

Sustainability Appraisal of the Broxbourne Local Plan 2018 - 2033

Post Adoption Statement

May 2020



LEPUS CONSULTING
LANDSCAPE, ECOLOGY, PLANNING & URBAN SUSTAINABILITY



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Post-Adoption Statement

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Acronyms and Abbreviations

BBC	Broxbourne Borough Council
DtC	Duty to Cooperate
GP	General Practice
HRA	Habitats Regulations Assessment
LSE	Likely Significant Effect
NPPF	National Planning Policy Framework
OAN	Objectively Assessed Need
PPG	Planning Practice Guidance
RTPI	Royal Town Planning Institute
SA	Sustainability Appraisal
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SHMA	Strategic Housing Market Assessment
SPA	Special Protection Area
SPZ	Source Protection Zone

1 Introduction

1.1 Context and purpose of this report

- 1.1.1 This report comprises the Sustainability Appraisal Post-Adoption Statement for the Broxbourne Local Plan 2018 - 2033¹. It has been prepared under Regulation 16 of the Strategic Environmental Assessment Regulations (SI 1633) 2004².
- 1.1.2 The Broxbourne Local Plan has been prepared by Broxbourne Borough Council (BBC) with the aim of positively planning for growth and development within the Borough. The Local Plan is a development strategy covering 15 years for homes, jobs, leisure, transport and infrastructure, along with considering the long-term protection of the Green Belt plus local parks and open spaces.
- 1.1.3 During the preparation of the Broxbourne Local Plan, the Council was required to carry out a Sustainability Appraisal (SA) of the Plan. SA is a statutory process incorporating the requirements of the European Union Strategic Environmental Assessment (SEA) Directive³.

¹ Broxbourne Borough Council (2017) The Broxbourne Local Plan. Available at: https://ex.broxbourne.gov.uk/sites/default/files/Documents/Planning_Policy/Pre-Submission%20Local%20Plan%20Written%20Statement%20-%20LOW%20RES%20VERSION.pdf [Date Accessed: 17/04/20]

² The Environmental Assessment of Plans and Programmes Regulations 2004. Available at: <http://www.legislation.gov.uk/uksi/2004/1633/contents/made> [Date Accessed: 01/05/20]

³ SEA Directive. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32001L0042> [Date Accessed: 17/04/20]

1.1.4 In 2017, the Pre-Submission Local Plan was prepared and consulted upon under Regulation 19 of the Town and Country Planning (Local Planning) (England) Regulations 2012⁴. The Local Plan was submitted to an independent inspector appointed by the Secretary of State on 15th March 2018⁵. Examination Hearings were held for four weeks between September and November 2018, with an additional hearing session held in June 2019. Following the Examination Hearings, main modifications were identified by the Inspector. These main modifications were consulted on between January and February 2020.

1.1.5 The purpose of this Post-Adoption Statement is to outline how the SA process has informed and influenced the Local Plan development process, and to demonstrate how consultation on the SA has been taken into account.

1.2 Broxbourne Borough

1.2.1 Broxbourne is located in the south-east of Hertfordshire within the Upper Lee Valley bordered by East Hertfordshire to the north, Epping Forest to the east, Enfield to the south and Welwyn Hatfield to the west (see **Figure 1.1**). The M25 demarcates the southern boundary of the Borough and the River Lee Navigation demarcates the eastern boundary.

1.2.2 The main towns of Hoddesdon, Cheshunt and Waltham Cross are linked by smaller settlements such as Broxbourne, Wormley and Turnford. These form a near continuous north south corridor of development which is bordered by the West Anglia mainline and Lee Valley Regional Park to the east and the A10, ancient woodland and rolling farmland and countryside to the west. Cheshunt also extends westwards over the A10 into Bury Green, Rosedale, Flamstead End and along Hammondstreet. Goffs Oak and St James are distinctive settlements set out in the Green Belt in open countryside.

⁴ The Town and Country Planning (Local Planning) (England) Regulations (2012). Available at: <http://www.legislation.gov.uk/uksi/2012/767/contents/made> [Date Accessed: 17/04/20]

⁵ Broxbourne Borough Council (2020) Emerging Local Plan 2018 – 2033. Available at: <https://ex.broxbourne.gov.uk/resident-planning-and-building-planning-policy/emerging-local-plan-2018-2033> [Date Accessed: 17/04/20]

1.2.3

The A10 provides direct access to the M25 and the wider motorway network. The Borough's five railway stations provide rail services to central London, Stansted Airport and Cambridge as well as local services to north London, Hertford and Harlow.

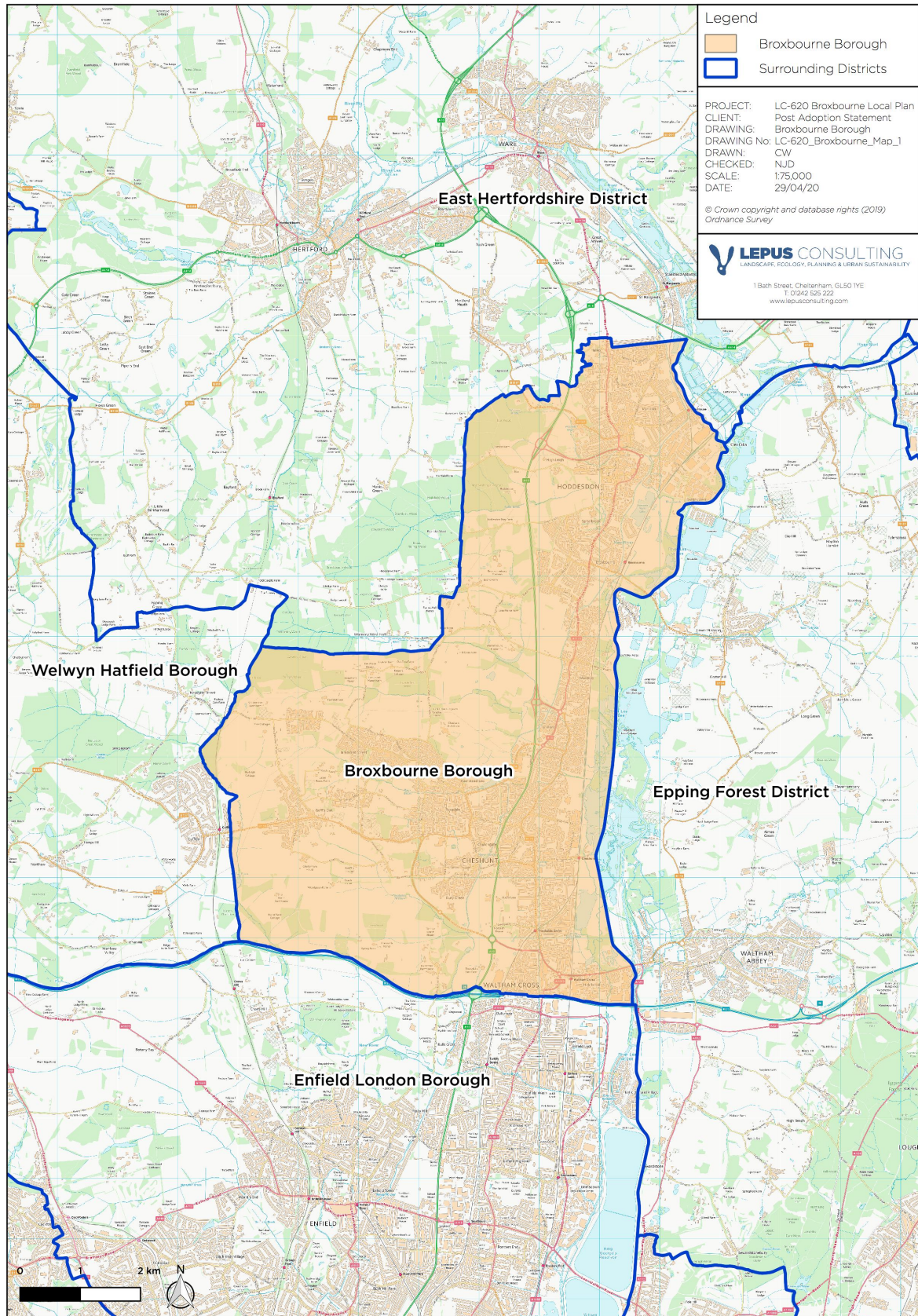


Figure 1.1: Boundary of Broxbourne Borough (source: Broxbourne Borough Council)

1.3 Requirement for the Post-Adoption Statement

1.3.1 In order to meet the legislative requirements of the European Directive 2001/42/EC and the Environmental Assessment of Plans and Programmes (2004), a Post-Adoption Statement is required to be published “*as soon as reasonably possible after the Plan has been adopted*”⁶.

1.3.2 SEA Regulation 16⁷ sets out the post-adoption procedures, including the requirement to produce a statement containing a number of particulars (Regulation 16 Paragraph 4). **Box 1.1** below presents the requirements of this SEA Post-Adoption Statement.

1.3.3 Following best practice guidance, BBC incorporated the SEA into the SA of the Broxbourne Local Plan. This Post-Adoption Statement provides sustainability information beyond the strict environmental parameters outlined in **Box 1.1**, to reflect the broader sustainability appraisal process.

