms. Whilst noting that the area could create scope for potential landscape improvement as part of a co-ordinated western extension, Basildon's 2013 Landscape Capacity Study concludes that the eastern part of the area within Basildon Borough has a low capacity to accommodate development without adverse landscape impacts, relative to other areas in the Borough. Brentwood Borough Council has commissioned consultants to carry out landscape sensitivity work to inform its Local Plan evidence base. In the interim, an existing landscape character assessment indicates that the Brentwood part of the site has moderate sensitivity to change.
- 2.12 Notwithstanding any landscaping that may be incorporated into the detailed design, the significant scale of the potential development described for this greenfield area together with its low landscape capacity is judged to result in a significant negative effect against the landscape element of this objective.
- 2.13 Minor positive and uncertain effects are also expected in relation to the countryside and green spaces element of this objective, as described in **Appendix 1**.

Objective 2: Protecting and enhancing the cultural heritage and local distinctiveness of Basildon Borough.

- 2.15 The eastern part of the area within Basildon Borough is a Historic Environment Zone considered to be 'Sensitive to Change'. It contains archaeological find areas and medieval sites or find-spots, as well as remnants of historic field patterns of possible Middle Saxon origin. There are two listed buildings in the area, Dunton Hall and Dunton Hills, with others nearby. To the north west of the area is the Registered Park and Garden of Thorndon Park with Old Thorndon Hall and Gardens Scheduled Monument. The major employment and residential development identified for the site could have a significant negative effect on the setting of these historic assets and on the listed buildings within and close to the site unless appropriate mitigation measures such as natural screening are incorporated into the detailed design and layout of the development. Additional road traffic travelling between the development and Brentwood on the A128 could have adverse effects on the historic assets of Herongate and Ingrave villages on this route and on the centres of Brentwood and Shenfield.

- 2.16 The significant scale of the potential development, the sensitivity of the historic landscape to change, the presence of two listed buildings within the area and the close proximity to a Registered Park and Garden and Scheduled Monument mean that there is potential for a significant negative impact on the heritage environment. This effect is judged to be uncertain as it may be possible to avoid or reduce the potential effects by sensitive layout and design of development.

Objective 3: Protect, conserve and enhance the Borough's biodiversity and the habitats which support it.

- 2.17 The development location contains limited amounts of Deciduous Woodland BAP Priority Habitat, one area of which is also Ancient and Semi-Natural Woodland. There are a number of Protected Species Alert Areas in and around the area. There are also Local Wildlife Sites in close proximity (Gravelpit Wood, Southfields Washland, Langdon Complex within Basildon Borough; data unavailable for Brentwood Borough) although these are separated from the development location by existing physical infrastructure such as roads. Thorndon Park SSSI lies to the north west of the development location. This is designated for its semi-natural broad-leaved woodland and ancient parkland which supports range of habitat types and an outstanding assemblage of beetles. The western half of the potential development location falls within this SSSI's Impact Risk Zone for residential developments of 100 units or more, non-residential development where total net additional gross internal floorspace following development will be 1000 m² or more, and various other forms of development, indicating a need to consult Natural England on likely risks to the SSSI.
- 2.18 The large scale development described for the 'Dunton Garden Suburb' scheme has the potential to have significant negative effects on habitats and species within and close to it, for example due to direct loss of woodland within the area or increased recreational pressure on sensitive habitats from the residents of the 4,000-6,000 additional homes. This effect is judged to be uncertain as it may be possible to avoid or reduce the potential effects by sensitive layout and design of development and appropriate design of the "*generous green space*" to be provided.
- 2.19 Uncertain, minor positive effects are also expected on this objective in relation to potential enhancement of ecological networks and provision of land set aside for biodiversity, including biodiversity-rich public parks, as described in **Appendix 1**.

Objective 12: Improve efficiency of land use, through the re-use of previously developed land and existing buildings, including the re-use of materials from previous buildings.

The development location is a greenfield site and is almost entirely Grade 3 agricultural land which would be lost to future development, although it is not known whether the agricultural land is Grade 3a, which is classified as best and most versatile agricultural land, rather than Grade 3b, which is not classified as best and most versatile agricultural land. In line with the precautionary principle, it is judged that there would be an uncertain significant negative effect on this objective.

