
**Land North of Horsham
Mixed Use Strategic Development**

**Planning Application DC/16/1677
Environmental Statement Addendum**

Liberty Property Trust

March 2017

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Appendix 12.26	Link Road Options Appraisal
Appendix 14.9	Transport Assessment Addendum
Appendix 15.8	Emissions and Assessment Methodology Technical Note
Appendix 17.2	Updated Climate Change and Blockage Modelling Technical Note

A. Introduction to the Addendum

- B.1 In August 2016, Liberty Property Trust submitted a planning application (Reference No. DC/16/1677) to Horsham District Council. It is an outline planning application with all matters reserved except for access for a mixed use strategic development to include housing (up to 2,750 dwellings), business park (up to 46,450 m²), retail, community centre, leisure facilities, education facilities, public open space, landscaping and retail infrastructure. It was validated on 4 August 2016.
- B.2 An Environmental Statement accompanied the planning application, as it falls within Schedule 2.10(b) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011.
- B.3 In accordance with procedures, this planning application was considered by statutory consultees. In addition, comments were received by the general public and also non-statutory organisations. As a result of these responses, Liberty Property Trust consider that it would be of assistance to provide 'Additional Information' to assist Horsham District Council in the consideration of this application.
- B.4 This information has been provided voluntarily by the applicant. This is in accordance with Regulation 2(1) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011. It is described in these Regulations as **"any other information"** – which means any other substantive information relating to the environmental statement and provided by the applicant". This information is to be treated in the same way as further information formally required by a Local Planning Authority under Regulation 22 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011. It therefore must be considered and consulted upon in accordance with the requirements of these Regulations.
- B.5 Only certain parts of the Environmental Statement are considered by Liberty Property Trust to benefit from the provision of Additional Information. These are set out in summary form in Chapter B of this Environmental Statement Addendum. The full Amended Chapters of the Environmental Statement are contained in the following Chapters (numbered according to the August 2016 Environmental Statement). In some instances updated information is provided, such as updated ecological surveys which are provided as additional appendices.
- B.6 In summary, the following Chapters of the July 2016 ES are replaced by this Addendum:
- Chapter 1 – Introduction
 - Chapter 3 – Scope of this Environmental Statement

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- Chapter 5 – Proposed Development
 - Chapter 6 – Other Alternatives
 - Chapter 11 – Landscape and Visual
 - Chapter 12 – Ecology
 - Chapter 13 – Archaeology and Heritage
 - Chapter 18 – Cumulative Development
 - Chapter 19 – Summary of Mitigation Measures and Residual Effects

B.7 The following appendices to the July 2016 ES are replaced by this Addendum:

- Appendix 5.1 2153A-150S - Illustrative Masterplan
- Appendix 5.4 2153A-100M - Land Use Parameter Plan
- Appendix 5.5 2153A-101M - Density Parameter Plan
- Appendix 5.6 2153A-102N - Building Heights Parameter Plan
- Appendix 5.7 2153A-103P - Movement and Access Parameter Plan
- Appendix 5.8 2153A-105M Green Infrastructure Parameter Plan
- Appendix 5.9 Drawing 2153A-207D - Phasing Plan Phase 1
- Appendix 5.10 Drawing 2153A-208D - Phasing Plan Phase 2
- Appendix 5.11 Drawing 2153A-209E - Phasing Plan Phase 3
- Appendix 12.14 Breeding Bird Territory Mapping
- Appendix 12.15 Confidential Badger Sett Location Plan
- Appendix 12.19a Bat Survey Report
- Appendix 12.19b Bat Survey Report Addendum
- Appendix 12.22 Breeding Bird Survey
- Appendix 12.23 Invertebrates Survey
- Appendix 12.24 Confidential Badger Survey

B.8 The following appendices are provided in addition to those within the July 2016 ES, as follows:

- Appendix 12.25 Ecological Mitigation and Management Plan
- Appendix 12.26 Link Road Options Appraisal
- Appendix 14.9 Transport Assessment Addendum
- Appendix 15.8 Emissions and Assessment Technical Note
- Appendix 17.2 Updated Climate Change Technical Note

B.9 This Additional Information also includes very minor amendments (reductions) to the application red line. This is shown on the Illustrative Masterplan. (Drawing No. 2153A-150Q), which is listed in Section 5 of the Environmental Statement (Paragraphs 5.2.2) and provided as amended appendices.

B. Summary of Chapter Amendments

- B.1 This Chapter provides the explanation for the Additional Information which is contained within this document. It is set out by relevant Chapter, and summarises the Additional Information. It also makes reference where relevant to the main issues which have led to the changes.

Chapter 1 - Introduction

- B.2 The Introduction now includes an explanation for the submission of Additional Information, in response to comments from various consultees. It explains that only parts of the submitted Environmental Statement have been amended. The amendments are all shown as 'track changes'.

Chapter 3 – Scope of this Environmental Statement

- B.3 The only amendment to this Chapter is the addition of two schemes in the Schedule of Developments considered in the Assessment of Cumulative Effects. One is the permitted scheme of approximately 600 dwellings; 48 bed care facility; community building; café and retail; and a one-form entry primary school on Land East of Brighton Road, Pease Pottage.
- B.4 We have also included the proposed recycling, recovery and renewable energy facility on the former Wealden Brickworks, Langhurstwood Road, Horsham. This is a planning application which is currently under consideration.

Chapter 5 - Proposed Development

- B.5 The amendments in this Chapter relate to the minor changes to the planning application 'red-line' boundary, which have been made due to land ownership considerations. These minor boundary changes, on the eastern site of the application site, do not affect the proposed land uses within the application site.

Chapter 6 – Other Alternatives

- B.6 The additional information in this Chapter relate to the selection of the routes for the Eastern and Western Link Roads within the scheme. It provides details of alternative routes for both of these Link Roads, which includes the indicative routes as shown on the Concept Masterplan of the adopted HDPF, as well as other possible alternatives.
- B.7 For both the Eastern and Western Link Roads, representations have been made on the potential adverse impact on Ancient Woodland. In the case of the Eastern Link Road the concern was over the impact on Castle Copse, and the Western Link Road the impact on Morris Wood. The Rationale Matrix for

all of these Link Road alternatives have been assessed, using comprehensive list of criteria, including the length of ancient woodland affected; sustainability of the transport route; highway safety; highway capacity; flood risk and drainage; urban design; landscape; ecology and cost. These are set out in full in a new Technical Appendix to the Ecology Chapter (12) of the ES.

- B.8 The Matrices for both the Eastern and Western Link Roads conclude with preferred routes, which are the routes which are incorporated in the planning application, and shown on the Illustrative Masterplan and relevant Parameter Plans.

Chapter 11 – Landscape and Visual

- B.9 There have only been minor changes to this Chapter, and these have been made in response to consultation responses, mainly relating to Ancient Woodland; effects on hedgerows, trees and woodland; and the potential cumulative effect of the proposed recycling, recovery and renewable energy facility on the former Wealden Brickworks Site off Langhurstwood Road.
- B.10 Minor changes/corrections have been made to Tables 11.7.1, 11.7.2 and 11.7.4 in relation to landscape receptor 8 – Protected Trees and Ancient Woodland. The ‘Sensitivity or Value’ ranking has been increased to include ‘Very High’ to reflect to importance of Ancient Woodland as an irreplaceable resource with consequential increase in significance of effects and residual effects ranking. This is in response to comments/objections raised by the Woodland Trust, natural England and others.
- B.11 Changes have been made to the text in the main body of the LVIA chapter paragraph 11.5.9 and 11.5.14 to reflect the increase in adverse effects resulting from the change to the sensitivity/value of the Ancient Woodland and clarification of effects on remaining hedgerows, trees and other undesignated woodlands of lesser sensitivity.
- B.12 Changes have been made to Table 11.7 – Summary Comparison of Landscape effects Year 1 and Year 15 – item 8 and paragraph 11.8.3 to reflect above changes.
- B.13 Changes have been made to paragraph 11.9.5 to acknowledge the loss of a small area of ancient woodland.
- B.14 A correction has been made to Table 11.7.3 – Core Visual Receptor Assessment table receptor 10 to confirm that the public house is still trading / in use.
- B.15 In addition, additional text has been included under Section 11.6 – ‘Cumulative Impacts’ to include consideration/commentary of potential cumulative impacts resulting from the combination of the Proposed

Development on the Application Site and Britaniacrest Ltd proposals for a recycling, recovery and renewable energy facility (3Rs) on the Wealden Brickworks site.