1.4 Using this document

1.4.1 This Post-Adoption Statement should be read alongside the Broxbourne Local Plan 2018 - 2033 and associated SA documents, which can be found on the BBC website⁸.

1.4.2 This report follows the SEA Regulation requirements. The chapters are structured as per the criteria presented in **Box 1.1**:

- **Chapter 2** presents how environmental considerations have been integrated into the Broxbourne Local Plan;
- **Chapter 3** presents how the Environmental Report has been taken into account;
- **Chapter 4** presents how opinions of consultation bodies and the public have been taken into account;
- **Chapter 5** presents why the adopted Local Plan was chosen, in light of reasonable alternatives; and
- **Chapter 6** presents how the environmental and sustainability effects of the Local Plan may be monitored.

⁶ RTPI (2018) RTPI Practical Advice: Strategic Environmental Assessment – Improving the effectiveness and efficiency of SEA/SA for land use plans. Available at: <https://www.rtpi.org.uk/media/1822/sea-sapracticeadvicefull2018c.pdf> [Date Accessed: 15/04/20]

⁷ The Environmental Assessment of Plans and Programmes Regulations (2004). Available at: <http://www.legislation.gov.uk/uksi/2004/1633/part/4/made> [Date Accessed: 15/04/20]

⁸ Broxbourne Borough Council (2020) Emerging Local Plan 2018 – 2033. Available at: <https://ex.broxbourne.gov.uk/resident-planning-and-building-planning-policy/emerging-local-plan-2018-2033> [Date Accessed: 15/04/20]

Box 1.1: SEA Regulation 16 Post-Adoption Procedures

Information as to adoption of plan or programme

16.—

- 1) As soon as reasonably practicable after the adoption of a plan or programme for which an environmental assessment has been carried out under these Regulations, the responsible authority shall—
 - a) make a copy of the plan or programme and its accompanying environmental report available at its principal office for inspection by the public at all reasonable times and free of charge; and
 - b) take such steps as it considers appropriate to bring to the attention of the public—
 - i) the title of the plan or programme;
 - ii) the date on which it was adopted;
 - iii) the address (which may include a website) at which a copy of it and of its accompanying environmental report, and of a statement containing the particulars specified in paragraph (4), may be viewed or from which a copy may be obtained;
 - iv) the times at which inspection may be made; and
 - v) that inspection may be made free of charge.
- 2) As soon as reasonably practicable after the adoption of a plan or programme—
 - a) the responsible authority shall inform—
 - i) the consultation bodies;
 - ii) the persons who, in relation to the plan or programme, were public consultees for the purposes of regulation 13; and
 - iii) where the responsible authority is not the Secretary of State, the Secretary of State; and
 - b) the Secretary of State shall inform the Member State with which consultations in relation to the plan or programme have taken place under regulation 14(4), of the matters referred to in paragraph (3).
- 3) The matters are—
 - a) that the plan or programme has been adopted;
 - b) the date on which it was adopted; and
 - c) the address (which may include a website) at which a copy of—
 - i) the plan or programme, as adopted,
 - ii) its accompanying environmental report, and
 - iii) a statement containing the particulars specified in paragraph (4), may be viewed, or from which a copy may be obtained.
- 4) The particulars referred to in paragraphs (1)(b)(iii) and (3)(c)(iii) are —
 - a) how environmental considerations have been integrated into the plan or programme;
 - b) how the environmental report has been taken into account;
 - c) how opinions expressed in response to—
 - i) the invitation referred to in regulation 13(2)(d);
 - ii) action taken by the responsible authority in accordance with regulation 13(4), have been taken into account;
 - d) how the results of any consultations entered into under regulation 14(4) have been taken into account;
 - e) the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with; and
 - f) the measures that are to be taken to monitor the significant environmental effects of the implementation of the plan or programme.

2 How environmental and sustainability considerations have been integrated into the Broxbourne Local Plan

2.1 Integrated approach to SA and SEA

2.1.1 The requirements to carry out SA and SEA are distinct, although it is possible to satisfy both obligations using a single appraisal process.

2.1.2 The SEA Directive applies to a wide range of public plans and programmes on land use, energy, waste, agriculture, transport and more (see Article 3(2) of the Directive for other plan or programme types). The objective of the SEA procedure can be summarised as follows: *“the objective of this Directive is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development”*.

2.1.3 The SEA Directive has been transposed into English law by the SEA Regulations. Under the requirements of the SEA Directive and SEA Regulations, specific types of plans that set the framework for the future development consent of projects must be subject to an environmental assessment. Therefore, it is a legal requirement for the Broxbourne Local Plan to be subject to SEA throughout its preparation.

2.1.4 SA is a UK-specific procedure used to appraise the impacts and effects of development plans in the UK. It is a legal requirement as specified by S19(5) of the Planning and Compulsory Purchase Act 2004⁹ and should include an appraisal of the economic, social and environmental sustainability of development plans. The present statutory requirement for SA lies in The Town and Country Planning Regulations. SA is a systematic process for evaluating the environmental consequences of proposed plans or programmes to ensure environmental issues are fully integrated and addressed at the earliest appropriate stage of decision-making.

2.2 Best Practice Guidance

2.2.1 Government policy recommends that both SA and SEA are undertaken under a single sustainability appraisal process, which incorporates the requirements of the SEA Directive. This can be achieved through integrating the requirements of SEA into the SA process. The approach for carrying out an integrated SA and SEA is based on best practice guidance including the following:

- European Commission (2004) Implementation of Directive 2001/42 on the assessment of the effects of certain plan and programmes on the environment¹⁰.
- Office of Deputy Prime Minister (2005) A Practical Guide to the SEA Directive¹¹.
- Ministry of Housing, Communities and Local Government (2018) National Planning Policy Framework (NPPF)¹².
- Ministry of Housing, Communities and Local Government (2018) Planning Practice Guidance (PPG)¹³.

⁹ Planning and Compulsory Purchase Act 2004. Available at: <https://www.legislation.gov.uk/ukpga/2004/5/contents> [Date Accessed: 15/04/20]

¹⁰ European Commission (2004) Implementation of Directive 2001/42 on the assessment of the effects of certain plan and programmes on the environment. Available at: http://ec.europa.eu/environment/archives/eia/pdf/030923_sea_guidance.pdf [Date Accessed: 15/04/20]

¹¹ Office of Deputy Prime Minister (2005) A Practical Guide to the SEA Directive. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf [Date Accessed: 15/04/20]

¹² National Planning Policy Framework. Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2> [Date Accessed: 15/04/20]

¹³ Planning practice guidance. Available at: <https://www.gov.uk/government/collections/planning-practice-guidance> [Date Accessed: 15/04/20]

- Royal Town Planning Institute (2018) Strategic Environmental Assessment, Improving the effectiveness and efficiency of SEA/SA for land use plans¹⁴.

2.2.2 The SA (incorporating SEA) of the Broxbourne Local Plan began in 2016. This Post-Adoption Statement follows on from:

- SA Scoping Report (2016)¹⁵;
- SA of the Framework Document (2016)¹⁶;
- SA of the Borough-Wide Options and Scenarios (2016)¹⁷;
- SA of the Draft Local Plan (2016)¹⁸,
- SA of the Local Plan (2017)¹⁹; and
- SA of the Main Modifications (2019)²⁰.

2.3 SA Framework

2.3.1 The purpose of the SA Framework is to provide a way of ensuring that the Local Plan preparation process considers the environmental, social and economic impacts of the proposed site allocations and policies on the various environmental, social and economic receptors located in and around the Borough. The Framework offers a consistent and robust means of description, analysis and comparison for these impacts.

¹⁴ RTPI (2018) RTPI Practical Advice: Strategic Environmental Assessment – Improving the effectiveness and efficiency of SEA/SA for land use plans. Available at: <https://www.rtpi.org.uk/media/1822/sea-sapracticeadvicefull2018c.pdf> [Date Accessed: 15/04/20]

¹⁵ Lepus Consulting (2016) Sustainability Appraisal of the Broxbourne Local Plan: Scoping Report. Available at: https://ex.broxbourne.gov.uk/sites/default/files/Documents/Planning_Policy/SUB4e%20-%20SA%20Scoping%20Report%20March%202016.pdf [Date Accessed: 15/04/20]

¹⁶ Lepus Consulting (2016) Sustainability Appraisal of the Broxbourne Local Plan Duty to Co-Operate Framework Document (October 2015). Available at: https://ex.broxbourne.gov.uk/sites/default/files/Documents/Planning_Policy/SUB4d%20-%20SA%20of%20the%20Framework%20Document%20April%202016.pdf [Date Accessed: 15/04/20]

¹⁷ Lepus Consulting (2016) Sustainability Appraisal of the Broxbourne Emerging Local Plan: Assessment of the Borough-wide Options and Scenarios. Available at: https://ex.broxbourne.gov.uk/sites/default/files/Documents/Planning_Policy/SUB4c%20-%20SA%20of%20Borough-Wide%20Options%20and%20Scenarios%20June%202016.pdf [Date Accessed: 15/04/20]