Objective 13: Minimise the risk of flooding and the detriment to public health, domestic and commercial property and the natural environment flood events can bring.

- 2.20 In relation to the eastern part of the site within Basildon Borough, the Garden Suburb would lie within the South Essex Surface Water Management Plan's Critical Drainage Area BAS6 and its northern part is vulnerable to surface water flooding. Equivalent data are unavailable for the site within Brentwood Borough, but the watercourse that runs across it to eventually meet Mar Dyke to the south west is subject to a high level of fluvial flood risk (Flood Zone 3). Overall, the potential development is judged to have a significant negative effect on this objective but with uncertainty relating to the extent to which flood risk can be mitigated by appropriate layout (e.g. the indicative map suggests that the area of flood risk associated with the watercourse to the west would be set aside as open space) and design (e.g. flood resilience measures, incorporation of Sustainable Drainage Systems – SuDS) of development.

Key to SA scores in Table 2.1 and Appendix 1

++	The policy is likely to have a significant positive impact on the SA objective(s).
+	The policy is likely to have a minor positive impact on the SA objective(s).
0	The policy is likely to have a negligible or no impact on the SA objective(s).
-	The policy is likely to have a minor negative impact on the SA objective(s).
--	The policy is likely to have a significant negative impact on the SA objective(s).
?	It is uncertain what effect the policy will have on the SA objective(s), due to a lack of data.
+/-	The policy is likely to have a mixture of positive and negative impacts on the SA objective(s).

Table 2.1 SA scores for PADC5 West Basildon Urban Extension

SA Objective	SA Score
1) Conserving and enhancing the diverse natural and urban landscape, countryside and green spaces, of Basildon Borough.	+/?/--
2) Protecting and enhancing the cultural heritage and local distinctiveness of Basildon Borough.	--?
3) Protect, conserve and enhance the Borough's biodiversity and the habitats which support it.	+?/--?
4) Achieve sustainable levels of prosperity and economic growth to stimulate economic regeneration.	++
5) Ensure the Borough's Town Centres are promoted as sustainable locations for living, retail, leisure and related commercial development.	++
6) Improve educational attainment and social inclusion, especially in the most deprived areas of the Borough.	+
7) Ensure that everyone has the opportunity to live in a decent home and increase affordable provision to help those in most need locally.	++
8) Improve the health and wellbeing of the Borough's residents and reduce inequalities in health related to development and the environment.	+
9) Create and sustain vibrant communities that are safe and feel safe to those who live in or visit them and where crime is reduced.	+
10) Regenerate and renew disadvantaged areas where people live or work in the Borough.	+
11) Improve accessibility to and enhance local services and facilities.	+/-
12) Improve efficiency of land use, through the re-use of previously developed land and existing buildings, including the re-use of materials from previous buildings.	--?
13) Minimise the risk of flooding and the detriment to public health, domestic and commercial property and the natural environment flood events can bring.	--?
14) Reduce the local contribution to climate change, by reducing emissions of greenhouse gases, improving energy efficiency of buildings and increase the use of renewable energy	+/-/?

SA Objective	SA Score
sources for local energy needs to reduce the reliance on fossil fuels.	
15) Reduce air, land and noise pollution and improve their respective quality through direct action or mitigation measures.	-
16) Improve water efficiency and achieve sustainable water resource management.	?
17) Adopt building and public realm designs which ensure the Borough is prepared for the effects of climate change.	0
18) Reduce waste generation and increase the amount of waste which is recycled or re-used.	0
19) Reduce traffic congestion and its related pollution levels by improving travel choice and channelling development to sustainable locations.	+/-

3 HRA commentary for Dunton Garden Suburb

Identification of European sites and factors contributing to their integrity

- 3.1 Consistent with HRA Screening work carried out for Basildon Borough's Local Plan Core Strategy Revised Preferred Options in December 2013, the following European sites have been considered in the high level HRA commentary for Dunton Garden Suburb.
- 3.2 European sites within 15 km of the Basildon Borough boundary:
- Benfleet and Southend Marshes SPA and Ramsar site.
 - Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar site.
 - Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) SPA and Ramsar site.
 - Essex Estuaries SAC
 - Medway Estuary & Marshes SPA and Ramsar site.
 - Thames Estuary & Marshes SPA and Ramsar site.
- 3.3 Additional European sites beyond the 15 km buffer considered in relation to potential water resources effects:
- Abberton Reservoir SPA and Ramsar site.
 - Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar Site.
 - Stour and Orwell Estuaries SPA and Ramsar site.
- 3.4 Descriptions of these European sites, their designated features and of factors affecting their integrity were obtained from the HRA of Basildon Borough Local Plan Core Strategy Preferred Options and that report should be consulted for a full understanding.