Chapter 12 – Ecology

- B.16 As part of the EIA in support of a planning application to develop the land known as Land North of Horsham a number of technical ecological appendices were produced. These appendices and the EIA were consulted upon by a number of consultees including inter alia WYG (ecologists acting on behalf of Horsham District Council), Natural England and the Environment Agency. As a result of the consultation process a number of points/clarifications were requested by the consultees.
- B.17 These points can be distilled down to the following main subjects: the level of survey information, the proposed mitigation measures, impact of the development on ancient woodland; the assessment provided in the breeding bird report, and a request for further information on the use of the site by barbastelle bats.
- B.18 In respect of the first point, additional appendices have been produced to provide the results of invertebrate surveys and bat emergence/re-entry surveys which were underway, but not complete, at the time of the planning application submission in August 2016. In addition, a badger survey was conducted in December 2016 to address a point raised by WYG regarding this species.
- B.19 In respect of the other points, the breeding bird survey report and bat survey report have been revised to provide further information; an options appraisal for the proposed roads through the ancient woodland has been produced, (and contained within Chapter 6 of the ES 'Other Alternatives'); and an Outline Ecological Mitigation and Management Plan has been produced. Further, two figures accompanying the Ecology Chapter have been updated to include new survey information.
- B.20 The following Table lists the Figures and Appendices which have been updated or are made in addition to the original submission of the planning application:-

Figure/Appendix	Title	Updated
12.1	Ecological Survey Areas	No
12.2	Ancient Woodland and Designations Map (2016)	No
12.3	Habitat Map (2016)	No
12.4	Dormouse Survey Plan	No
12.5	Hedgerow Survey Results	No
12.6	Location of Schedule 9 Invasive Non-Native Plan Species	No

12.7	Great Crested Newts Survey Plan	No
12.8	Great Crested Newts Survey Results	No
12.9	Reptile Survey Results Map	No
12.10	Bat Tree Roost Assessment Plan	No
12.11	Farm Complex Building Locations	No
12.12	Summary of Bat Foraging 2014	No
12.13	Summary of Bat Foraging 2015	No
12.14	Breeding Bird Territory Mapping	Yes
12.15	Confidential Badger Sett Location Plan	Yes
12.16	Extended Phase 1 Habitat Survey	No
12.17	Great Crested Newt Survey	No
12.18	Reptile Survey Report	No
12.19a	Bat Survey Report	Yes
12.19b	Bat Survey Report Addendum	Addition
12.20	Hazel Dormouse Survey	No
12.21	Water Vole and Otter Survey	No
12.22	Breeding Bird Survey	Yes
12.23	Invertebrates Survey	Yes
12.24	Confidential Badger Survey	Yes
12.25	Ecological Mitigation and Management Plan	Addition
12.26	Link Road Options Appraisal	Addition

Chapter 13 – Archaeology and Heritage

- B.21 The Summary of this Chapter is extended, as it addresses a number of matters raised by Heritage England (HE) in their consultation responses. HE provided a useful detailed consultation commentary on the Archaeology and Heritage ES chapter and associated appendices provided by Archaeology South-East (ASE) to accompany the outline planning application. In their response, they stated that HE had no objection in principle to the application but that they required some more work to be carried out on some areas of the assessment. The purpose of this document is to outline this additional work.
- B.22 In their letter HE identified a number of areas which needed addressing. These are dealt with below, cross-referenced to the Appendix 13.1 (the DBA) and the amended ES chapter as appropriate.

Historic Landscape Character

- B.23 HE were concerned that no specific assessment of the potential effects on overall historic landscape character was included in the chapter. This has now been rectified, and an assessment has been inserted into the chapter together with a clearer identification of where historic landscape character is discussed at various points within Appendix 13.1 (Heritage Statement). The crux of our assessment is that the current landscape character is primarily modern and, in historic landscape terms, degraded (as is stated in Chapter

11 and in the Horsham District Landscape Assessment of 2003) with the surviving historic hedgerows and ancient woodland only providing a partial skeletal impression of the earlier complex field systems recorded on historic mapping (notably the Tithe map, reproduced in Appendix 13.1). Consequently, we feel the impact will not be significant in heritage terms as the key elements are the surviving hedgerows and areas of woodland, which are to be retained within the scheme wherever possible, with appropriate mitigation measures in place where unavoidable disturbance is required. These are set out in the chapter.

- B.24 In terms of the historic parkland, which we have discussed in paragraphs 8.25-8.27 of Appendix 13.1, this is derived from a dataset added to the West Sussex HER by WSCC. This is not a designation per se, and comprises the extent of parkland as it was in the later 19th century derived from its representation (by stippling) on 6-inch OS mapping of the era (this is based on a discussion some years ago with John Mills at WSCC). Consequently, it represents a historic snapshot and does not necessarily relate to modern landscape character. In this case, based on field observation we do not believe that either of the two areas of parkland survive to any significant extent in a readable condition, and that the main impression gained by any observer within those areas is of agricultural land.

Cumulative Impacts

- B.25 HE wished to see a more detailed assessment of cumulative impacts. This has been carried out and included within Chapter 18, divided between in-combination effects and effect interaction.

Heritage significance of the motte and bailey castle

- B.26 HE commented that our assessment of the castle was inadequate. However, we presented a detailed discussion in paragraphs 8.7-8.9 of Appendix 13.1. We concluded that the setting of this asset is constrained by being surrounded by housing and the tree-lined A24 dual carriageway. Similarly, we discussed the contribution of setting to the significance of the moated sites in some detail within paragraphs 8.10-8.14. We feel that our assessments of the contribution of setting are appropriate.

Extension of the study area and consideration of long views

- B.27 HE requested an extension of the study area to include Warnham in their pre-application advice. Consequently, we have enlarged the study area within Appendix 13.1 to include Warnham Court and also carried out an assessment of setting issues for all the listed buildings within Warnham village. In terms of long views, we noted the absence of these due to the topography of the study area in paragraph 2.1 of Appendix 13.1, which is consistent with the conclusions of Chapter 11. We also addressed the absence of long views

specifically relating to designated heritage assets at Warnham in paragraphs 8.4 and 8.24 of Appendix 13.1.

Significance of all heritage assets should be assessed

- B.28 HE were concerned that a significance rating had not been ascribed for all of the heritage assets listed within Appendix 13.1 (Appendix 1) of the Heritage Statement (there are 155 across the entire study area). However, we have ascribed a significance rating to all the designated heritage assets where a potential effect was identified in section 8 of Appendix 13.1 and in section 13.5 of the chapter. The effect on non-designated heritage assets is effectively a generic one relating to buried archaeological deposits, and a group rating was ascribed in paragraph 13.5.1 of the chapter. We believe this is in accordance with the principle quoted by HE in the response that 'the first stage of assessment is to understand the significance of the assets that may be affected'.

Mitigation

- B.29 Further mitigation measures appropriate to the outline application have been discussed with WYG, archaeological advisors to HDC, and presented in section 13.7 of the chapter. These include proposals for avoiding impacts by amending the development layout as well as details of further fieldwork to be carried out under condition. It is anticipated that further detailed mitigation can be addressed as part of any future detailed planning applications.

Further details of setting-related impact assessment

- B.30 The impact assessment is presented in sections 13.5 to 13.8 of the ES Chapter, and the details informing it are presented within section 8 of Appendix 13.1. As this is an outline planning application, the assessment was carried out in relation to the masterplan and the parameter plans, which provided spatial and basic height information. Further detailed planning applications will be submitted in due course. The assessment of setting as it pertains to the significance of the assets concluded that the open agricultural setting contributes to an extent to their significance, and will be impacted upon by the proposed development. However, this is an impact on the generic open setting rather than on a specific view or detailed landscape association with any individual asset, consequently it is the loss of the open space as a general concept which is the key issue in relation to the setting and how it contributes to significance and which has been addressed, rather than specific details of the proposed development which are of less importance in this case. We believe that the open setting itself has a relatively low value from a heritage perspective, as laid out in the assessment of historic landscape character within the chapter.

Chapter 14 - Transport and Access

- B.31 WSCC and HE have requested more information via letters dated 1st September 2016 and 25th August 2016 respectively.
- B.32 An additional appendix to this Chapter has been provided (Appendix 14.9) forming an addendum to the Transport Assessment which sets out additional information pursuant to requests for information set out above.

Chapter 15 – Air Quality

- B.33 The Environmental Protection Officer of Horsham District Council has requested additional information regarding air quality impacts on routes to and from Horsham town centre.
- B.34 An additional appendix has been provided to this Chapter as a technical note which provides further information regarding vehicle emission factors and the methodology of the assessment (Appendix 15.8).

Chapter 17 – Surface Water and Hydrology

- B.35 The Environment Agency (EA) have requested that further modelling is carried out to assess the impacts of the February 2016 climate change guidance where 45% should be added to the 1 in 100 year flows. In addition, they have requested that blockage scenarios are carried out on existing site crossings and culverts, in particular where the Chennells Brook passes under the A264.
- B.36 An additional Appendix has been provided to this Chapter as a technical note which summarises the additional modelling (Appendix 17.2).

Chapter 19 – Summary of Mitigation Measures

- B.37 The Mitigation Measures and Residual Effects, as set out in this Chapter, remain valid. The additional information as set out in this 'Additional Information' reinforces the findings of the likely significant residual effects of this proposed development.

We make reference in this Summary to the response to concerns expressed over ancient woodland within the site. These are referred to in both the Landscape and Ecology paragraphs, and are addressed in full in the new Appendix in the Ecology Chapter.

Non-Technical Summary

- B.38 There is very little change to the Non-Technical Summary. The only comments from the consultation responses related to Archaeology and Heritage, which sought further details to be set out on the existing and

proposed surveys, and mitigation works. This is now incorporated within the Summary.

Chapter 1

Introduction

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1. Introduction

1.1 Introduction to the Environmental Statement

- 1.1.1 This Environmental Statement ("ES") has been prepared for submission with an outline planning application seeking permission on behalf of Liberty Property Trust UK Limited ("Liberty") to develop a mixed use strategic development at Land North of Horsham (the "application site"). The application site lies within the administrative area of Horsham District Council (HDC).
- 1.1.2 The application is for a mixed use strategic development for up to 2,750 dwellings, 46,450 m² of commercial floorspace, 2 primary schools, site for a secondary school, 'early years' and special needs provision, local centres, retail provision, community centre, land for a parkway railway station, open space, landscape buffers, land for a cemetery, commercial leisure facilities and infrastructure improvements.
- 1.1.3 The application site is located to the north of Horsham, north of the A264 between Langhurstwood Road and Wimland Road. The site comprises a number of agricultural parcels of land subdivided by hedgerows and trees, as well as several small copses and areas of woodland. Within the site there are also a number of agricultural, commercial buildings and residential properties. The location of the application site is shown on Appendix 1.1.
- 1.1.4 Land North of Horsham forms an allocation in the adopted Horsham District Planning Framework ("HDPF"). The planning application is submitted to provide a development consistent with the objectives and policies of the Submission HDPF.