¹⁸ Lepus Consulting (2016) Sustainability Appraisal of the Broxbourne Emerging Local Plan: Assessment of the Regulation 18 Draft Local Plan. Available at: https://ex.broxbourne.gov.uk/sites/default/files/Documents/Planning_Policy/SUB4b%20-%20SA%20of%20Regulation%2018%20draft%20Local%20Plan%20July%202016.pdf [Date Accessed: 15/04/20]

¹⁹ Lepus Consulting (2017) Sustainability Appraisal of the Local Plan, Broxbourne Borough Council: Regulation 19 Report. Available at: https://ex.broxbourne.gov.uk/sites/default/files/Documents/Planning_Policy/SUB4a%20-%20Regulation%2019%20Sustainability%20Appraisal.pdf [Date Accessed: 15/04/20]

²⁰ Lepus Consulting (2019) Sustainability Appraisal of the Broxbourne Local Plan: Appraisal of the Main Modifications. Available at: https://ex.broxbourne.gov.uk/sites/default/files/Documents/Planning_Policy/EXAM%2034G%20-%20Sustainability%20Appraisal.pdf [Date Accessed: 15/04/20]

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- 2.3.2 The SA Objectives were first considered as part of the SA Scoping Report published in 2012 and were subsequently updated in March 2016.
- 2.3.3 The SA Framework consists of 13 environmental objectives. The extent to which these objectives will be achieved can, in most cases, be measured using a range of indicators. The SA Objectives were largely informed by topics of Annex I (f) of the SEA directive²¹, taking into account other relevant national, regional and local plans and programmes and local key issues. By taking into account each of these influences, the SA Framework allows for a robust, thorough and meaningful Sustainability Appraisal.
- 2.3.4 The SA Objectives included within the SA Framework, and the sustainability themes to which they relate, are set out in **Table 2.1**.

²¹ Biodiversity flora and fauna; Population; Human health; Soil; Water; Air; Climatic factors; Material assets; Cultural heritage (including architectural and archaeological heritage); and Landscape.

Table 2.1: SA Framework objectives and corresponding SEA topic

	SA Objective	Description	SEA Topic(s)
1	Cultural heritage	Protect, enhance and manage sites, features, areas and landscapes of archaeological, historical and cultural heritage importance, their setting and significance.	Cultural heritage (including architectural and archaeological)
2	Landscape	Protect, enhance and manage the character and appearance of the landscape and townscape, maintaining and strengthening local distinctiveness and sense of place.	Landscape
3	Biodiversity and geodiversity	Protect, enhance and manage biodiversity and geodiversity.	Biodiversity Flora Fauna
4	Climate change mitigation	Minimise the borough's contribution to climate change.	Climatic factors
5	Climate change adaptation	Plan for the anticipated levels of climate change.	Climatic factors Water
6	Natural resources	Protect and conserve natural resources.	Biodiversity Flora Fauna Soil
7	Pollution	Reduce air, soil and water pollution.	Air Water Soil
8	Waste	Reduce waste generation and disposal, and promote the waste hierarchy of reduce, reuse, recycle/compost, energy recovery and disposal.	Material assets
9	Transport and accessibility	Improve the efficiency of transport networks by increasing the proportion of travel by sustainable modes and by promoting policies which reduce the need to travel.	Material assets Population
10	Housing	Provide affordable, environmentally sound and good quality housing for all.	Material assets
11	Health	Safeguard and improve community health, safety and well-being.	Human health Population
12	Economy	Develop a dynamic, diverse and knowledge-based economy that excels in innovation with higher value, lower impact activities.	Population Material assets
13	Education, skills and training	Raise educational attainment and develop and maintain a skilled workforce to support long-term competitiveness.	Population

2.3.5 The likely adverse and positive sustainability effects of the Broxbourne Local Plan as identified as part of the Regulation 19 SA Report and amended are presented in **Tables 2.2 and 2.3**.

Table 2.2: Potential residual adverse sustainability effects of the Broxbourne Local Plan

Negative impacts	
1	<p>Decreases in air quality</p> <p>The Local Plan is anticipated to lead to a reduction in local air quality with implications for human health. Development proposed in the Local Plan would place a large number of new residents in locations within 200m of busy or major roads and increase traffic volumes, contributing to a decrease in air quality.</p>
2	<p>Increased emissions of greenhouse gases</p> <p>The large quantity of development proposed within the Local Plan would be likely to result in a significant increase in the Plan area's carbon emissions. This increase would exacerbate the impacts of climate change.</p>
3	<p>Flood risk</p> <p>The Local Plan is anticipated to increase fluvial flood risk. Although the majority of the Plan area is located in Flood Zone 1, some sites in the Plan include land within Flood Zones 2, 3a and 3b, in particular, development proposed under Policies CH1, HOD6 and LV6. Development in these areas could potentially locate some site end users in areas that are susceptible to fluvial flooding.</p>
4	<p>Increase in waste generation</p> <p>The proposed development would be expected to increase the number of residents across the Borough, which would increase waste generation. At this stage, it is uncertain if this waste can be efficiently managed.</p>
5	<p>Impact on the local landscape character</p> <p>There is the potential for the development in the Local Plan to lead to a loss of sense of place through the introduction of built form which does not respect the locally distinctive character of existing settlements within the Plan area. The development of some of the sites proposed in the Plan may lead to the physical, or perceived, loss of separation between settlements.</p>
6	<p>Loss of soil resource including BMV land</p> <p>The Local Plan proposes a significant quantity of development, a large proportion of which would be situated on previously undeveloped greenfield sites. At each previously undeveloped site, it is expected that where new buildings are constructed there will be a direct loss of soils with little scope for mitigation.</p>
7	<p>Water pollution</p> <p>The Local Plan would be likely to lead to a reduction in local water quality. Many sites being considered for development are previously undeveloped greenfield sites. It is considered likely that the construction and occupation/operation of residential or employment development at these locations would increase the risk of contamination and pollution of waterways to some extent. The majority of the Plan area is within a groundwater Source Protection Zone (SPZ). These indicate the potential risks of different types of development for groundwater quality.</p>
8	<p>Increased pressure on ecosystem services</p> <p>Soil provides a range of essential services to the local area, including nutrient cycling, abating flood risk, filtering water, filtering air, carbon storage and providing the basis for vegetation to flourish. Water provides a range of essential services to the local area, including drinking water, filtering water, providing the basis for vegetation to flourish, mental and physical wellbeing, and supporting biodiversity. The significant scale of development proposed within the Local Plan, including those proposed at previously undeveloped locations, would be expected to increase pressure on essential ecosystem services.</p>

Negative impacts

Restricted access to education	
9	Some of the development proposed could potentially be located in areas with limited access to primary and secondary educational facilities. To reach such facilities, site end users may rely on personal car use.

Table 2.3: Likely positive sustainability effects of the Broxbourne Local Plan

Positive impacts

Employment	
1	The Local Plan is anticipated to lead to a significant increase in employment opportunities and commercial floor space in the Plan area. This will help ensure all residents have access to employment opportunities which help to enable them to live a higher quality life.
Housing	
2	The development proposed in the Local Plan would make a significant contribution towards meeting the various housing needs in the Plan area, such as quantity, distribution and affordability.
Physical and mental health	
3	The Local Plan is anticipated to help ensure that residents in the Plan area have access to a range of health facilities, including GP surgeries, hospitals and natural habitats. This would be likely to help ensure that residents can pursue healthy lifestyles.
Transport	
4	The Local Plan is anticipated to help ensure that residents would have convenient access to frequent, affordable and sustainable modes of transport. Where this is currently not the case, it is likely that policies in the Local Plan would help ensure that the sustainable transport options are improved.
Biodiversity	
5	Although development proposed within the Local Plan would be expected to result in the loss of some biodiversity features, such as woodland and parkland, the policies ensure that internationally and nationally protected biodiversity sites are protected, and biodiversity net gain is promoted across the Plan area.
Cultural heritage	
6	The policies set out in the Local Plan would be expected to help protect local historic assets and no adverse impacts would be expected.

2.4 Habitats Regulations Assessment

- 2.4.1 The Broxbourne Local Plan was also subject to a Habitats Regulations Assessment (HRA) in accordance with the Conservation of Habitats and Species Regulations 2017 as amended²² (the Habitats Regulations).
- 2.4.2 Following a screening exercise (Stage 1 of the HRA process) a detailed Appropriate Assessment²³ (Stage 2 of the HRA process) was undertaken to assess a number of Likely Significant Effects (LSEs) in more detail. These included:
- Public access associated disturbances LSE at Lee Valley SPA caused by the Broxbourne Local Plan alone;
 - Air pollution and public access LSEs at Epping Forest Special Area of Conservation (SAC) caused by the Broxbourne Local Plan in-combination; and
 - Public access associated disturbances LSE at Wormley Hoddesdonpark Woods SAC caused by the Broxbourne Local Plan in-combination.
- 2.4.3 The HRA to support the Local Plan concluded that, based on the Council's continued adoption and progress of the relevant monitoring and mitigation strategies, all potential LSEs on European sites caused by the Broxbourne Local Plan alone or in-combination could be objectively ruled out.
- 2.4.4 In 2019, the Main Modifications were assessed in the HRA process²⁴. This assessment concluded that there would be no adverse impact on the site integrity of a European site as a result of the Main Modifications.