Potential effects of Dunton Garden Suburb on European sites

- 3.5 The closest European site to the potential development is Thames Estuary and Marshes SPA and Ramsar site. It is considered that at this, and greater distances, potential pathways only exist for the following types of likely significant effect capable of affecting the European sites listed above:
- Hydrological effects such as reduced water quality, reduced water resources, and increased flood risk.
 - Recreational disturbance impacts.
- 3.6 These types of potential effect are considered below.

Reduced water quality

- 3.7 The South Essex Water Cycle Study⁶ indicates potential issues within Basildon Borough in respect of wastewater treatment capacity. Housing development will increase demand for wastewater treatment capacity so likely significant effects require further evaluation through HRA of the Local Plan if this potential development area is to be carried forward.

⁶ South Essex Outline Water Cycle Study, September 2011

Reduced water resources

- 3.8 Essex is one of the driest parts of the country and the Water Cycle Study indicates potential issues within the water resources zone within which Basildon Borough is located. Housing development will increase demand for potable water so likely significant effects require further evaluation through HRA of the Local Plan if this potential development is carried forward.

Increased flood risk

- 3.9 The location for potential development includes an area of high flood risk (Flood Zone 3), creating the possibility that development will result in loss of flood storage and increased flood risk downstream at European sites. The indicative map included in the consultation document suggests that development will avoid this flood risk area. For any development that is permitted in the floodplain, a requirement to provide water storage of the equivalent size could be used as mitigation. Development of impermeable surfaces on greenfield land can also increase the rate of run-off to nearby watercourses and again increase downstream flood risk. This could be mitigated by a requirement to incorporate Sustainable Drainage Systems (SuDS), where a feasible.

Increased recreational disturbance

- 3.10 All of the European sites listed above have designated bird interests and recreational disturbance is identified as an issue for a number of them in their Natura 2000 Site Data Forms / Ramsar Information Sheets. Although not within easy walking distance of any European site, housing development at Dunton Garden Suburb may add to recreational pressure on European sites in combination with development in other districts. The inclusion within the development of "*generous green space connecting Thorndon and Langdon Hills Country Parks*" may provide some mitigation of potential recreational disturbance, depending on its design and ability to attract residents who might otherwise travel to the European sites for outdoor recreation. Likely significant effects require further evaluation through HRA of the Local Plan if this potential development is carried forward.