1.2 Purpose of the Environmental Statement

- 1.2.1 Proposals for strategic mixed use developments fall under Schedule 2 10 (b) of the Town and Country (Environmental Impact Assessment) Planning Regulations 2011 ("EIA Regulations") (as amended). This identifies that urban development projects over 0.5 hectares in area are Schedule 2 developments. Schedule 2 developments require an Environmental Impact Assessment ("EIA") where they are likely to have a significant effect on the environment by virtue, inter alia, of their nature, size or location.
- 1.2.2 Having considered the scale of the proposed development, whilst having regard to Schedule 3 of the EIA Regulations and advice contained within National Planning Policy Guidance, it has been agreed with HDC that this proposal is one which requires an EIA. In accordance with the EIA Regulations an environmental assessment carried out by the competent planning authority (in this case HDC) is therefore required before development consent can be granted.

- 1.2.3 It is the purpose of this ES to present the findings of an EIA that has been undertaken in respect of the proposed development, in order that HDC are able to carry out an environmental assessment of the development as required by the EIA Regulations.
- 1.2.4 This ES was updated in March 2017 following comments from various consultees made in respect of the Land North of Horsham planning application (HDC Ref: DC/16/1677). The updates to the ES comprise provision of additional environmental information and clarifications. The Chapters within the original ES (dated July 2016) should be replaced with those amended as part of the addendum submitted March 2017.

Chapter 3

Scope of this Environmental Statement

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3. Scope of this Environmental Statement

3.1 Introduction

- 3.1.1 This Chapter outlines the process of EIA that has been undertaken. The EIA has been undertaken in accordance with the 2011 Regulations (as amended). An overview of the ongoing stakeholder engagement and consultation process and how this has reflected the scope of the EIA is also provided within this Chapter.

3.2 Environmental Impact Assessment Screening and Scoping

- 3.2.1 As described in Section 1, it has been agreed with Horsham District Council (HDC) that this proposal is one which requires an EIA. In accordance with the EIA Regulations an environmental assessment carried out by the competent planning authority (in this case HDC) is therefore required before development consent can be granted.

- 3.2.2 Although not legally required by the EIA Regulations, scoping is an important part of the EIA process designed to ensure that the environmental studies provide all the relevant information on the potential impacts of the development; the alternatives, and; other matters considered to be relevant to the development.

- 3.2.3 Paragraph 13 of the NPPG confirms that the planning authorities, as well as statutory and non statutory consultees, will often possess useful local and specialised information that will assist the EIA process. However, the NPPG notes caution in identifying the scope of information provided within the ES too loosely:

“Whilst every Environmental Statement should provide a full factual description of the development, the emphasis on Schedule 4 is on the “main” or “significant” environmental effects to which a development is likely to give rise. The Environmental Statement should be proportionate and not be any longer than is necessary to assess properly those effects. Where, for example, only one environmental factor is likely to be significantly affected, the assessment should focus on the issues only. Impacts which have little or no significance for the particular development in question will need only very brief treatment to indicate that their possible relevance has been considered.”

- 3.2.4 In order to ensure that all significant environmental effects have been identified, as well as make use of any local or specialised information held by them, the following statutory and non statutory bodies have been asked for feedback on the scope of the EIA:

- Horsham District Council Development Management
- Horsham District Council Strategic Planning
- Horsham District Council Environmental Health
- Horsham District Council Economic Development
- Horsham District Council Housing Services
- Horsham District Council Arboriculture
- David Huskisson Associates on behalf of Horsham District Council
- White Young Green on behalf of Horsham District Council
- Network Rail
- West Sussex County Council Drainage
- West Sussex County Council Education
- West Sussex County Council Highways
- West Sussex County Council Ecology
- West Sussex County Council Archaeology and Heritage
- Natural England
- Historic England
- Environment Agency
- Sport England

3.2.5 A Scoping Report prepared on behalf of Liberty was submitted to HDC on the 22nd July 2014. The Scoping Report is provided at Appendix 3.1 of this ES. The Scoping Report outlined the likely significant effects of the development on the environment and the methodology for assessing those effects. It concluded that the following environmental issues associated with the proposed development should be considered in the ES:

- Landscape and Visual
- Socio Economic

- Agricultural Land
- Ecology
- Archaeology and Heritage
- Air Quality
- Noise and Vibration
- Geotechnical and Land Contamination
- Surface Water Drainage and Hydrology

- 3.2.6 The Council formally issued an EIA Scoping Opinion on the 9th September 2014 (Appendix 3.2), following the necessary consultation period and receipt of comments from statutory consultees.
- 3.2.7 Further to receipt of the Scoping Opinion, the Applicant and the consultant team have regularly engaged with Horsham District Council and their advisors as part of the wider Pre-Application process to discuss the scope and methodology of the EIA.
- 3.2.8 A summary of these comments and the related actions are provided in Table 3.1.

Table 3-1 Feedback on Scope of EIA

Consultee	Feedback	Action Taken
Socio Economic		
HDC Economic Development	Consider the impact of development on the nearby population, in particular neighbouring properties on Langhurstwood Road and in North Horsham. It would be beneficial if this included an analysis of the representations made as part of the Submission HDPF consultation process	A review of how the proposed development affects neighbouring properties has been carried out within Chapter 8 of the ES and within each of the relevant technical chapters.
Agricultural Land		
Natural England	The development should be considered in light of Government's policy for the protection of the best and most versatile agricultural land (Paragraph 12 of the NPPF). Soils should also be considered under a more general heading of sustainable use and their contribution they make as a sustainable resource.	A review of the application site in accordance with the principle of Paragraph 112 has been carried out by Reading Agricultural at Chapter 10.
Land Contamination		
Environment Agency	The site is on secondary and unproductive aquifers. We therefore consider that in relation to groundwater quality, land contamination issues can be scoped out of the EIA.	Contamination issues so far as it relates to groundwater quality has been scoped out of the EIA. An assessment of the developments effect on ground conditions and contamination is carried out by BAE Systems at Chapter 9 of this ES.
Landscape & Visual Impact Assessment		
HDC	Indicated that the EIA should incorporate a full assessment of the development on local landscape character using Landscape Character Assessment methodologies. The EIA should take into consideration: <ul style="list-style-type: none"> • Identify any change to Landscape Character Areas • Identify the impact on specific landscape features, 	All of these points have been addressed within Chapter 11 (Landscape & Visual) of the ES. There has been on-going liaison with Horsham District Council Landscape to ensure that all of the viewpoints for assessment are agreed.

	<p>e.g. trees and field boundaries</p> <ul style="list-style-type: none"> Assess the visual effects together with any physical effects, e.g. changes in topography. Viewpoints to be agreed with HDC in accordance with good practice. Photomontages to be prepared for key viewpoints which should be agreed with HDC. The assessment should take into account worst case scenario in terms of winter views. 	
Natural England	<p>The EIA should include assessments of visual effects on the surrounding area and landscape together with any physical effects of the development, such as changes in topography.</p> <p>The EIA should include a full assessment of the potential impacts of the development on local landscape character using landscape assessment methodologies.</p> <p>The EIA should consider potential impacts on access land, public open land, rights of way and coastal access routes in the vicinity of the development.</p>	This is generic advice relating to the carrying out of Visual Impact Assessments, all of which have been addressed by Chapter 11 (Landscape & Visual) of the ES.
Archaeology & Heritage		
Historic England	<p>The EIA should be carried out in accordance with Conservation Principles and according to the guidance on the NPPF, in particular Paragraphs 17, 139, 132, and 133.</p> <p>The EIA should take into consideration:</p> <ul style="list-style-type: none"> In relation to three medieval moated sites, the historic landscape character of the area, the degree to which the setting of these sites contributed to their heritage significance and the cumulative effect of other 	<p>These comments have been addressed in full within Chapter 13 of this ES.</p> <p>This includes a consideration of the three medieval moated sites and how these sites contribute to landscape character.</p> <p>Since the Scoping Report the study area for the Archaeology & Heritage Assessment has been extended and now includes Warnham Village</p>

	<p>developments and land uses.</p> <ul style="list-style-type: none"> • Study area should include Warnham Village and Warnham Park and should include an assessment of long views into and out of the site. • A broad view of the archaeology of the wider area, not just the study site. 	<p>and Warnham Park, as well as a broader consideration of archaeology within the wider area.</p>
Ecology		
Natural England	<p>The EIA should be carried out in accordance with the Guidelines for Ecological Impact Assessment (EcIA).</p> <ul style="list-style-type: none"> • The ES should thoroughly assess the potential for the proposal to affect designated sites. • The EIA will need to consider any impacts upon local wildlife and geological sites. • The ES should assess the impact of all phases of the proposal on protected species (including, for example, great crested newts, reptiles, birds, water voles, badgers and bats). • The ES should thoroughly assess the impact of the proposals on habitats and/or species listed as 'Habitats and Species of Principal Importance' within the England Biodiversity List, published under the requirements of S41 of the Natural Environment and Rural Communities (NERC) Act 2006. <p>Natural England advises that a habitat survey (equivalent to Phase 2) is carried out on the site, in order to identify any important habitats present The Environmental Statement should include details of:</p> <ul style="list-style-type: none"> • Any historical data for the site affected by the 	<p>These are generic comments which set out the general requirements for an assessment carried out in accordance with the EcIA. The Ecological Impact Assessment provided at Chapter 12 has been carried out in line with these principles.</p>

	<p>proposal (e.g. from previous surveys);</p> <ul style="list-style-type: none"> • Additional surveys carried out as part of this proposal; • The habitats and species present; • The status of these habitats and species (e.g. whether priority species or habitat); • The direct and indirect effects of the development upon those habitats and species; • Full details of any mitigation or compensation that might be required. 	
Environment Agency	<p>The surveys should seek to identify all 'wetland' features, including less obvious features such as marshy, boggy grassland.</p> <p>The EA support the ecological enhancements proposed in paragraphs 6.167 and 6.168 of the Surface Water Drainage and Hydrology Chapter, however recommend cross reference between these two chapters in relation to those proposals.</p> <p>The mitigation measures should also relate to Boldings Brook.</p>	Chapter 12 (Ecology) now references the ecological enhancements proposed as part of the drainage strategy for the proposed development and mitigation measures have been extended to incorporate Boldings Brook.
HDC	Subsequent to the HDC Scoping Report response, HDC has commented on the ecological surveys which have been carried out, and has required further surveys to confirm the ecological value of the site, and to ensure that the proposed mitigation is sufficient.	Further ecological surveys were carried out in response to HDC requirements. However an invertebrate survey will be submitted subsequent to the application.
Transport		
West Sussex County Council	<p>WSCC will expect the EIA to be updated where it draws on traffic information in line with the TA process as it is agreed.</p> <p>The EIA should take into consideration WSCC Transport Assessment Guidance. This should be discussed</p>	The EIA has been carried out with reference to WSCC Transport Assessment Guidance, and updated guidance contained in the NPPG and NPPF.