²² The Conservation of Habitats and Species Regulations 2017 (2017) SI No. 2017/1012, TSO (The Stationery Office), London.

²³ Lepus Consulting (2018) Habitats Regulations Assessment of the Broxbourne Emerging Local Plan: Appropriate Assessment. Available at: https://ex.broxbourne.gov.uk/sites/default/files/Documents/Planning_Policy/EV1%20-%20Habitats%20Regulations%20Assessment.pdf [Date Accessed: 15/04/20]

²⁴ Lepus Consulting (2019) Broxbourne Local Plan Proposed Main Modifications, Habitats Regulations Assessment Addendum. Available at: https://ex.broxbourne.gov.uk/sites/default/files/Documents/Planning_Policy/EXAM%2034F%20-%20Habitats%20Regulation%20Assessment.pdf [Date Accessed: 17/04/20]

3 How the Environmental Report has been taken into account

3.1 SA Recommendations

3.1.1 The SA of the Broxbourne Local Plan, in particular the Environmental Report²⁵, made recommendations for mitigating likely negative effects as well as recommending measures to enhance sustainability.

3.1.2 The SA has presented recommendations at the following stages of the plan making process:

- Sustainability Appraisal of the Local Plan: Borough-wide Options and Scenarios (June 2016);
- Sustainability Appraisal of the Draft Local Plan: Regulation 18 Report (July 2016);
- Sustainability Appraisal of the Local Plan: Regulation 19 Report, (October 2017); and
- Sustainability Appraisal of the Main Modifications (December 2019).

3.1.3 The recommendations, which include changes to the wording of policies, are set out in **Table 3.1** below alongside explanations of how the recommendations were incorporated into the Plan making process.

Table 3.1: Recommendations from the SA process and how they have been taken into account by BBC

SA Report	SA Recommendations	Broxbourne Borough Council Response
Borough-wide Options and Scenarios	<ul style="list-style-type: none"> • Given the interdependence between Rags Brook and Tudor Nurseries, it may be preferable to present them as a single combined option at the Regulation 19 stage. It would seem doubtful if in the absence of Rags Brook Valley being allocated for development, Tudor Nurseries would still be considered a reasonable option for development given its effect on the Green Belt in those circumstances. In addition, a combined approach would allow for increased clarity on the location for a new school and the scale / location of other supporting facilities and amenities. In addition, comprehensive mixed-use redevelopment of the Rags Brook Valley and Tudor Nurseries sites would improve levels of accessibility for the other sites identified in the Goffs Oak and St James 	<p>Further masterplanning was undertaken for all the strategic sites throughout the evolution of the Local Plan. This assisted in the identification of appropriate mitigation measures.</p> <p>A policy on comprehensive masterplanning was added to the design policies.</p>

²⁵ The Regulation 19 SA Report, as set out in Regulation 12 of the Environmental Assessment of Plans and Programmes Regulations. Available at: <http://www.legislation.gov.uk/ukxi/2004/1633/regulation/12/made> [Date Accessed: 06/05/20]

SA Report	SA Recommendations	Broxbourne Borough Council Response
	<p>areas. This is because development of Rags Brook and Tudor Nurseries would reduce the number of longer trips required to access the facilities and amenities not available in the local area, in turn potentially reducing pressure on the A10 southbound.</p> <ul style="list-style-type: none"> • That the development management policies in the plan leave open the option of increasing the density if it can be shown at the planning application stage that this is appropriate. • That more detailed masterplanning be undertaken to identify whether it would be possible to mitigate potential adverse effects for certain sites through detailed layout and design. • The greater emphasis be given to urban sites within the <i>'Borough- Wide Issues and Scenarios'</i> report. The urban areas contain some of the most sensitive sites identified by the SA process, particularly those in Waltham Cross, however the discussion of these sites is limited in comparison to the Green Belt sites. • A number of the urban sites, particularly in Waltham Cross, are in Flood Zones 2 and 3. Given the potential risk to lives and property that this poses, it is recommended that further consideration be given to the release of Green Belt land on the basis that the current approach doesn't release sufficient land to avoid further development in Flood Zones 2 and 3 and whether this constitutes an exceptional case for Green Belt Release. • That greater emphasis and clarity is given to the provision of where new facilities and amenities are expected to be provided to support the additional dwellings. At present schools and large scale retail are addressed, however it is not clear where new small scale facilities such as convenience stores or community centres would be considered desirable. 	<p>A capacity testing exercise was undertaken in relation to urban sites, in particular Cheshunt Lakeside, which resulted in an uplift for the proposed level of development from 400 dwellings to 1,000 dwellings.</p> <p>A sequential test and exceptions test were prepared to address flood risk (note: a number of small sites in Waltham Cross were later dropped from the plan for other reasons beside flood risk).</p> <p>An Infrastructure Delivery Plan was prepared to address facilities and amenities, and additional detail was added to the Plan.</p>
Regulation 18	<p>Cultural heritage:</p> <ul style="list-style-type: none"> • Loss of heritage features is an irreversible adverse effect. Excavation of features prior to development should be carefully documented and added to the local historic record. • Where possible, cultural features should be designed into new development to recognize and help develop a strong sense of place. New development should avoid compromising existing qualities. <p>Landscape:</p> <ul style="list-style-type: none"> • Where possible, development should incorporate mitigation through careful design including planting strategies. Key characteristics for Landscape Character Areas should be maintained where possible. Development should not hinder the successful delivery of management prescriptions for Landscape Character Areas. • New development should seek to incorporate new planting schemes or landscape buffers into the development design in keeping with the local character. <p>Biodiversity:</p> <ul style="list-style-type: none"> • Where habitats present may have the potential to support protected species, surveys should be undertaken to determine presence/absence and population size. This will determine whether protected species are likely to be lost if the site were to be developed. • Where possible, development should seek to ensure 'no net loss' in biodiversity at any given site. • Habitat features can be incorporated into developments and help overcome the effects of habitat fragmentation. Where possible, removal of existing linear features such as hedgerows, tree lines and aquatic networks should be avoided. <p>Climate change mitigation:</p> <ul style="list-style-type: none"> • Mitigation methods include supporting sustainable transport modes, i.e. through reducing the need to travel, 	<p>Development Management policies were developed to address these. Subsequently through the Local Plan examination this approach was refined, and further detail added in respect of Local Plan sites.</p> <p>Requirements in respect of landscape were developed through further masterplanning, particularly at Brookfield and Rosedale Park, including planting schemes and landscape buffers.</p> <p>A development management policy was added to the plan in respect of no net loss of biodiversity.</p> <p>An infrastructure policy was added to the plan to support the</p>

SA Report	SA Recommendations	Broxbourne Borough Council Response
	minimizing walking distance to public transport links, and increasing frequency of public transport services. <ul style="list-style-type: none"> Where possible development should maximize renewable energy generation and use of energy from renewable sources. 	implementation of the Council's Local Cycling and Walking Infrastructure Plan.
	Climate change adaptation: <ul style="list-style-type: none"> Retain existing GI and incorporate this into the development where possible. Seek to augment and strengthen Broxbourne's strategic network of GI. 5.6.2 Climate change adaptation recommendation 2: Incorporate new, high- quality GI into the development, including a variety of habitats and publicly accessible green space. This should be well connected to the existing GI network. 	A new development management policy on Green Infrastructure was inserted into the Plan.
	Pollution: <ul style="list-style-type: none"> Air quality mitigation methods include careful development design arrangement, and sustainable traffic management principles. Support the local and strategic GI network. 	A new policy on air quality was inserted into the Plan.
	Waste: <ul style="list-style-type: none"> Sufficient opportunities should be identified to meet the needs of the development area for management of waste streams. Where economically and environmentally practical, development should promote re-use of recycled materials, and high quality recycling facilities. 	Policy added regarding residential and environment quality with reference to the Council's Waste Supplementary Planning Guidance.
	Transport: <ul style="list-style-type: none"> Development should look to improve the existing sustainable transport network and encourage behavioural change to promote the use of sustainable transport. To mitigate potential impacts on local and national road networks, development should aim to be located near to existing amenities and transport links, as well as including new amenities and new sustainable transport links, particularly in larger developments. 	The Council prepared the Broxbourne Transport Strategy. Site allocations were selected in part on the basis of their potential to promote sustainable transport including potential access to facilities.
	Housing: <ul style="list-style-type: none"> Careful consideration should be given to density, design and future proofing in terms of climate change and potential expansion. 	This was achieved through ongoing masterplanning of sites.
	Health: <ul style="list-style-type: none"> Where health and recreation facilities are not within the recommended distances, it may be possible to provide these on site. Where this is not possible, facilities should be easily accessible by sustainable modes of transport, e.g. via affordable, frequent bus services. 	These principles were applied in the selection of sites for allocation.
	Economy and employment: <ul style="list-style-type: none"> If operating businesses will be removed from the site, there should be suitable alternative business premises nearby. Existing businesses could be given support in finding new premises and moving over from one to the other. Access to employment opportunities should be maximised by either providing employment opportunities within a development, or by ensuring easy access to employment elsewhere, via sustainable modes of transport. 	Policies for Cheshunt Lakeside and Park Plaza North prepared to address these points.
	Education: <ul style="list-style-type: none"> Existing schools could be given support in expansion, alteration or finding new premises and moving over from one to the other, if necessary. Sustainable transport should be promoted as a safe and easy way to access educational facilities. This may require improvements to road infrastructure to make it more pedestrian-friendly or dedicated school transport services. 	An Infrastructure Delivery Plan was prepared to address these points.
Regulation 19	Biodiversity: <ul style="list-style-type: none"> It is recommended that the Council continues to commit to the strategies presented in the HRA AA, including the altering of policy CH1: Cheshunt Lakeside so it includes a 	Policy CH1 was altered as suggest by the sustainability appraisal.