Appendix 1

Detailed SA matrix

SA objective	SA Commentary	Likely Effect
<p>1. Conserving and enhancing the diverse natural and urban landscape, countryside and green spaces, of Basildon Borough.</p>	<p>The area contains an open space (Land adjacent to West Mayne and Madeville Way Green Space) as identified in the PPG17 Open Space Assessment (2010). Although there is potential for this open space to be lost the stated intention to include "<i>generous green space connecting Thorndon and Langdon Hills Country Parks</i>" suggests that the development would result in a net gain of public open space, resulting in a minor positive effect on the 'green spaces' element of this objective, benefiting residents of both Basildon and Brentwood Boroughs.</p> <p>Three public footpaths cross the area and it is unclear whether these would be retained as part of the development, resulting in uncertain effects on use and enjoyment of the wider countryside. There is a concentration of woodland patches to the south west of Basildon, and to the south of Brentwood, providing an opportunity to increase connectivity.</p> <p>The landscape of the area predominantly features rectilinear grazed pastures and arable fields divided by fragmented hedgerows, tree lines and post and wire fencing plus Dunton Hills golf course to the south west. Overhead power lines cross the area. Eastlands Spring sits to the north of the site with a watercourse and an associated belt of trees running along the site's western edge. Existing development includes the Dunton Park Residential Caravan Park to the south east, sporadic roadside residential properties and a number of farms. The Green Belt Landscape Capacity Study of Basildon Borough (2013) covers the eastern part of the area falling within Basildon Borough (areas 66 and 67 in the study). In its narrative description of capacity for different land uses, the study notes that development in this area (areas 66 and 67 together) could create scope for a potential improvement as part of a co-ordinated western extension. However, taking all factors into account, the overall judgement for this area (areas 66 and 67 in the study) is that it has low relative capacity to accommodate development without adverse landscape impacts, compared with the other areas in the borough. In relation to the landscape sensitivity of the western part of the site within Brentwood Borough, Brentwood Council has commissioned landscape assessment work, and that this will be available in the near future. In the interim, the Brentwood Landscape Character Assessment⁷ describes the 'Horndon Fenland' landscape (area G1 which covers the north west part of the site) as an open and exposed landscape with moderate sensitivity to change. Landscape planning guidelines provided for the Horndon Fenland include conserving the relatively sparse settlement pattern and generally rural character of the area and ensuring that any appropriate new development responds to the existing settlement pattern and uses materials which are appropriate to local landscape character. . Notwithstanding any landscaping that may be incorporated in the detailed design, the significant scale of the potential development described for this greenfield area together with its low landscape capacity is judged to result in a significant negative effect against the landscape element of this objective.</p>	<p>+ / ? / --</p>
<p>2. Protecting and enhancing the cultural heritage and local distinctiveness of Basildon Borough.</p>	<p>The eastern part of the area within Basildon Borough is a Historic Environment Zone considered to be 'Sensitive to Change'. It contains archaeological find areas and medieval sites or find-spots, as well as remnants of historic field patterns of possible Middle Saxon origin. There are two listed buildings in the area, Dunton Hall and Dunton Hills, with others nearby.</p> <p>To the north west of the area is the Registered Park and Garden of Thorndon Park with Old Thorndon Hall and Gardens Scheduled Monument. The major employment and residential development identified for the site could have a significant negative effect on the</p>	<p>--?</p>

⁷ http://www.brentwood.gov.uk/pdf/pdf_1179.pdf

SA objective	SA Commentary	Likely Effect
	<p>setting of these historic assets and on the listed buildings within and close to the site unless appropriate mitigation measures such as natural screening are incorporated into the detailed design and layout of the development.</p> <p>As noted under SA objective 15, additional road traffic travelling between the development and Brentwood on the A128 could have adverse effects on the historic assets of Herongate and Ingrave villages on this route and on the centres of Brentwood and Shenfield.</p> <p>The significant scale of the development proposed described, the sensitivity of the historic landscape to change, the presence of two listed buildings within the area and the close proximity to a Registered Park and Garden and Scheduled Monument mean that there is potential for a significant negative impact on the heritage environment. This effect is judged to be uncertain as it may be possible to avoid or reduce the potential effects by sensitive layout and design of development.</p>	
<p>3. Protect, conserve and enhance the Borough's biodiversity and the habitats which support it.</p>	<p>Potential principles for Dunton Garden Suburb include "<i>generous green space, including a surrounding belt of countryside...following Eastlands Spring connecting Thorndon Country Park to Langdon Hills Country Park</i>", "land set aside for biodiversity areas" and "biodiversity-rich public parks". Together with the extensive areas of open space shown on the indicative map, these suggest the potential to enhance biodiversity by increasing ecological connectivity between existing, surrounding habitats and by improving the habitat value of selected areas within the site boundary. This potential minor positive effect is judged to be uncertain as it will depend on the "generous green space" being designed and managed in a way that delivers these gains. For example, some habitats can be sensitive to trampling, and some bird and mammal species can be sensitive to increased recreational pressure, including dog walking and pet predation (e.g. cats belonging to residents of the new homes).</p> <p>The area contains limited amounts of Deciduous Woodland BAP Priority Habitat, one of which is also Ancient and Semi-Natural Woodland. There are a number of Protected Species Alert Areas in and around the area. There are also Local Wildlife Sites in close proximity (Gravelpit Wood, Southfields Washland, Langdon Complex within Basildon Borough; data unavailable for Brentwood Borough) although these are separated from the development location by existing physical infrastructure such as roads.</p> <p>Thorndon Park SSSI lies to the north west of the area. This is designated for its semi-natural broad-leaved woodland and ancient parkland which supports range of habitat types and an outstanding assemblage of beetles. The western half of the potential development location falls within this SSSI's Impact Risk Zone for residential developments of 100 units or more, non-residential development where total net additional gross internal floorspace following development will be 1000 m² or more, and various other forms of development, indicating a need to consult Natural England on likely risks to the SSSI.</p> <p>The large scale development described for the 'Dunton Garden Suburb' scheme has the potential to have significant negative effects on habitats and species within and close to it, for example due to direct loss of woodland within the area or increased recreational pressure on sensitive habitats from the residents of the 4,000-6,000 additional homes. This effect is judged to be uncertain as it may be possible to avoid or reduce the potential effects by sensitive layout and design of development and appropriate design of the "<i>generous green space</i>" to be provided.</p>	<p>+?/--?</p>
<p>4. Achieve sustainable levels of prosperity</p>	<p>In addition to the construction of up to 6,000 dwellings, which will bring new consumers and, temporarily, construction jobs in to the area, new employment land would be provided. The new Garden Suburb would therefore be likely to have a significant positive effect</p>	<p>++</p>