	<p>with WSCC in light of updates required following publication of the NPPG and NPPF.</p> <p>The assessment needs to look at the impact on lanes to the west of the A24 through Warnham (i.e. there will be cause and effects created by any changes at the Great Daux and Robin Hood roundabouts).</p>	
Air Quality		
Environment Agency	The EA are aware of planning permission DC/2919/06(NH) which included an anaerobic digestion plant at Brookhurst Wood Landfill Site. Brookhurst Wood Landfill and MBT (anaerobic digester) have flares, engines that run on landfill/bio-gas. It may be relevant to factor in the impacts of this as part of the baseline data for the odour chapter.	The anaerobic digestions plan has been addressed by Chapter 15 (Air Quality) at Paragraphs 15.3.28 – 15.3.30 and has been considered within each of the technical chapters in terms of cumulative development.
HDC	The EIA should take into consideration Horsham District Council's Planning Advice Document for Air Quality.	This document has been addressed by Chapter 15 (Air Quality) and has taken into account
Noise and Vibration		
HDC	<p>HDC would like to see an explanation as to how the proposed monitoring positions relate to future land use. For example location 4 could be relocated to take account of the combination of noise effects from the two separate links of the A264 either side of the Roffey Roundabout. North of location 1 are significant areas of industrial activity and these sources should also be considered in the assessment.</p> <p>Baseline noise data of the north eastern area of the site would afford a proper consideration of the potential impacts of the expansion at Gatwick.</p>	<p>The chosen location of monitoring positions is addressed at Paragraph 16.3.5 (Chapter 16 – Noise & Vibration).</p> <p>The potential impacts of expansion at Gatwick is considered at Paragraphs 16.6.4 – 16.6.9.</p>
Surface Water Drainage		
Environment	Support the ecological enhancements proposed in paragraphs	The ecological enhancements that will be

Agency	<p>6.167 and 6.168. We recommend reference is also made to these in the Ecology Chapter.</p> <p>The EA agree with the design standards stated in paragraph 6.169 and support the inclusion of residual risks and recommend you also consult with Horsham District Council's Drainage Engineer and West Sussex County Council, as the Lead Local Flood Authority regarding flood risk from sources other than rivers or the sea.</p>	<p>delivered through the approach towards surface water drainage have been referenced within the Ecology Chapter.</p> <p>HDC's Drainage Engineer and WSCC have been kept fully informed as part of the EIA process.</p>
Climate Change		
HDC	<p>The ES should reflect these principles and identify how the development's effects on the natural environment will be influenced by climate change, and how ecological networks will be maintained. The NPPF requires that the planning system should contribute to the enhancement of the natural environment by establishing coherent ecological networks that are more resilient to current and future pressures' (NPPF Para 109), which should be demonstrated through the ES.</p>	<p>Each of the technical chapters consider the influence of Climate Change and how this might alter the significance of the effects on the natural environment.</p>
Cumulative Development		
HDC	<p>The ES should include an impact assessment to identify, describe and evaluate the effects that are likely to result from the project both:</p> <ul style="list-style-type: none"> a. cumulative with other projects and activities that are being, have been or will be carried out and b. in combination effects which may or may not interact with each other. For instance, bird species could be affected by additional vehicular noise. 	<p>This is carried out by each of the technical chapters, with a summary and further assessment provided at Chapter 18.</p>

- 3.2.9 The Land North of Horsham planning application (HDC Ref: DC/16/1677) was validated on 4 August 2016. As part of the consultation process a number of statutory and non-statutory consultees as listed in paragraph 3.2.4 made comments on the application. This ES has been updated where required to provide additional environmental information and clarification in respect of those comments.

3.3 Community Engagement

- 3.3.1 The Localism Act (Part 6(4)) requires developers to consult with local communities before submitting planning applications for certain schemes. The 'certain schemes' however have yet to be identified through secondary legislation. The NPPF encourages early engagement with communities despite this not yet being required by law.
- 3.3.2 The NPPF includes robust guidance for community involvement for both plan-making and decision-taking. For plan-making this means undertaking early and meaningful engagement and collaboration with neighbourhoods, local organisations and businesses. For decision-taking, the NPPF encourages early engagement with the Local Planning Authority.
- 3.3.3 Paragraph 188 states that early engagement has significant potential to improve the efficiency and effectiveness of the planning application system for all parties. It continues, "Good quality pre-application discussion enables better coordination between public and private resources and improved outcomes for the community."
- 3.3.4 Horsham District Council's Statement of Community Involvement (SCI) encourages developers to undertake early community engagement to ensure local issues are identified and addressed prior to submission of a planning application. It also outlines a number of ways a developer can engage the public, including exhibitions, press releases and meetings with local groups.

3.4 Methodology of the EIA and Layout of the ES Technical Chapters

- 3.4.1 Each of the ES Technical Chapters will be broadly laid out as follows.

Introduction

- 3.4.2 This section of each Chapter will state which part of the Liberty technical team carried out the assessment and acts as an introduction to the technical area.

Policy Context

- 3.4.3 This section of each Chapter will include a summary of the national, regional and local policies of relevance to the environmental discipline and assessment.

Methodology

- 3.4.4 This section of each Chapter will describe the method of approach in assessing the significance of the impact, the sources of information used and any technical difficulties encountered.
- 3.4.5 This section will make reference to relevant professional assessment standards where relevant.

Baseline Environmental Conditions

- 3.4.6 This section of each Chapter describes the current situation with regard to the discipline under assessment and anticipated changes over time in the absence of the proposed development.
- 3.4.7 This section is critical to establishing the significance of any impacts of the proposed development and forms one of the key stages of performing an EIA. Where appropriate, sensitive receptors will be identified with the LPA or other stakeholders before baseline environmental conditions are measured.

Assessment of Key Impacts

- 3.4.8 This section forms the second key stage of the EIA process which is to focus on significant environmental effects. NPPG provides advice on the general requirements of EIA as explained in paragraph 3.2.3 of this ES.
- 3.4.9 The assessment of the significance of impacts arising from the development proposal is the key to informing the decision-making process. A judgement on the significance of impacts is made using a combination of professional subjectivity and quantifiable tests that are considered to be sound within each technical specialism.
- 3.4.10 The assessment of potential effects of the environment will taking into account the following factors;
- the nature of the effects and whether they are adverse, beneficial, neutral, direct and indirect;
 - the extent of the effects and susceptibility of the receptor;
 - the duration, frequency and reversibility of the effect;

- the probability of the effect, and;
- the magnitude of the effects.

3.4.11 The specialists, when undertaking quantifiable tests will define specific significance criteria within their relevant Chapters which may include specialist terminology specific to their chapter. However, the following terminology will generally be used throughout the ES:

- Beneficial or Adverse;
- Short, Medium, or Long Term
- Permanent or Temporary
- Direct or Indirect

3.4.12 The significance of the effects will generally be based on the below matrix of significance:

Table 3-2 Significance Matrix

Sensitivity or Value of Receptor	Magnitude of Effect (Adverse / Beneficial)		
	High	Medium	Low
High (National)	Major	Major/Moderate	Moderate
Medium (Regional)	Major/Moderate	Moderate	Moderate/Minor
Low (District)	Moderate	Moderate/Minor	Minor

3.4.13 Where an effect is considered to have no or very little influence, it will be classified as negligible.

3.4.14 These levels of significance are used for all of the environmental issues which are considered in this ES, and set out in the Assessment Tables in Chapter 19: Summary of Mitigation Measures and Residual Effects.

3.4.15 The process of this assessment is therefore identifying the magnitude of the impact, which can generally be identified as:

- High: Total loss of or major alteration to key elements of baseline conditions.
- Medium: Loss or alteration to one of the key baseline elements.
- Low: A minor shift away from baseline conditions.
- Negligible: None or very little change from baseline conditions.