SA Report	SA Recommendations	Broxbourne Borough Council Response
	<p>framework for addressing the impacts of the proposed Cheshunt Lakeside development on the Lee Valley SPA. This should include the provision of alternative open and green space for residents of Cheshunt Lakeside. This is to help ensure that an LSE at Lee Valley SPA and/or Epping Forest SAC is avoided and that the proposed development results in a net gain for biodiversity;</p> <ul style="list-style-type: none"> • It is recommended that, where it is unavoidable that habitats will be detrimentally affected by development, compensatory habitat of at least equal quality and scale must be provided at a nearby location; • It is recommended that the site 'Land to the west of the A10, Hoddesdon' should not be allocated for residential development because of its potential adverse impacts on Wormley Hoddesdonpark Woods SAC; • It is recommended that trees within allocated site boundaries are, as consistently as possible, retained and supported by additional tree planting. Development of sites is an opportunity to retain important trees and stands of woodland as well as to contribute towards a net gain for biodiversity through planting additional native tree species such as oak (<i>Quercus robur</i>) and hornbeam (<i>Carpinus betulus</i>). Oak and hornbeam woodlands have a restricted distribution in the country and the Borough of Broxbourne is therefore well placed to make a significant contribution towards improving the prevalence of this type of woodland in the UK; • Policy INF9 proposes a site south of Church Lane to be reserved for a Secondary School to help meet the demand for places, should it be required. This site is also a LWS and building a school here would be likely to have an adverse impact on an important local biodiversity asset. It is recommended that, should this development proceed, the fields adjacent to the northern and southern perimeters of the site are managed and maintained in a way to establish greater biodiversity, and as such help ensure there is a net gain for biodiversity as opposed to a loss; • It is recommended that frequent, accessible and affordable sustainable transport options, such as new direct walking and cycling routes, are in place to reduce the reliance on personal car use to reach important biodiversity sites that are also attractive/popular visitor destinations, such as Broxbourne Woods NNR; • It is also recommended that future sites designated and protected for their biodiversity should be located more than 200m from a major road in order to help ensure the conservation status of important biodiversity sites, whether locally, nationally or internationally designated, is not undermined by air pollution; • It is recommended that, where biodiversity sites are within 200m of a major road, on-site efforts are made to monitor, manage and mitigate the impacts of excess nitrogen deposition. This may include removing invasive species, clearing nitrophilous plants such as bramble and removal of ground litter to benefit native species and overall biodiversity; and • It is recommended that reedbed should be conserved and enhanced at all opportunities. Where development in the Borough may impact on reedbed habitat, conservation and enhancement should be encouraged to the extent that there is an overall net gain for the habitat. 	<p>The requirement for compensatory habitat was applied through the provisions of the policy in respect of no net loss of biodiversity.</p> <p>Land west of the A10 was not allocated for development.</p> <p>A policy for the protection and planting of trees was included in the plan and pursued through masterplanning as well as policy references.</p> <p>Regarding the secondary school site at Church Lane, Wormley, an ecological impact assessment was produced and demonstrated that net gain for biodiversity could be achieved on site.</p> <p>The Habitats Regulations Assessment concluded that there would be no likely significant adverse effects on the protected sites from the planned development.</p> <p>A mitigation strategy for the Lee Valley protected sites was prepared.</p>
	<p>Population:</p> <ul style="list-style-type: none"> • It is recommended that, where residential sites are more than 800m from a GP surgery or more than 8km from a hospital, frequent, accessible and affordable sustainable transport links to these health facilities are provided; • It is recommended that, where strategic residential sites are more than 800m from a GP surgery or more than 8km 	<p>The Broxbourne Transport Strategy was prepared to address sustainable transport links. Opportunities for new health centres were specified within policies</p>

SA Report	SA Recommendations	Broxbourne Borough Council Response
	<p>from a hospital, new health facilities are provided as a part of the development;</p> <ul style="list-style-type: none"> It is recommended that residents are encouraged to walk and/or cycle as frequently as possible, potentially through enhancing the PRow network, enhancing the cycle lane network and ensuring residential streets are well lit and safe; It is recommended that all residential sites have excellent and sustainable access to a diverse range of natural environments within a walkable distance. Exposure to a diverse range of natural habitats is proven to be significantly beneficial to human physical and mental health and well-being. For example, good access to green/recreational areas can reduce stress, fatigue, anxiety and depression. It is associated with healthy foetal growth and higher birth weights in pregnant women, it is vital in the development of a healthy microbiome in babies and it is associated with reduced rates of obesity and Type 2 diabetes. Impacts of access to the natural environment are particularly significant for lower socio-economic groups. Providing residents with sustainable access to a diverse range of natural habitats is therefore a potentially effective means of reducing health inequalities in the Borough; It is recommended that green spaces are highly accessible, safe, functional, have a high biodiversity value and are of a high quality. These spaces should include water features, benches and paths to help ensure that the green spaces are popular social spaces where residents can meet; It is recommended that efficient management regimes of open and green spaces are in place to help ensure that residents' perception of these spaces is that they are safe and comfortable to use; It is recommended that increased and/or enhanced links to the countryside are specifically sought from higher density settlements, such as Hoddesdon; It is recommended that development offers residents with passive/visual access to green spaces, particularly where population density is relatively high. Residents are less likely to have access to green spaces in high population density areas, but are also less likely to use it than residents in lower density areas. 	<p>for Brookfield, Rosedale Park, and Cheshunt Lakeside.</p> <p>Provision of good access to green spaces both on-site and off-site was addressed through the selection of site allocations to address health inequalities.</p> <p>A policy regarding the management and maintenance of open spaces was added to the plan.</p>
	<p>Soil:</p> <ul style="list-style-type: none"> The reuse of existing buildings and previously developed land should be encouraged at all developments where there is an opportunity to do so, in order to direct development away from undeveloped land; Encourage the retention of, and additional planting of, trees within all development where feasible, as soils in the Borough are well equipped to support woodland habitats; Require better management of soils during construction to prevent pollution and unnecessary compaction; Avoid leaving or creating bare ground during construction to limit the risk of soil erosion events; Where sites contain bare soil either prior to or following the construction phase, efforts should be made to cover the ground with native plant species to reduce the risk of erosion. 	<p>The brownfield register was used to identify brownfield opportunities.</p> <p>Policy added in respect of sustainable construction.</p>
	<p>Cultural heritage:</p> <ul style="list-style-type: none"> Development which proposes to revitalise or regenerate an area should be encouraged, such as converting empty spaces above shops in town centres back to their original use as homes; Development within existing town centres should be encouraged to pay close attention to the existing character of the area. Developers should acknowledge local architectural details, use locally sourced materials 	<p>Policy on design and sustainable construction was updated to address these issues.</p> <p>Masterplanning was used to address these points, and were further addressed through</p>

SA Report	SA Recommendations	Broxbourne Borough Council Response
	<p>where possible and knit the development together with the local area;</p> <ul style="list-style-type: none"> • Where development may adversely impact on views or settings of heritage assets, the use of native plant species as screening vegetation should be considered; • Where new development is located in the vicinity of relatively secluded cultural heritage assets, opportunities for maintaining and/or enhancing access to the heritage asset are explored. <p>Material assets:</p> <ul style="list-style-type: none"> • Developers should be encouraged to maximise their use of recycled and locally sourced materials during construction; • It is recommended that, where residential development is relatively isolated from household recycling centres, new recycling facilities be provided or opportunities to recycle through kerbside schemes should be enhanced. Residents are unlikely to carry their recycling on the bus and will be likely to rely on personal car use when forced to travel relatively far to recycle; • Where residential sites do not have good access to sustainable transport links and residents are anticipated to rely relatively heavily on personal car use, new, frequent and affordable bus links should be installed; • New residential developments should be well equipped to facilitate walking, cycling and travelling by bus and/or rail. For example, new dwellings can include suitable locations to lock bikes, whilst residential streets should be clear, broad and well-lit; • The actions in the Walking and Cycling Infrastructure Plan aimed at making cycling in the Borough more safe, and helping residents to perceive it as safe, should be prioritised and delivered at the earliest opportunity. Increasing the quantity of designated cycle paths, ensuring that there is adequate space for cyclists at junctions and improving signage at junctions to remind drivers to pay close attention for cyclists should all be required as part of any new development. <p>Climate and water:</p> <ul style="list-style-type: none"> • Where there is an opportunity to do so, riparian habitats and spaces along watercourses are naturalised with the introduction of native plant and tree species to improve natural flood risk attenuation; • All residential development should have access to frequent, affordable and sustainable modes of transport. This would include bus stops, ideally within 400m of every resident, and railway stations, ideally within 2km of every resident; • The use of recycled materials and/or renewable energy sources should be encouraged during construction in the Borough; • Every effort should be made to expand the GI network, retain GI within site boundaries and to support it with additional planting of native species; • Development should include surface sustainable urban drainage systems, where feasible; • Policy TM4 new electric car charging points should be strengthened to require all new parking spaces in Hoddesdon, Broxbourne, Cheshunt and Goff's Oak to have charging points. Currently, residents of the Borough could potentially use one of only three charging points located in Broxbourne, Cheshunt and Waltham Abbey. Electric cars will likely play a key role in reducing fuel consumption and improving air quality in the future, it is therefore important to ensure that residents in the Borough can pursue this option without disrupting or inconveniencing their daily lives; • Consideration should be given to the use of cool roofs and cool pavements in sites allocated for development. Cool 	<p>modifications proposed during the examination.</p> <p>New policy on sustainable construction added to the plan.</p> <p>Sustainable transport addresses through new policies in the plan and also through the Broxbourne Transport Strategy.</p> <p>A new cycle path has been delivered at Broxbourne Station and plans are advanced for a cycle paths around Waltham Cross and along the New River between Church Lane Wormley and Enfield.</p> <p>Policy on Landscaping and Biodiversity in New Developments added to address treatment of waterways.</p> <p>Policy on Sustainable Construction added.</p> <p>Policy on Green Infrastructure strengthened.</p> <p>Policy on Sustainable urban drainage strengthened.</p> <p>Policy TM4 strengthened. At examination some modifications to the policy were proposed to ensure that the policy is effective.</p> <p>Policy on Water Quality address groundwater.</p> <p>Drainage matters were addressed through the policy on Sustainable Urban Drainage.</p>