SA objective	SA Commentary	Likely Effect
and economic growth to stimulate economic regeneration.	<p>on this objective.</p> <p>It is notable that the potential development location is very well connected to the M25 so that demand for employment land is likely to be high. Consideration should therefore be given to the relative benefits of using more of the site for employment, rather than housing.</p> <p>This location, at the south of the two districts, is in close proximity to Thurrock and the wider Thames Gateway where regeneration is a priority issue nationally. There is little reason to suggest, at this stage, that a scheme at this location would have a bearing on the achievement of regeneration objectives in the Thames Gateway, but this will need to be an issue that is the focus of ongoing investigation.</p> <p>As set out in the overall approach to the SA, development of Dunton Garden Suburb has been assessed on its own merits. Should the proposal be taken forwards then it will also be necessary to consider its sustainability relative to alternative locations in Basildon and Brentwood.</p>	
5. Ensure the Borough's Town Centres are promoted as sustainable locations for living, retail, leisure and related commercial development.	<p>The eastern edge of the potential development location is located within walking distance of two of Basildon's local centres at Laindon and Great Berry and associated Public Rights of Way and bus stops. There is also good access to Brentwood Town Centre, via established bus-routes. The local centre of West Horndon and existing bus stops on Tilbury Road lie to the west of the site although it has been assumed in line with the indicative map that a wide area of green space and a watercourse would separate the developed area from these. The described development includes on-site employment opportunities and local cultural, social and community facilities in walkable neighbourhoods in addition to residential development. Improvements would also be made to highways and integrated transport would be provided.</p> <p>Taking into account the described mix of likely uses, the ability of large scale residential development to support provision of services and facilities, the commitment to provision of local facilities rather than larger scale facilities that would compete with existing Town Centres and lead to unsustainable travel patterns, together with the described transport improvements, the potential development is judged likely to have a significant positive effect on this objective.</p>	++
6. Improve educational attainment and social inclusion, especially in the most deprived areas of the Borough.	<p>Basildon has significant capacity within its existing secondary schools and there is some capacity within the existing primary schools. The closest existing primary schools are Great Berry Primary School, West Horndon Primary School and Merryland Primary School in Laindon; the nearest secondary school is in the centre of Basildon. These schools are reasonably accessible to the development location. The scale of development is such that it could support provision of a new primary school within the development location although it is uncertain whether the "social and community facilities" to be provided include this.</p> <p>The development description also refers to apprenticeships which would presumably be secured during the construction phase.</p> <p>In light of these factors, the potential development is judged to have a minor positive effect on this objective.</p>	+
7. Ensure that everyone has the opportunity to	<p>The potential development would deliver 4,000-6,000 dwellings which would contribute significantly to Basildon and Brentwood Boroughs' housing needs. The scale of development should also be capable of requiring developers to provide a significant number of</p>	++