- 3.4.16 The 2011 Regulations state that the types of impact identified 'should cover direct effects and any indirect, secondary, cumulative, short medium and long-term effects, permanent and temporary, positive and negative effects'
- 3.4.17 Cumulative impacts may occur as a result of individual impacts of the development proposal working in combination, as well as with the development already consented. They can also occur in combination with existing, consented or other proposed developments.
- 3.4.18 The relevant committed developments have been discussed with Horsham District Council and are considered to comprise:

Table 3-3 Developments considered in the Assessment of Cumulative Effects

Application No.	Location	Description	Status
Mixed Use Developments			
DC/09/2138	Land East of A24 Worthing Road, Horsham	Development primarily of up to 1044 dwellings including provision of employment floor space, fire station, community centre and expanded school facilities.	Permitted 18 th March 2010.
DC/09/2101	Land South of Broadbridge Heath, Old Wickhurst Lane, Broadbridge Heath	Erection of 963 residential units, community facility including land for a primary school, neighbourhood centre, youth and recreational facilities, other formal and informal open space, landscaping, environmental works, transport and access arrangements.	Permitted 12 th April 2010.
DC/10/1612	Holmbush Farm Landfill Site, Crawley Road, Faygate	Development of approximately 2500 dwellings, new access from A264 and a secondary access from A264, neighbourhood centre, comprising retail, community building with library facility, public house, primary care centre and care home, main pumping station, land for primary school and nursery, land for employment uses, new rail station, energy centre and	Permitted 29 th October 2010

		associated amenity space.	
DC/13/0735	Land East of Billingshurst to North and South of A272, East Street, Billingshurst	Demolition of existing buildings and structures and redevelopment to provide up to 475 residential dwellings, land to accommodate a new primary school and land to accommodate an extension to existing doctors' surgery, land for new dentist's surgery and creche (falling within Class D1), with associated access and play space.	Permitted 24 th July 2013
DC/14/0590	Land West of Worthing Road, Southwater	Residential development of up to 540 dwellings and 54 retirement living apartments, associated vehicular, cycle and pedestrian access, drainage and landscape works	Permitted 21 st July 2014
DC/10/0088	Faygate Sawmills, Faygate Lane, Faygate	Demolition of existing buildings, construction of 148 retirement units, 1 warden's unit, 50 bed care home, visitor accommodation, central facilities building, shop, medical centre, provision of open space, balancing pond, landscaping and access	Permitted 5 th August 2010
Primarily Residential Developments			
DC/14/1624	Novartis Pharmaceuticals UK Limited, Parsonage Road, Horsham	Demolition of existing social club and redevelopment of site so as to accommodate 160 dwellings together with new access arrangements and landscaping works	Permitted 12 th December 2014
DC/10/0939	Land South of Groomsland Drive and Gillmans Industrial Estate, Marringdean Road, Billingshurst	Erection of 150 dwellings (comprising 47 x 2-bed, 49 x 3-bed, 38 x 4-bed and 16 x 5-bed) with associated works and landscaping	Permitted 20 th November 2011
DC/14/2582	Land to the west of Mill Straight, Worthing Road,	Residential development of up to 193 No. dwellings (including affordable	Permitted 18 th September 2015

	Southwater	housing) and associated works (Outline)	
DM/15/4711	Land East of Brighton Road, Pease Pottage, West Sussex	Approximately 600 dwellings (C3), 48 bed-care facilities (C2), Community building (D1), Café (A3) and retail (A1). Up to 1 form entry primary school (D1), landscaping, infrastructure, accesses and car parking.	Permitted 28 November 2016
DC/13/2408	Land North of Old Guildford Road, Broadbridge Heath	Outline application for the erection of up to 165 residential dwellings (use class C3) including affordable housing, a 60-bed care home (use class C2) with separate staff accommodation, two new vehicular accesses, associated infrastructure, groundworks, open space and landscaping	Permitted 18 th May 2015
Commercial Developments			
DC/14/0476	Wealdon, Langhurst Wood Road, Horsham	Erection of units for Class B2 (6695 sqm) and Class B8 (8185 sqm) Uses from outline application DC/09/2355 (Approval of Reserved Matters)	Permitted 27 th June 2014
DC/15/4111	Land east of Brighton Road, Pease Pottage, West Sussex	Approximately 600 dwellings, (C3) 48 bed care facility (C2), community building (D1), café (A3) and retail (A1). Up to 1 form entry primary school (D1). Landscaping, infrastructure, accesses and car parking	Permitted 28 th November 2016
Waste Developments			
WSSC/062/16/NH	Former Wealden Brickworks, Langhurstwood Road, Horsham, West Sussex, RH12 4QD	Recycling, Recovery and Renewable Energy Facility and Ancillary Infrastructure	Under Consideration
Site Allocations			
Policy Ref	Location	Description	Status
Policy 13	South of	Around 150 homes and	

	Billingshurst	associated infrastructure	
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- 3.4.19 An assessment of cumulative effects will be set out within each technical chapter. In Chapter 18, a review is undertaken of cumulative effects identified by each of the technical chapters. This is in order to provide a discussion and identify circumstances where effects that are not significant on their own may in combination with other developments, or other effects, lead to a significant impact.

Mitigation Measures

- 3.4.20 The technical chapters will set out in detail elements of the development that have been introduced to mitigate potential adverse effects or increase beneficial effects. The mitigation measures can be described as:
- Inherent Mitigation, identified through the planning process and developed as a fundamental part of the proposed development.
 - Additional Mitigation, delivered through detailed plans or documents usually secured through planning conditions or planning obligations.

Residual Impacts

- 3.4.21 This section describes the significance of the impacts that would remain once mitigation measures as described within the section above, have been put in place.
- 3.4.22 If the effects are still significant following avoidance, mitigation or compensation, justification should be provided as to why it has not been possible to reduce such effects.

Summary

- 3.4.23 This section will summarise the main findings of each technical chapter.
- 3.4.24 In Chapter 19, the findings of the technical chapters will be provided in summary form identifying the mitigation measures proposed throughout each of the technical chapters in order to assist with translating the measures into planning conditions or planning obligations.
- 3.5 Tables in Chapter 19 will draw together the residual effects of the development after taking the mitigation measures into account.

3.6 Limitations of this Environmental Statement

3.6.1 A number of assumptions have been made during the preparation of this ES, which are as set out below.

- The principle land uses within and adjacent to the application site will remain as they are during consideration of the application, except in cases where land has been allocated, or development has been granted, and these have been treated as contributing to 'cumulative' effects where relevant (as identified above).
- Information provided by third parties, including publicly available information is correct at the time of drafting this ES.
- The design and construction of the proposed development will satisfy legislative requirements.
- Conditions will be applied to the planning permission that will reflect the mitigation assumed to be inherent to the development and that will control disturbance during construction works.

3.6.2 Any assumptions or limitations that are relevant to each area of technical expertise will be discussed within the relevant chapter of this ES.

Chapter 5

Proposed Development

DMH Stallard LLP

5. Proposed Development

5.1 Introduction

5.1.1 The Proposed Development is for the creation of a mixed use strategic development at Land North of Horsham to include housing, a business park, retail, community centres, leisure facilities, education facilities, public open space and landscaping. The development will include:

- Up to 2,750 homes, with a mix of house types and tenures to meet local needs;
- 46,450 m² (500,000 ft²) business park;
- two primary schools;
- a secondary school;
- provision for special educational needs;
- 'early years' provision;
- local centres and community facilities;
- retail provision of 4,900 m² (52,744 ft²) sales floorspace, together with other appropriate local shopping facilities;
- multi-use community centre;
- land safeguarded for a parkway railway station and associated uses including car parking;
- open space including a nature park, sport and recreation facilities, and allotments;
- landscape buffers;
- a cemetery;
- commercial leisure facilities of 5,100 m² (54,896 ft²) gross floorspace;
- local transport infrastructure to include delivery of and/or contributions towards highway improvements, comprising:

- closure of Langhurstwood Road left in / left out junction onto A264 and re-alignment of Langhurstwood Road to the east with a new signalised roundabout on the A264;
- upgrade of the Rusper Road roundabout to a signalised roundabout;
- a new left in left out junction into the development east of Rusper Road;
- a new roundabout on Rusper Road;
- a new roundabout on Langhurstwood Road;
- a new crossroads junction on Old Holbrook;
- a new emergency access on Wimland Road;
- priority access for buses to/from Pondtail Drive;
- new pedestrian and cycle crossing points on the A264; and
- a number of off-site highways improvements.

5.2 Parameters of Development Assessed

5.2.1 A set of parameter plans have been developed in order to inform the environmental assessments that have been carried out. At this stage the parameters have been defined by land uses, building heights, building density, vehicle and pedestrian movement and access, and green infrastructure.

5.2.2 The proposed development which has been subject of this EIA is shown within the Plans included at the following Appendices:

- Drawing 2153A-150S - Illustrative Masterplan (Appendix 5.1)
- Drawing 2153A-151J - Development Framework Plan (Appendix 5.2)
- Drawing 2153A-203L - Open Space Budget Plan (Appendix 5.3)
- Drawing 2153A-100M - Land Use Parameter Plan (Appendix 5.4)
- Drawing 2153A-101M - Density Parameter Plan (Appendix 5.5)
- Drawing 2153A-102N - Building Heights Parameter Plan (Appendix 5.6)

- Drawing 2153A-103P - Movement and Access Parameter Plan (Appendix 5.7)
- Drawing 2153A-105M Green Infrastructure Parameter Plan (Appendix 5.8)
- Drawing 2153A-207D - Phasing Plan Phase 1 (Appendix 5.9)
- Drawing 2153A-208D - Phasing Plan Phase 2 (Appendix 5.10)
- Drawing 2153A-209E - Phasing Plan Phase 3 (Appendix 5.11)

5.3 Land Use

5.3.1 The main land uses will comprise:

Table 5-1 Schedule of Land Uses

Land Use	Site Area (Ha)	Percentage of Total
Residential	83.94	36.2%
Local Centres and Mixed Use	4.59	2.0%
Education	13.40	5.8%
Commercial Development	15.93	6.9%
Parkway Railway Station	3.00	1.3%
Transport Infrastructure	14.52	6.3%
Community Facilities	11.32	4.9%
Greenspace - Parks & Recreation	15.83	6.8%
Greenspace – Amenity & Natural	18.13	7.8%
Additional Land not in OS requirement	51.14	22%
TOTAL	231.80	100%

5.4 Residential Development

- 5.4.1 The proposed residential development will provide a mix of up to 2,750 dwellings. The houses will vary in height from up to 2 storeys (ridge height of approximately 10m) to up to 3 storeys (ridge height of approximately 16m). The tallest buildings will be located centrally within the site with heights reducing to the site edges.
- 5.4.2 The density of residential development will range from 15 dwellings per hectare concentrated predominantly on the northern edge of the site to 60 dwellings per hectare concentrated to the south of the site and adjacent to the A264 and main access routes. The density of development will be lower to the north and site edges.
- 5.4.3 The residential development will comprise a mix of dwelling types and sizes, to be delivered in three phases of development, as set out below:

Table 5-2 Phasing of Residential Development

Phase	No. of Dwellings
1	Circa 1000
2	Circa 1000
3	Circa 750
	Total Dwellings Circa 2750

5.5 Commercial Development

- 5.5.1 The proposed development will provide a business park of up to 46,450m² of B1 floorspace located within the south eastern part of the application site. The commercial elements will have a maximum building height of up to 16 m above ground level. There will also be a commercial leisure facility within the site.