SA Report	SA Recommendations	Broxbourne Borough Council Response
	<p>roofs and pavements make use of more reflective materials, such as reflective paints or reflective aggregates used in the concrete or tarmac. Cooler roads have reduced rates of evapotranspiration whilst cooler roofs help reduce heat storage in buildings and thereby reduce energy consumption;</p> <ul style="list-style-type: none"> • Consideration should also be given to the greater use of permeable road surfaces. Pavements and roads which are more permeable reduce the level of surface water runoff. This would be more beneficial in predominantly urban areas of the Borough or where the risk of surface water flooding is greater, such as in Hoddesdon; • Greater attention should be paid to the risk of groundwater contamination in the east of the Borough, where the soil is more permeable and freely draining towards rivers and groundwater sources; and • It is recommended that attention should be paid to the risk of overland flow at development in the west of the Borough where land is less permeable and more compact. <p>Air:</p> <ul style="list-style-type: none"> • It is recommended that all residential development has access to frequent, affordable and sustainable modes of transport. This would include bus stops, ideally within 400m of every resident, and railway stations, ideally within 2km of every resident; • Air pollution is a trans-boundary issue and air quality in the Borough impacted by sources outside the Borough's border. It is therefore recommended that the Council collaborate with neighbouring local authorities as well as transport planners, highway engineers, health commissioners and Hertfordshire County Council through a partnership approach to improve air quality; • Passive diffusion tubes used for measuring air quality in the Borough monitor background nitrogen dioxide levels provide a general indicator of pollution levels averaged out over monthly periods. It is recommended that the Council install real time analysers of NO₂, PM₁₀, PM_{2.5} and O₃ to establish real time information on the air quality that residents are being exposed to and which is causing elevated rates of particular matter associated mortality; • It is recommended that the use of green roofs on new developments be encouraged as these have been shown to improve air quality; • The retention of woodland at all sites should be encouraged, as well as the planting of new trees, as woodland has been shown to collect three times as much particulate matter as grassland through dry deposition. A mix of tree species is likely the most effective method as whilst coniferous trees have a larger filtering capacity due to the greater surface area of needles, they are less able to cope with poor air quality than broad-leaved species; • It is recommended that careful consideration is given to which species of trees are planted at which locations, particularly when planting near major emissions sources. Consideration should be given to the species of tree (particularly as some tree species can be heavy emitters of volatile organic compounds and therefore make air pollution issues worse), the eventual canopy volume, the geometry of nearby buildings (and other features which block wind flow), wind speeds and predominant wind directions. Depending on these factors, trees can either improve local air quality through dry deposition or potentially have an adverse impact by inhibiting air circulation and trapping polluted air beneath the canopy; • It is recommended that pollutant tolerant tree species be planted at high pollution 'hot-spots', such as birch and yew (<i>Taxus baccata</i>), in order to absorb contaminants and thereby improve air quality. 	<p>A Strategic Flood Risk Assessment was prepared to address flood risk issues.</p> <p>A partnership approach to addressing air quality on the A10 has been established through the Joint Air Quality Unit (JAQU) with the Department for Transport and the Highways Authority. JAQU is also assessing cross-boundary impacts.</p> <p>The Broxbourne Transport Strategy proposes an approach to reducing air pollution from idling traffic by increasing through-capacity at College Road and Church Lane, as well as improvements to sustainable transport across the borough.</p> <p>Tree planting to mitigate against climate change is a requirement of the policy on General Design Principles.</p>

SA Report	SA Recommendations	Broxbourne Borough Council Response
	<p>Landscape:</p> <ul style="list-style-type: none"> • Where development may impact on views into the countryside for sensitive receptors such as residents, consideration could be given to the use of screening vegetation that is comprised of native species and planted and managed along the periphery of sites; • Where feasible, developers should be encouraged to employ techniques that help integrate new developments into the surrounding landscape. Techniques could include earth mounding, ha-ha walls or sourcing local materials for construction; • Development should be in accordance with the vision and guidelines for landscapes in the Borough, as presented in the Broxbourne LCA71. For example, the vision for Plateau Ridges and Slopes: Wooded parkland and farmland – Wormleybury and Cheshunt Park character type is to conserve small-scale patchwork parkland and patches of mature oak and hornbeam woodland. Several sites in the Local Plan are located in this landscape, including Brookfield Garden Village. Adopting the recommended strategy of maintaining and enhancing stands of oak and hornbeam would be beneficial to the local landscape, as well as local biodiversity and the health of residents; • Land which is released from the Green Belt should be seen as an opportunity to enhance GI within, and beyond, the site boundary. For example, the High Leigh Garden Village development would require releasing 42ha of land from the Green Belt. The Green Belt here contains major roads and power lines and is thought to have a relatively low biodiversity value. The proposed development could potentially introduce a suburban extension to Hoddesdon that helps the Borough meet its housing need whilst also improving the quality and value of biodiversity and natural habitats at this location. 	<p>A policy on landscaping and biodiversity in new developments has been added to address the integration of new developments into the landscape.</p> <p>Masterplanning for site allocations has sought opportunities for green infrastructure.</p> <p>At Brookfield, a new policy specifically on ‘the environment and landscape of the Brookfield area’ has been inserted through the examination main modifications process.</p>
SA of the Main Modifications	Following the assessment of Main Modifications, it is recommended that Policies BR1 and BR2 are expanded to explicitly state that development proposals within Brookfield Riverside and Brookfield Garden Village must be in accordance with the requirements set out in Policies BR5, BR6 and BR7. This could potentially mitigate some of the adverse impacts identified.	These policies were amended in accordance with Lepus’ recommendation.

4 How opinions of consultation bodies and the public have been taken into account

4.1 Consultation responses

4.1.1 At each stage of the preparation of the Broxbourne Local Plan, an SA Report was published for consultation both with the public and statutory bodies. The consultation stages relating to the SA documents as well as the consultation responses received relating to the SA are summarised in **Table 4.1**.

Table 4.1: Broxbourne Local Plan and related SA reports consultation periods.

Published Local Plan document	Published SA/SEA Report	Consultation period	Summary of consultation responses
Evidence gathering	SUPERSEDED - SA of the Broxbourne Local Plan: Scoping Report (December 2012)	07/11/12 - 12/12/12	The comments received during this consultation were used to update the SA Scoping Report and taken forward into the 2016 SA Scoping Update.
The Broxbourne Local Plan: Regulation 18 Draft Local Plan Consultation Document	SA of the Broxbourne Local Plan: Scoping Report Update (March 2016)	18/07/16 to 16/09/16	A summary of the consultation responses and consequential amendments to the plan was published in a report to Cabinet on 31 October 2017 on the Council's website ²⁶ .
	SA of the Broxbourne Local Plan Duty to Cooperate Framework Document (April 2016)		
	SA of the Broxbourne Emerging Local Plan: Assessment of the Borough-wide Options and Scenarios (June 2016)		
	SA of Broxbourne Emerging Local Plan: Assessment of the Regulation 18 Draft Local Plan (July 2016)		
The Broxbourne Local Plan: Regulation 29 Draft Local Plan Consultation Document (October 2017)	SA of Local Plan, Broxbourne Borough Council: Regulation 19 (October 2017)	09/11/17 to 21/12/17	A summary of the responses received is set out in the Regulation 22 Statement of Compliance (Submission document SUB7) is on the examination website ²⁷ .