SA objective	SA Commentary	Likely Effect
live in a decent home and increase affordable provision to help those in most need locally.	affordable homes and the development description refers to " <i>well designed, mix tenure homes</i> ". As such, the potential development is judged to have a significant positive effect against on this objective.	
8. Improve the health and wellbeing of the Borough's residents and reduce inequalities in health related to development and the environment.	<p>The location of residential development is not considered to directly influence health inequality, mortality rates or fuel poverty. However, the Council has confirmed that any development at this location would be expected to support additional in-patient capacity at Basildon Hospital and assist in upgrading Laindon health centre and other existing primary health care through financial contributions.</p> <p>Financial contributions could also be made available for improvements to local sports facilities in line with Basildon Council's Indoor Sports and Community Facilities Standards. Furthermore, new formal and informal open space provision should be provided in accordance with the Basildon Council's adopted Open Space Standards, Playing Pitch Standards and Play Strategy. Any equivalent standard in Brentwood Borough would also apply. The commitment to designing "<i>walkable neighbourhoods</i>" would also help to encourage active and therefore healthier lifestyles.</p> <p>The provision of employment land, job offers and apprenticeships within the area would be likely to support reductions in unemployment with an indirect positive effect on the health of local people.</p> <p>Overall, it is therefore considered that as a strategic scale development, Dunton Garden Suburb provides the potential for targeted investment in social and community infrastructure with a minor positive effect on health and wellbeing.</p>	+
9. Create and sustain vibrant communities that are safe and feel safe to those who live in or visit them and where crime is reduced.	The potential development would be unlikely to have a significant effect on this objective. However, development would be required to provide " <i>local cultural, social and community facilities</i> " which would encourage community cohesion and increase vibrancy with a minor positive effect on this objective.	+
10. Regenerate and renew disadvantaged areas where people live or work in the Borough.	The eastern part of the potential development location falling within Basildon Borough is almost entirely within the 20-40% most deprived areas in England; there are no issues in terms of deprivation in South East Brentwood. Development would be required to provide " <i>local cultural, social and community facilities</i> " and would also provide new job and apprenticeship opportunities. There is therefore the potential to reduce local deprivation which is judged to have a minor positive effect on this objective.	+
11. Improve accessibility to and enhance local services and facilities.	Much of the potential development location is relatively isolated. Whilst its periphery area is within walking distance of a range of local services and facilities in the local centres of Laindon, Great Berry and West Horndon, these local centres are separated from the potential development location by the B148 (Laindon and West Berry) and A128 (West Horndon). It also appears likely that the developed area would be separated from West Horndon by a wide belt of open space. There are several bus stops and public rights of	+/-

SA objective	SA Commentary	Likely Effect
	<p>way located within easy walking distance of the peripheral parts of the potential development location. The centre of the potential development location is more remote from existing local services and facilities. Overall, these factors are judged to result in minor negative effects on access to existing facilities in neighbouring Laindon, West Berry and West Horndon.</p> <p>The described development includes on-site employment opportunities and "<i>local cultural, social and community facilities in walkable neighbourhoods</i>" in addition to residential development. Residents of the existing communities, such as Laindon, West Berry and West Horndon, would potentially benefit from new services and facilities provided in the Garden Suburb. Improvements would also be made to highways and integrated transport would be provided, and these are assumed to include a new station to the south of the Garden Suburb, linked to Basildon town centre and stations into London, although residents are still likely to use the car to access services and facilities, particularly in the north of the Garden Suburb which would be furthest from the station. These factors go some way to mitigating the relative isolation of the proposed development location, with a minor positive effect on this objective.</p>	
12. Improve efficiency of land use, through the re-use of previously developed land and existing buildings, including the re-use of materials from previous buildings.	The development location is a greenfield site and is almost entirely Grade 3 agricultural land which would be lost to future development, although it is not known whether the agricultural land is Grade 3a, which is classified as best and most versatile agricultural land, rather than Grade 3b, which is not classified as best and most versatile agricultural land. In line with the precautionary principle, it is judged that there would be an uncertain significant negative effect on this objective.	--?
13. Minimise the risk of flooding and the detriment to public health, domestic and commercial property and the natural environment flood events can bring.	In relation to the eastern part of the site within Basildon Borough, it lies within Critical Drainage Area BAS6 and its northern part is vulnerable to surface water flooding. Equivalent data are unavailable for that part of the site within Brentwood Borough but the watercourse that runs across it to eventually meet Mar Dyke to the south west is subject to a high level of fluvial flood risk (Flood Zone 3). Overall, the potential development is judged to have a significant negative effect on this objective but with uncertainty relating to the extent to which flood risk can be mitigated by appropriate layout (e.g. the indicative map suggests that the area of flood risk associated with the watercourse to the west will be open space) and design (e.g. flood resilience measures, incorporation of Sustainable Drainage Systems – SuDS) of development.	--?
14. Reduce the local contribution to climate change, by reducing emissions of greenhouse gases, improving energy efficiency of buildings and increase the use of renewable energy	For the reasons described under SA objective 11: Improve accessibility to and enhance local services and facilities, the potential development is judged to have negative mixed, non-significant effect on sustainable access to services and facilities. This is judged to have the same effect on SA objective 14 due to both minor positive and minor negative effects on the need to travel by both car and bus. No proposals have yet been made in relation energy efficiency of buildings or local renewable energy generation but the large scale of the development provides the potential to design in district heating and Combined Heat and Power (CHP) so uncertain effects are predicted on these aspects of the objective.	+/-/?