5.6 Local Centre

- 5.6.1 The local centre will be located in a central position within the site and will have a maximum building height of 16 m above ground level. The local centre will comprise a mix of uses including smaller retail units, and a mixture of leisure, community and housing uses.
- 5.6.2 A food store with floor space of up to 4,900 m² will be provided south of the local centre and will have a maximum building height of 16 m above ground level.

5.7 Community Provision and Schools

- 5.7.1 The proposed development will include land for a secondary school with the total space associated with this development being approximately 6.91 hectares. An additional 2 hectares is also to be provided for expansion to an 8 form entry school if required. There will also be two primary schools one of which will be 2 form entry and the other 1 form entry with room to expand. They will both comprise a total area of up to 2.00 hectares each. Additionally, the development is required to accommodate a special needs school, early years provision and youth provision. The buildings will have a maximum height of 12 m.
- 5.7.2 Except for the primary school in the western part of the site, all of the school provision will be located within one campus style development just north of the local centre.

5.8 Commercial Leisure Facilities

- 5.8.1 The proposed development will include commercial leisure facilities of 5,100m².

5.9 Landscaping and Green Space

5.9.1 There will be various types of open space provided as part of the development consisting of:

- Formal open space – such as sports pitches, multi-games use area; allotments; kick-about areas; skate parks; and children’s play areas;
- Informal open space – such as natural and semi-natural open space; parks; and green corridors.

5.10 Transport and Access

5.10.1 A number of highway infrastructure improvements will be required in order to facilitate the development. The transport improvements are set out in more detail within Chapter 14 but will generally comprise:

- closure of Langhurstwood Road left in / left out junction onto A264 and re-alignment of Langhurstwood Road to the east with a new roundabout junction on the A264;
- improvements to the Rusper Road roundabout;
- a new secondary junction into the development east of Rusper Road;
- improvements to the Great Daux roundabout;
- improvements to the Moorhead roundabout;
- appropriate access for buses; and,
- new pedestrian and cycle crossing points on the A264.

5.10.2 As well as the above highway improvements, it is anticipated that the development will make provision for an efficient bus service, as well as provide land for the development of a parkway railway station.

5.10.3 A Travel Plan has been submitted alongside the planning application, which will seek to deliver measures required in order to encourage more sustainable methods of transport.

5.11 Phasing of Development and Construction Programme

5.11.1 At this stage the phasing of the development is necessarily broad and has been developed in order to assist with the assessment of environmental effects. The first housing completions are anticipated to be 2017. It is expected that there will be an on-going building programme with all housing completed by the end of 2031.

Phase 1:

5.11.2 Phase 1 will deliver the local centre, which will be organised around the Moated House and the new Rusper Road access. The first zone of the Business Park will be delivered, via a new access off the A264. In this stage of development the following will be delivered:

- circa 1000 homes in a range of dwelling types including local needs
- a mix of employment uses focussed on the provision of B1(a) employment floorspace at the proposed Business Park
- a school campus comprising a secondary school, a 2 FE primary school, early years provision and special needs provision
- community facilities
- a food store
- a mix of shops & café, restaurants and a pub
- a mix of play spaces to serve a range of age groups
- landscaping to edge of the existing A264 and Rusper Road
- SuDS (Sustainable Drainage Systems) and ecological improvements
- commercial leisure facilities

Phase 2:

5.11.3 Phase 2 will deliver the new nature park area incorporating the sports hub and community facilities. The key element of the cross-site greenway will be formed. In this stage of development the following will be delivered:

- circa 1000 homes in a range of dwelling types including local needs
- a nature park
- expansion of the town Riverside Walk
- sports pitches within the nature park
- a sports pavilion
- multi use games areas
- a mix of employment uses focussed on the provision of B1(a) employment floorspace at the proposed Business Park

- a mix of play spaces to serve a range of age groups
- landscaping incorporating SuDS and ecological enhancements
- an area for allotments

Phase 3:

5.11.4 Phase 3 will deliver the remaining neighbourhood areas to the west. Access to Langhurstwood Road will be completed. In this stage of development the following will be delivered:

- circa 750 homes in a range of dwelling types including local needs
- a mix of employment uses focused on the provision of B1(a) use in a Business Park
- a parkway railway station
- a 1FE primary school
- community facilities
- a mix of play spaces to serve a range of age groups
- a mix of natural informal green amity spaces
- landscaping incorporating SuDS and ecological enhancements
- land for a cemetery
- an area for allotments

5.12 Construction Methodology and Minimisation of Environmental Effects

5.12.1 The site preparation and construction works will be designed and programmed to minimise as far as possible any disruption to local residents and the general public.

5.12.2 The hours of construction will follow the industry wide accepted working times. The sequencing of the principal construction works planned for each phase of the development will generally be as follows:

- Establishment of the construction compound, including accommodation, material storage areas and car parking.
- Site hoarding and security measures.
- Initial site preparation including required mitigation.

- Construction of foul and surface water drainage.
- Construction of roads and road crossings.
- Construction of groundworks for buildings.
- Construction of superstructures.
- Fitting out of buildings.
- Landscaping and preparation of outdoor recreational facilities.
- Site completion and removal of compounds.

5.12.3 The likely significant effects of the proposed construction works have been considered within each of the technical chapters within this ES (Chapters 8 to 17). In order to minimise these effects a Construction Environmental Management Plan (CEMP) will be prepared by the principle contractor and submitted to HDC for agreement in writing prior to the start of works.

5.12.4 The aim of the CEMP will be to avoid or minimise any significant adverse effects on environmental receptors and to minimise disturbance to local residents. Chapter 19 of this document summarises the recommended mitigation measures recommended by the technical consultants to avoid or minimise significant effects resulting from the construction works, in order that their inclusion within the CEMP can be secured by condition or by planning obligations.

Chapter 6

Other Alternatives

DMH Stallard LLP

6. Other Alternatives

6.1 Introduction

- 6.1.1 Schedule 4, Part 1, Paragraph 2 of the EIA Regulations 2011 state that environmental statements are to include an outline of the main alternatives considered by the application, and an indication of the main reasons for the choice made, taking into account the environmental effects.
- 6.1.2 In addressing this requirement, consideration is given both to the selection of this site, and also to the alternatives to the submitted distribution of uses within the site.

6.2 Main Alternatives to This Site

- 6.2.1 Horsham District Council is required to make provision for at least 16,000 new homes within the District to 2031. The Horsham District Planning Framework is the development plan document which is required to define how and where these new homes are to be provided. A 'no development' alternative, is therefore not a real alternative, as it would result in Horsham District not having an up to date plan. This in turn would lead to speculative planning applications throughout the District, with the NPPF presumption in favour of sustainable development. Horsham District Council has therefore addressed the provision of this housing requirement in the preparation of the now adopted Horsham District Planning Framework.
- 6.2.2 In selecting this site to promote as a strategic mixed use development, it was essential to understand the spatial objectives of Horsham District Council in preparing the Horsham District Planning Framework. The first public consultation stage in this process was the 'Core Strategy Review Consultation Document' – September 2009, which put forward nine potential strategic site options for major development.
- 6.2.3 Of these nine options, two related to two areas north of the A264, both west and east of 'Old Holbrook'. They were described as follows:-
- **Strategic Site Option 3: Horsham Western Area – Holbrook Park.**

Some 58 hectares and could accommodate up to 1500 homes, with open space, a neighbourhood centre, the realignment of Longhurstwood Road, and some employment.
 - **Strategic Site Option 4: - Horsham Eastern Area – Chennells Brook.**

Some 121 hectares, and could accommodate up to 1500 homes, with open space, a neighbourhood centre, schools and potentially a new railway station, and some employment.

- 6.2.4 All of these potential strategic site options were supported by evidence based Key Delivery Stakeholder Position Statements, which were the outcome of consultations between Horsham District Council and key delivery stakeholders, including those responsible for environmental issues, such as Southern Water; the Environment Agency; English Heritage; Natural England; and West Sussex County Council.
- 6.2.5 In 2010 Liberty considered these potential strategic site options, and took the view that Options 3 and 4 were ideally located to be a strategic site, to provide the best location for a sustainable mixed use development, providing not only housing and related open space, neighbourhood facilities and a new railway station, but also a high quality business park.
- 6.2.6 During the period in which HDC were selecting the strategic sites, from 2010 to 2013, Liberty carried out significant evidence-base work in relation to many of the environmental issues which apply to these two Option Sites. These included a Landscape and Visual Appraisal; Transport, Infrastructure and Flood Risk Assessments; Ecological Appraisal and Sustainability Appraisal.
- 6.2.7 From 2009 to 2013, (when the Preferred Strategy of the Horsham District Planning Framework was published), HDC carried out extensive evidence-based work, which culminated in the publication of the Sustainability Appraisal in August 2013, in support of the Preferred Strategy Version of the Horsham District Planning Framework (August 2013).
- 6.2.8 This Preferred Strategy, and related Interim Sustainability Appraisal, concurred with Liberty's submissions in relation to environmental matters on this site. The Land North of Horsham was identified as a proposed strategic allocation, (Draft Policy 13), and was considered to be the most sustainable option, when compared with all of the other Strategic Site Options in the 2009 Core Strategy Review. It stated:

"All sites were found to have different pros and cons. It is considered that the sites which would best meet wider economic and social need whilst providing opportunities for environmental mitigation are North Horsham and Southwater".