²⁶ Available at: <https://ex.broxbourne.gov.uk/sites/default/files/meetings/MS-2017-10-31-Cabinet-Part1.pdf> [Date Accessed: 06/05/20]

²⁷ Available at: www.broxbourne.gov.uk/localplanexamination [Date Accessed: 06/05/20]

Published Local Plan document	Published SA/SEA Report	Consultation period	Summary of consultation responses
Main Modifications	SA of the Broxbourne Local Plan: Appraisal of the Main Modifications (December 2019)	07/01/20 to 19/02/20	A summary of the responses is provided on the Examination website above (see document EXAM37B). The only response to the SA of the Main Modifications was from Historic England, who questioned the reliability of the SA conclusions for Brookfield in advance of the completion of a Heritage Impact Assessment.

5 Why the adopted Local Plan was chosen, in light of reasonable alternatives

5.1 Reasonable alternatives

5.1.1 At each stage of the plan making process, policies and site allocations were identified, considered and appraised using the SA Framework, as required by the SEA regulations (12)(3). Assumptions for each of the SA Objectives were developed and supported by the methodology.

5.1.2 Where an assessment of reasonable alternatives was carried out, these findings were reported and subject to public consultation. Section 2.6 of the Regulation 19 SA Report presented reasonable alternatives considered at each stage of the Plan and Section 2.7 outlines the reasons for selection and rejection of options.

5.2 Dealing with uncertainty

5.2.1 Where assessment uncertainty prevailed, this was due to a lack of information available to fully assess the policy or site, for example: because the policy relies on behavioural change which may or may not occur; because the effect development has depends upon its design and layout, whereby issues such as flood risk could be mitigated by designing the development in such a way as to minimise the risk; or an ambiguity in how a policy could be interpreted, such as uncertainty over whether community facilities or housing will be developed on site.

5.2.2 Those impacts identified as uncertain were treated as being potentially adverse in nature. They should be monitored in order to establish early on in the process of plan implementation whether they will in fact become negative, as well as provide time to compensate for and mitigate these potential negative effects. The uncertain impacts of the Local Plan should be mitigated where possible so that only positive impacts remain.

5.3 SA of the Duty to Cooperate Framework Development (April 2016)

5.3.1 The Duty to Cooperate (DtC) Framework Document²⁸ was intended to form an early basis for discussion with the Council's Duty to Cooperate partners by setting out information in relation to the preparation of the Local Plan. The document set out the "*vision and objectives for the Local Plan*", as well as locations to be considered for development.

Broad spatial options

5.3.2 Within the DtC Framework Document, the BBC considered broad spatial options for accommodating future growth. Residential growth was favoured towards existing neighbourhoods and the report identified scope to provide homes on suitable urban sites. A total of 15 options to accommodate future growth in Broxbourne were considered in this document:

- Delamere Road;
- Northern High Street;
- Green Belt Releases;
- High Leigh Garden;
- Brookfield Riverside;
- Park Plaza;
- Rosedale Park;
- Church Lane;
- Cheshunt Football Club;
- Goffs Oak Village;
- Broxbourne School;
- Dark Lane;
- Bury Green Road;
- Primary Schools; and
- Derelict Sites.

²⁸ Broxbourne Borough Council (2015) A Framework for the Future development of the Borough: A Duty to Cooperate Document.

5.3.3 The 15 options for residential growth were appraised in the SA of the DtC Framework Document. The SA identified several uncertain impacts in regard to cultural heritage, biodiversity, climate change adaptation, natural resources and pollution. Positive impacts were primarily identified for the social and economic SA Objectives (SA Objectives 9, 10, 11, 12 and 13) but negative impacts were identified for several options in regard to landscape, biodiversity and climate change. A best performing option was not identified at this stage. Instead, sustainability performance data for each site was presented which identified a number of sites which performed better than others.

5.4 SA of Borough-Wide Options and Scenarios (June 2016)

Urban sites

5.4.1 The 'Borough-wide Options and Scenarios' document prepared by BBC presented a long list of development sites within the urban area of Broxbourne, some of which were identified as reasonable alternatives.

- Hoddesdon;
- Cheshunt and Goffs Oak; and
- Waltham Cross.

Strategic sites

5.4.2 The 21 strategic locations listed below were identified within the 'Borough-wide Options and Scenarios' report prepared by BBC:

- Brookfield;
- Delamare Road;
- Land south of Bury Green;
- Land east of Dark Lane;
- Broxbourne School;
- Cheshunt Football Club;
- In-Ex/Tina Nursery;
- Manning Ground;
- Tudor Nurseries;
- Rags Brook Valley;
- Cuffley Hill, Goffs Oak;
- Land North of Hertford Road, Hoddesdon;
- Various Glasshouse Sites;
- Bonneygrove Field, Bury Green;
- Whitehouse house Farm;
- North of St James';

- North of Goffs Oak;
- Oak Field, Goffs Oak;
- Maxwell Farm West;
- Park Plaza West; and
- South of Church Lane, Wormley.

5.4.3 Several options were considered for some strategic sites, which included: do nothing; commercial development; Framework Document; maximum housing; and no Green Belt release.

5.4.4 Overall, a single best performing strategic site was not identified from this long list of sites at this stage. Instead sustainability performance data for each site was presented which identified a number of sites which performed better than others.

5.4.5 A range of positive, negative and negligible impacts were identified at these 21 strategic locations. All strategic locations were identified as having negligible impact in relation to 'Waste'. Several of the strategic locations were identified as having potential negative impacts in regard to cultural heritage, landscape and biodiversity. In general, the strategic locations were likely to result in positive impacts in relation to transport, housing, health, economy and education.

Borough-wide scenarios

5.4.6 Following a review of the available locations for development, the BBC concluded that no single option or location would be capable of meeting the identified growth needs of the Borough. A combination of options representing high, medium and low levels of residential development were considered based on the Objective Assessed Need (OAN) of approximately 7,000 dwellings over the Plan period.

- Scenario 1: Framework Document (6,094 dwellings);
- Scenario 2: Maximum Development (8,507 dwellings); and
- Scenario 3: No Green Belt Release (4,682 dwellings).

5.4.7 All three scenarios were identified as likely to result in adverse impacts in regard to cultural heritage and biodiversity, and negligible impacts in regard to climate change mitigation, pollution, waste and health.

5.5 SA of the Broxbourne Local Plan: Regulation 18 (July 2016)

5.5.1 The aim of the Draft Local Plan Consultation document prepared by BBC was to identify the environmental, social and economic effects of the Regulation 18 Local Plan. The Draft Plan also set out mitigation considerations and enhancement opportunities that would be expected to enhance the overall sustainability of the Local Plan at a sufficiently early juncture that they be given due consideration as the plan progressed

5.5.2 There were four main sections of the Draft Local Plan: Development Strategy (includes vision, objectives and development strategy for the Borough); Places (Council's approach to planning in the Borough's towns, villages and countryside); Infrastructure and Delivery (Council's approach to delivery of a range of infrastructure); and Development Management Policies (policies which will be used by the Council in the determination of planning applications).

5.6 Quanta

5.6.1 In May 2016, the SA report for the Borough-wide Options and Scenarios²⁹ assessed three development options for the Local Plan, including the housing scenario of 6,094 dwellings from the Framework Document (2015), a maximum housing scenario of 8,507 dwellings and a No Green Belt Release scenarios of 4,682 dwellings.

5.6.2 Scenario 2 proposed the highest number of dwellings and was the only scenario which was considered likely to result in positive impacts in relation to housing provision and was expected to have the greatest positive impacts in regard to the local economy. However, as this scenario proposed the greatest number of dwellings, it was determined to be likely to result in more negative impacts in relation to cultural heritage and landscape than the other two scenarios.

²⁹ Lepus Consulting (2016) SA of the Broxbourne Emerging Local Plan – Assessment of the Borough-wide Options and Scenarios, May 2016

- 5.6.3 In May 2016, the Council undertook a review of the OAN³⁰ in the Borough, which updated the OAN element of the 2013 Strategic Housing Market Assessment (SHMA)³¹. This review accounted for the 2011 Census and the latest available demographic and economic data and identified a reasonable objective housing need of 419 dwellings per annum for the 2014 – 2031 period. The 2016 OAN was updated in the June 2017 ‘Partial Review of Objectively Assessed Housing Need’³² to account for newly available data on population and household projections. The June 2017 review concluded that the OAN for the Borough was 454 dwellings per annum over the 2016 – 2033 period.
- 5.6.4 The Pre-Submission Local Plan identified a need for 7,718 new homes to be built across the Borough during the Plan period, with an average of 454 dwellings per annum. The development of 7,718 dwellings over the Plan period was appraised in the Regulation 19 SA Report, under Policy DS1. The appraisal identified positive impacts in relation to landscape, biodiversity, transport, housing, economy and education. Uncertain impacts were identified for the remaining SA Objectives.

5.7 Spatial distribution

- 5.7.1 A review of the Green Belt within Broxbourne was carried out in 2008³³. The Review examined the broad context of the study in terms of the state of Broxbourne’s existing Green Belt. The majority of sub areas were identified as playing a strong role for at least one of the Green Belt purposes. Poorly performing sub areas tended to be those located around the edge of the urban area, and that were surrounded on three sides by existing built development.