SA objective	SA Commentary	Likely Effect
sources for local energy needs to reduce the reliance on fossil fuels.		
15.Reduce air, land and noise pollution and improve their respective quality through direct action or mitigation measures.	<p>The A127, A128 and B148 run through or along the boundary of the potential development location and an existing railway line lies to the South. In addition, the area is in close proximity to existing employment sites, with new employment land included in the described development. The strategic roads, together with the existing and potential employment sites will bring large amounts of traffic within close proximity of the residents of the location, generating noise and reducing air quality. These negative effects could be exacerbated by the <i>described "highway improvements"</i>. It may be possible to mitigate some of these adverse effects on residents by placing open space buffers between development and, for example, the A128. Access to Brentwood and Shenfield is via the A128, which is of rural character in parts. Additional traffic would pass through the villages of Herongate and Ingrave which have a number of listed buildings and the centre of Herongate and Brentwood town centre are conservation areas. Overall a net minor negative effect on new residents is judged likely.</p>	-
16.Improve water efficiency and achieve sustainable water resource management.	<p>In terms of the potential for the development to cause water pollution, a water course runs across the western part of the location and it is underlain by aquifers. These environmental receptors create the potential for localised water pollution during construction although it may be possible to mitigate the risk by good construction practice.</p> <p>Connection to the existing wastewater sewer network and receiving treatment works could require the upgrading of existing infrastructure to manage the additional demand associated with the large scale residential and employment development described.</p> <p>No proposals have yet been made in relation to water efficient development design so no effect is predicted on these aspects of the objective.</p> <p>Overall, the effects of the potential development are judged to be uncertain at this early stage.</p>	?
17.Adopt building and public realm designs which ensure the Borough is prepared for the impacts of climate change.	<p>The potential development's location is not expected to have an effect on this objective. No proposals have yet been made in relation to climate change adaptation measures such as flood resilient design or incorporation of SUDS or passive cooling so no effect is predicted on these aspects of the objective at this stage of the potential development process.</p>	0
18.Reduce waste generation and increase the amount of waste which is recycled or re-used.	<p>The potential development's location is not expected to have an effect on this objective. No proposals have yet been made in relation to reducing construction waste, designs to encourage household and commercial recycling and so on. Thus, no effect is predicted on these aspects of the objective at this stage of the potential development process.</p>	0

SA objective	SA Commentary	Likely Effect
<p>19.Reduce traffic congestion and its related pollution levels by improving travel choice and channelling development to sustainable locations.</p>	<p>For the reasons described under SA objective 11: Improve accessibility to and enhance local services and facilities, the potential large scale development is judged to have a net minor negative effect on sustainable access and result in a net increase in the need to travel by both car and bus. The potential new railway station in the south of the Garden Suburb would provide a more sustainable transport access to Basildon town centre, and stations into London. Transport modelling carried out by Basildon Borough for its Local Plan Core Strategy suggested that several junctions would be over-capacity, including along the A127, although it was expected that all could be mitigated. Residents might also use the A128 to access Brentwood town centre, or major shopping centres such as Lakeside further afield.</p> <p>Overall, the potential development is judged to have a mixed effect against this objective.</p>	<p>+/-</p>