The Interim Sustainability Appraisal provided the evidence base for this statement in the Preferred Strategy, by assessing all of the option sites, and concluding in paragraph 7.44 that:

"on balance it is considered that North Horsham performed best against the range of sustainability criteria".

These criteria included environmental impacts such as biodiversity; landscape; archaeology; cultural heritage; environmental quality such as soil, air and water; flooding and drainage; and climate change.

- 6.2.9 The Horsham District Planning Framework (adopted November 2015) confirms the inclusion of Land North of Horsham as a mixed-use strategic development for around 2,500 homes, a new high quality business park, and associated infrastructure (Policies 15 and SD1 to SD9). In finding the HDPF 'sound', the Planning Inspector, in his Report on the Examination into Horsham District Planning Framework (October 2015) made specific statements supporting the Land North of Horsham.

"Of all the proposed sites for major new housing development, I consider the North Horsham allocation is at one of the most sustainable locations, close to the heart of the Gatwick Diamond economic area and well placed to meet the clear need for housing in the District but also the SHMA as the whole, with particular reference to unmet needs in Crawley. At the resumed hearing the Council indicated that the allocation had potential for a minimum of 2,500 homes but in all likelihood another 250 homes could be accommodated. This is the subject of MM14, required for clarification and effectiveness." (Paragraph 59).

- 6.2.10 The Planning Inspector made other relevant supporting comments in relation to specific aspects of this application, which will be referred to in this Planning Statement. The Planning Inspector concluded, in relation to this strategic allocation, in paragraph 69:-

"In conclusion, the allocation offers the opportunity to provide necessary housing, business development and community facilities at a sustainable location. Overall, the housing the employment benefits of the proposed allocation would significantly outweigh the disadvantages of the environmental impacts, which in my view would not be unacceptably severe."

- 6.2.11 The principle for the development of Land North of Horsham is set out in Policy 2 proposing a strategic development area of at least 2,500 dwellings immediately to the north of Horsham Town, to meet the strategic requirements for new homes, and to provide access to new employment, health, educational and recreational opportunities (Appendices B & C of this Statement).

- 6.2.12 The overarching housing policy, Policy 15, states that provision is made for the development of at least 16,000 homes within the District (equating to 800 dwellings per annum) with this figure to be achieved in part by a strategic development of at least 2,500 homes at LAND North of Horsham. Furthermore, the overarching employment policy, Policy 7, states that sustainable employment development will be achieved in Horsham by allocating land for a new high quality business part at Land North of Horsham.

- 6.2.13 Policy SD1 of the adopted HDPF relates specifically to the proposed strategic development of Land North of Horsham and allocates a development for at

least 2,500 homes, business park, local centre, two primary schools and a site for a secondary school; open space, sport and recreation facilities and a strong landscape buffer; land to be safeguarded for a parkway station; and infrastructure works. The development should be programmed to enable its completion by 2031. Policies SD2 and SD9 of the adopted HDPF sets out the principles for various aspects of Land North of Horsham.

- 6.2.14 The Sustainability Appraisal, Environmental Report (November 2015) which accompanies the adopted HDPF, states that HDC considered all of the alternative options for the location of strategic sites, including additional sites proposed since 2013, and confirmed that “on balance it is considered that Land North of Horsham performed best against the sustainability criteria” (Chapter 7 of the Environmental Report – Recommendations).

6.3 Alternatives to the Scheme Design

- 6.3.1 In formulating the masterplan for the Land North of Horsham, the consideration of environmental effects was at the forefront of the process. The masterplan has evolved over the period from 2009 to date, and has been informed throughout by ‘evidence gathering’; the development of key structuring elements; and masterplan evolution; The stages are clearly set out in the Design and Access Statement which forms part of the planning application (sections 4 and 5).
- 6.3.2 The key objectives and aspirations for the Land North of Horsham strategic allocation, against which the environmental impacts has to be considered, include the key structuring elements of site boundaries; green infrastructure; access; parkway station; business park; education; local centre; connected neighbourhoods.
- 6.3.3 Throughout the consideration of alternative scheme designs, evidence has been drawn both from HDC’s; consultation process, as well as from additional technical documents produced throughout the HDPF process, and in particular between 2009 and 2015.
- 6.3.4 In order to explain how the masterplan has evolved, we make reference to four key ‘snapshots’ in time, which demonstrate how alternatives have been considered, with particular reference potential environmental impacts. These are July 2011; October 2013; February 2015; and July 2015. These will be considered in turn, with particular reference to the key structuring elements as described.

Masterplan – July 2011

- 6.3.5 At the outset of the masterplanning of this site, reference was made to HDC’s Core Strategy Review (September 2009), and the related evidence-base documents : “Potential Strategic Site Option Appraisal” and “Key Delivery Stakeholder Position”.

- 6.3.6 The Core Strategy Review sets out the proposed mix of uses, which informed the preparation of this version of the masterplan. It did not define where these uses should be located within the Land North of Horsham Strategic Site Option and only showed an indicative area for the whole site.
- 6.3.7 In preparing this masterplan, consideration was given to the identified environmental constraints and opportunities set out in the 'Option Appraisals', which included:-
- Landscape
 - Ecology
 - Surface water/waste water
 - Flooding
 - Water resource
 - Heritage
 - Highways and transport
- 6.3.8 The site boundaries were defined to relate to natural features. The northern boundary comprised mature woodland and steeper slopes which act as a natural edge, ensuring that there was sufficient landscape buffers to minimise any adverse environmental impact on the woodland. The western boundary extended to the railway line at Warnham Station, which again was a clearly defined edge. The eastern boundary was defined by a landscape buffer west of Wimland Road, which again defined a strong defensible eastern edge. The southern edge was defined by the A264, and has strong natural tree/hedgerow boundaries along the majority of its length.
- 6.3.9 The masterplan recognised the importance of the existing landscape structure of hedgerows, woodland, and heritage assets in the distribution of land uses. It incorporated green infrastructure, taking a holistic approach to biodiversity, landscape, cultural heritage, hydrology and climate change. It included east/west and north/south 'green routes', forming a strong landscape structure within which development could be satisfactorily absorbed. It also included significant open space, including a nature park focussing on the Chennells Brook Flood Plain area.
- 6.3.10 Within these development opportunities on the site, the masterplan distributed the housing across the site. The schools and other community facilities were likewise spread within these development opportunity areas. The business park was proposed on the south east part of the site, in order to have easy access onto the A264, and to the proposed railway station, with minimum environmental impact within the site.

Masterplan – October 2013

- 6.3.11 This masterplan was prepared following the HDPF Preferred Strategy, published in August 2013. This proposed that the Land North of Horsham accommodate 2,500 homes, rather than the 3,500 in the Core Strategy Review Consultation in 2009. It also proposed clearer guidance on the boundaries of this proposed strategic allocation, as well as the boundaries on the 'countryside buffers' around the site.
- 6.3.12 As a result of this policy change, the masterplan was reviewed. The October 2013 version maintained the same considerations of the potential environmental impacts of this development, and also took account of the significant number of technical studies which were carried out since 2011, by Liberty. These included ecological surveys, landscape and heritage assessments, flooding and drainage reports.
- 6.3.13 The masterplan responded to the proposed boundaries in the HDPF Preferred Strategy by adjusting the 2011 Masterplan boundaries accordingly. In particular, the western boundary was moved eastwards to follow Langhurstwood Road, rather than the railway. The land use distribution within the site was also re-configured to take account of the findings of the environmental studies carried out by Liberty between 2011 and 2013. These included more detail on the green infrastructure; proposed landscaping and landscape buffers north of the A264; areas of public open space; and revised locations for the schools and community facilities.

Masterplan – February 2015

- 6.3.14 The HDPF Proposed Submission Version was published in May 2014. This included a 'Land North of Horsham Concept Masterplan Map', which included a land use distribution within the site, taking account of environmental constraints and opportunities. It showed areas of ancient woodland; heritage assets; proposed landscaping and landscape buffers; other woodland and substantial hedgerows; and floodplain boundaries.
- 6.3.15 This HDC Concept Masterplan was broadly consistent with Liberty's evolving masterplan. This masterplan version responded to this HDC Concept Masterplan by making some amendments which took account of these more detailed environmental requirements.
- 6.3.16 The main alterations from the 2013 masterplan related to the areas of open space; landscape buffers; and some alterations to the land use distribution.
- 6.3.17 In this version of the masterplan, the school campus was created, which combined the secondary school and a primary school. This resulted in the sharing of playing fields and parking requirements.

- 6.3.18 This version also created stronger north to south and east to west green corridors, connecting the main open spaces; incorporating existing and new woodland, wetland, hedgerows and diversified wildflower grasslands, which would enhance biodiversity of the site overall.