³⁰ JG Consulting (2016) Review of Objectively Assessed Housing Need, Broxbourne Council, June 2016

³¹ JG Consulting, GL Hearn (2013) Strategic Housing Market Assessment, May 2013

³² JG Consulting (2017) Partial Review of Objectively Assessed Housing Need. Available at: https://ex.broxbourne.gov.uk/sites/default/files/Documents/Planning_Policy/H2%20-%20Partial%20Review%20of%20OAN%202017.pdf
[Date Accessed: 28/04/20]

³³ Scott Wilson (2008) Borough of Broxbourne: Review of the Green Belt for the Preparation of Local Development Framework (LDF). Available at: https://ex.broxbourne.gov.uk/sites/default/files/Documents/Planning_Policy/GB3%20-%20Green%20Belt%20Review.pdf
[Date Accessed: 28/04/20]

5.7.2 Reasonable alternatives for the spatial distribution of development in the Borough were considered by the BBC as early as 2014. The 2015 ‘Duty to Cooperate Framework Document’ set out further general locations in the Borough which could potentially be suitable for development. The SA appraised the 15 broad spatial options. A number of uncertain impacts were identified across the options, in particular, in relation to heritage assets, biodiversity, climate change mitigation, climate change adaptation, natural resources and pollution. Adverse impacts were primarily associated with environmental objectives, and positive impacts associated with the social and economic objectives. The DtC document identified that “*urban and brownfield sites cannot meet all of the development and infrastructure needs and provide for sufficient opportunities for the future development of the Borough*”. As a result, it was concluded that meeting the Borough’s development needs could only be achieved through the strategic release of Green Belt land.

5.8 Strategic sites

5.8.1 The options for strategic sites were assessed through the SA process in the SA of Borough-wide Options and Scenarios report³⁴ and the SA of the Broxbourne Local Plan DtC Consultation Document³⁵. The chosen allocations were appraised within the Regulation 19 SA Report.

5.8.2 The Council considered various locations to identify sites for supporting the anticipated growth and development in the Borough. The Council sought sites which would build on and support existing neighbourhoods, help protect green and open spaces, and which were accessible by public transport or walking. The Council prioritised sites on urban land to help attain these ends.

5.8.3 As mentioned above, options for re-using existing urban land were limited, particularly as the Council had aspirations and objectives to promote economic growth and development. The Council carefully considered a range of options for releasing land from the Green Belt and in 2017, the Council undertook a Green Belt Exceptional Circumstances exercise and produced a ‘Green Belt Topic Paper’³⁶.

³⁴ Lepus (2016) SA of the Broxbourne Emerging Local Plan – Assessment of the Borough-wide Options and Scenarios, May 2016

³⁵ Lepus (2016) SA of the Broxbourne Local Plan Duty to Cooperate Consultation Document

³⁶ Broxbourne Borough Council (2017) Green Belt Topic Paper, June 2017

5.8.4 The Council subsequently identified scope to provide 7,718 dwellings, between 5,000 and 6,000 new jobs, approximately 24,000 square metres of new retail space and around 10,000 square metres of new leisure space across the Borough, including within the Green Belt. The significant majority of urban sites could potentially support 100 dwellings or less. In addition to these, the following strategic urban land allocations were proposed in the Broxbourne Local Plan:

- Brookfield Riverside;
- Brookfield Garden Village;
- Cheshunt Lakeside;
- Rosedale Park;
- High Leigh Garden Village;
- Park Plaza; and
- Waltham Cross Town Centre.

5.9 Development Sites

5.9.1 Reasonable alternative sites were considered in the 2017 Strategic Land Availability Assessment³⁷ to determine which housing and employment sites within the Borough were deliverable, developable and/or potentially achievable. The 2016 Borough-wide Options and Scenarios and the Regulation 18 version of the Local Plan considered alternatives for site allocations. All of these sites were considered to be reasonable alternatives for the purposes of the SA and were assessed accordingly.

5.9.2 The assessment of site allocations as part of the Regulation 18 SA Report found that the additional detail provided regarding the anticipated development at the allocated sites led to more positive assessment findings than had been found in the SA of the 'Borough-Wide Options and Scenarios' report. The Regulation 18 SA Report concluded that consideration was needed at sites with low levels of accessibility to ensure that the level of accessibility would be suitable once the site has been regenerated and it was likely that this would be the case. Flood risk was also an issue for certain areas of the Borough.

³⁷ Broxbourne Borough Council (2017) Strategic Land Availability Assessment, June 2017

5.9.3 A number of small Green Belt sites were selected as allocated sites by BBC for their potential to integrate with the existing residential neighbourhoods and provide ready access to existing facilities, or to rejuvenate brownfield/underused land. Examples of this include the sites in Goff's Oak and Bury Green, as well as the former Britannia Nurseries site in Waltham Cross. The potential to access sites by alternatives to car travel was a key factor influencing site selection, and all the sites have demonstrated significant potential to increase levels of walking and cycling, and to link with commercially viable bus routes.

5.10 SA of the Broxbourne Local Plan: Regulation 19 (October 2017)

5.10.1 Following consultation on the Regulation 18 version of the Local Plan, the Council sought to meet the OAN for housing in full. The Regulation 19 SA Report included an assessment of each site identified in the Local Plan that could potentially be allocated for residential or commercial development. The SA also assessed policies of the Local Plan, which were revised since the Regulation 18 consultation.

5.11 SA of Main Modifications (December 2019)

5.11.1 The Main Modifications to the draft Local Plan were put forward by Broxbourne Borough Council in response to the Local Plan inspector's questions and Action Points raised throughout the examination process. A total of 42 Main Modifications were considered as part of the SA, which included amendments to site allocations and policies.

5.11.2 Overall, the Main Modifications were expected to improve the sustainability performance of the Local Plan. Almost all of the amended policies were likely to result in positive impacts or would no longer result in negative impacts. In addition, many of the new policies would be expected to result in positive impacts.

6 How the environmental and sustainability effects of the Local Plan will be monitored

6.1 Monitoring

6.1.1 The SEA Regulations require that significant effects resulting from the implementation of the plan should be monitored. SEA Regulation 17 states that:

6.1.2 *“The responsible authority shall monitor the significant environmental effects of the implementation of each plan or programme with the purpose of identifying unforeseen adverse effects at an early stage and being able to undertake appropriate remedial action”.*

6.1.3 The monitoring requirements typically associated with the SA process are recognised as placing heavy demands on authorities with SA responsibilities. For this reason, the proposed monitoring framework focuses on those aspects of the environment that are likely to be negatively impacted upon, where the impact is uncertain or where particular opportunities for improvement might arise.

6.1.4 Monitoring the impacts of the Local Plan should seek to answer:

- Was the likelihood of sustainability impacts identified in the SA process accurate?
- Is the Local Plan successful in achieving its desired sustainability objectives?
- Are mitigation measures performing as expected?
- Are there any unforeseen adverse impacts of the Local Plan, and are these within acceptable limits or is remedial action required?

6.1.5 Monitoring proposals are set out in **Table 6.1**.

Table 6.1: Monitoring proposals for the Broxbourne Local Plan

Potential adverse effect	Indicator	Scale and frequency of monitoring	Data
Decreases in air quality due to traffic increases	Traffic flows on A roads and motorways	Annually, along key routes	Traffic flow increases annually e.g. Department for Transport 'Annual Average Daily Traffic' counts ³⁸
	Rates of public transport uptake	Annually, Plan area wide	Rates of uptake declining or showing no signs of improvement
Increase in greenhouse gas emissions and energy consumption	Proportion of energy from renewable sources and carbon footprint of the Borough	Annually, Borough wide	Annual increases in the Borough's carbon footprint
Flood risk	Increased development on floodplains	Annually, Plan area wide	Quantity of development in Flood Zones 2 and 3 increases annually
	Urbanisation increasing run off into a stream or river	Annually, Plan area wide	Annual increases to urbanisation and impermeable surfaces increasing run off
Waste generation	Proportion of household and industrial waste being generated and recycled	Annually, Borough wide	Decreasing or unchanging proportion of waste being recycled and annual increases in waste generation
Impact on the local landscape character	Loss of key landscape features due to development	Annually, Borough wide	Annual increases in quantity of development proposals in sensitive Landscape Character Areas
Loss of soil resource including best and most versatile land	Use of BMV land for alternative use, such as developments	Annually, Plan area wide	Annual increases of development on best and most versatile land resulting in loss of soil resources
Water pollution	Input into a water source from anthropogenic activity that reduces water quality	Annually, Plan area wide	Annually there is risk to water pollution through construction related activities, waste disposal and occupation
Increased pressure on ecosystem services	Quality and quantity of habitats and environment resources	Annually, particularly within important biodiversity sites	Annually there is an increased demand for ecosystem services as population growth results in a growing need for housing, food and energy

³⁸ Department for Transport (2018) Road traffic statistics. Available at: <https://www.dft.gov.uk/traffic-counts/index.php> [Date Accessed: 15/04/20]

Habitat Regulations Assessments

Sustainability Appraisals

Strategic Environmental Assessments

Landscape Character Assessments

Landscape and Visual Impact Assessments

Green Belt Reviews

Expert Witness

Ecological Impact Assessments

Habitat and Ecology Surveys



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