Masterplan – July 2015

- 6.3.19 In April 2015, Liberty held a public exhibition, which was attended by over 900 people. Many comments were made on the masterplan, and as a consequence, the masterplan was reviewed.
- 6.3.20 Also, during this same period further technical work was carried out to ascertain the definitive flood plain boundaries within the site. As a consequence of this work, additional land was confirmed as being suitable for such uses as playing pitches and development.
- 6.3.21 One of the key land use changes which was made as a result was the relocating of the sports campus from the eastern part of the site to a more central location, east of Rusper Road. This relocation makes these facilities more easily accessible to the new residents at Land North of Horsham, as well as to existing residents in North Horsham. It also confirms the boundaries of the green corridors and the Nature Park.
- 6.3.22 Other changes included the incorporation of sustainable urban drainage systems, including ponds, which improves both the ecology and the landscaping of the scheme. Further details were also shown of the proposed landscape buffers along the A264.
- 6.3.23 Following concerns raised after submission of the Planning Application, a number of alternatives were considered in respect of the effect on Ancient Woodland of the proposed link roads.
- 6.3.24 An assessment of these alternatives was carried out, as presented in the Matrix provided in Appendix 12.26 of the Ecology Chapter.

6.4 Conclusions on Alternatives

- 6.4.1 Throughout the HDPF plan making process, from 2009 to date, there has been a clear recognition of the environmental opportunities and constraints to developing the Land North of Horsham as a strategic allocation. The consideration of the alternatives to Land North of Horsham, which are set out in HDC's Sustainability Appraisal, confirm that this site has the least environmental impact of all of the alternative locations for a strategic allocation.
- 6.4.2 Since 2010, Liberty has been evolving the masterplanning of the site, taking account of all of the environmental constraints and opportunities, as well as carrying out significant detailed evidence-base work. As a result, there have

been changes to the masterplan, as alternative land use distributions have been considered. There has also been consultations with key stakeholders as well as a public exhibition, which has informed the masterplan which forms part of this planning application.

6.4.3 Elements of change which have taken place during this consideration of alternatives in the masterplanning process include:-

- Confirmation of strong natural boundaries to the site;
- Retention and enhancement of the biodiversity of the site, including woodland and hedgerows;
- Creation of green linkages, to improve biodiversity, heritage assets, informal public open space, and a nature park;
- Location of schools and community facilities in areas which are easily accessible to the new residents throughout the site, with minimal environmental impact;
- Creation of a network of footpaths and cycleways which will reduce the need for local car journeys, and the resultant reduction in air and noise adverse impacts within the site;
- The creation of housing areas which respect the existing woodland and hedgerows, thus retaining the landscape structure, and maintain biodiversity;
- Creation of a landscape strategy which ensures the scheme's respect for the existing landscape features, and minimise landscape impact within the site and the surrounding area;
- Creation of landscape buffers, which will reduce noise impacts from the A264; and will also reinforce the natural boundaries of the site;
- Using existing road junctions to access the site, thus minimising environmental impact of creating new accesses;
- Confirming the flood plain boundaries within the site, ensuring that inappropriate development does not take place in the flood plain;
- Incorporation of the proposed railway station within the overall masterplan, including the creation of footpath, cycleway, and public transport linkages to the proposed residential and employment areas within the site, and also to the existing residents in North Horsham.
- The location of the business park in close proximity to the proposed railway station, and also to the strategic road network, to minimise

environmental impact both within the site, and also on the surrounding area;

- The retention of Old Holbrook as a country lane, and not as a vehicular access into the new mixed use community thus retaining its landscape and biodiversity attributes;
- The creation of connectivity between Land North of Horsham and existing residents in North Horsham, as well as connectivity between the new housing areas within the site. These connections to have minimal environmental impact, using existing routes, as well as the creation of new linkages in areas of least environmental impact, using the natural topography, and greenways within the site.
- The defining of an area of natural informal amenity open space, focusing on the space formed by the watercourses of Chennells Brook and its related flood plain area, and creating biodiversity and landscape benefits.

Chapter 11

Landscape and Visual Impact

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11 Landscape and Visual Impact

11.1 Introduction

Background

- 11.1.1 This chapter of the ES describes the landscape character and visual amenity associated with the land north of Horsham (application site) and its surroundings. It sets out the baseline landscape and visual appraisal for the application site following desktop studies and field surveys in June 2011 and more recent visits in March 2014, September 2014 and September 2015 including a photographic record. This chapter has been prepared by David Williams Landscape Consultancy Ltd.
- 11.1.2 The chapter assesses the potential effects of the proposed development on landscape and visual amenity during both the construction and on completion where adverse effects are identified and mitigation measures are highlighted that would avoid, reduce or compensate for such effects. The residual landscape and visual effects are also considered.
- 11.1.3 The location of the application site together with a full description of the Proposed Development is given in Chapter 4 – “Site Description”, Chapter 5 – “The Proposed Development” and Chapter 6 – “Other Alternatives”.

Study Area Definition

- 11.1.4 Land north of Horsham is located to the north and west of the A264 / Crawley Road and north of the built up area of Horsham. The application site lies approximately 3 kilometres from the town centre of Horsham and about 1.0 kilometre from the Littlehaven railway station with the suburbs of Holbrook and Chennells Brook Bridge / Roffey lying immediately to the south of the A264. These areas presently form the northern edge of Horsham. The location of the application site is shown on Appendix 11.1 – Landscape Context Plan and in more detail on Appendix 11.2 – Application Site Appraisal Plan and Appendix 11.3 Application Site Topography Plan.
- 11.1.5 The ‘Study Area’ for this appraisal covers the theoretical ‘Zone of Visual Influence (ZVI) of the proposed development which is illustrated on Appendix 11.4 – Visual Appraisal – Zone of Theoretical Visual Influence Plan (with Barriers). A ZVI is defined in the ‘Guidelines for Landscape and Visual Impact Assessment’ (GLVIA3)¹ as the “area within which a proposed development may have an influence or effect on visual amenity”. The ZVI includes the immediate surrounding countryside (landscape) areas to the

¹ Landscape Institute and Institute of Environmental Management and Assessment, April 2013 “The Guidelines for Landscape and Visual Impact Assessment. Third Edition “(GLVIA3) Spons

north, west, east and south east of the application site and wider area of countryside up to about 3.0 kilometres from the application site to the west, east and south east of the application site with a number of outlying areas situated on higher ground to the south east over 7.0 kilometres from the application site.

11.1.6 The ZVI is considered to be contained and restricted by area of substantial woodland adjoining the application site to the north and built up areas of Horsham to the south and extends as follows:

- To the north by about 0.5 kilometres up to the woodlands and ridgeline (Hurst Hill) which forms the visual horizon and within this area there are no public rights of way where views of the application site can be obtained;
- To the east by approximately 3.0 kilometres up to existing woodlands and tree lined hedgerows near Faygate that form the visual horizon although within this area views of the application site are curtailed by intervening vegetation from these areas;
- To the south east by approximately 2.5 kilometre towards Roffey Park, High Wood and ridge of high ground within the High Weald AONB, which forms the visual horizon, and within this area there are relatively few public locations where open views of the application site can be obtained;
- To the south, the application site is contained by the tree belts along the A 264 / Crawley although the roof tops of some development mainly church spires within Horsham are visible when looking southwards from within the elevated parts of the application site; and,
- To the west by approximately 3.5 kilometres around Warnham village where the ZVI is contained by the trees and vegetation adjoining the eastside village and Sands Farm to the north of the village. Within this area there are relatively few public locations where open views of the application site can be obtained and these are mainly of the elevated northern parts of the application site and wooded ridgeline to the north.

11.1.7 In addition, the ZVI indicates that there a number of small outlying areas to the south west of the application site where theoretically views of the application site and the development would be seen. These locations have been visited and the views assessed but due to the distances involved (over 7.0 kilometres), extent of intervening vegetation (woodlands and hedgerows) and very limited area of the application site perceived in the wider views it is considered that the likely impact and visual effect of the development would be negligible.

Contents

11.1.8 This chapter first sets out the technical and planning context of the application site and Appendix 11.13 sets out the terminology used in this chapter. The methodology used is set out in detail in Appendix 11.14 and each landscape issue or aspect is considered in terms of the potential landscape effects and visual effects, the scope for mitigating adverse effects and an assessment of the residual effects following mitigation.

11.1.9 The following plans and photo-sheets have been prepared to support this chapter:

Appendix 11.1 – Landscape Context Plan

Appendix 11.2 – Application Site Appraisal Plan

Appendix 11.3 – Application Site Topography Plan

Appendix 11.4 – Visual Appraisal – Zone of Theoretical Visual Influence Plan (with Barriers)

Appendix 11.5 – Location of Selected Photographic Viewpoints

Appendix 11.6 - Location of Visual Assessment Photographs Plan (Distant Views)

Appendix 11.7 – Visual Impact Assessment – Baseline Plan

Appendix 11.8 – Visual Impact Assessment – Construction Plan

Appendix 11.9 – Visual Impact Assessment – Year 1 Plan

Appendix 11.10 – Visual Impact Assessment – Year 15 Plan

Appendix 11.11 – Photograph Sheets - Visual Assessment Photographs – 1 to 45

Appendix 11.12 – Photograph Sheets – Wireframe Photomontages – PM1 to PM9

11.2 Policy Context

11.2.1 Landscape planning designations and policies are used to provide an indication of the value attributed to countryside/landscape/townscape and visual resources by National and Local Government.

11.2.2 The application site is identified as a strategic allocation, known as ‘Land North of Horsham’, in the adopted Horsham Development Planning Framework² (“HDPF”) dated November 2015.

11.2.3 In terms of the planning context of the application site and surrounding area, the relevant Planning Policy Documents and Statutory Plans for the area are as follows:

- National Planning Policy Framework (NPPF) March 2012³;
- National Planning Practice Guidance (NPPG) March 2014⁴;
- The Horsham Development Planning Framework (HDPF) (November 2015)⁵;

National Planning Policy Framework - March 2012

11.2.4 The policies in the National Planning Policy Framework⁶ (NPPF) apply from the 27th March 2012 and therefore it is a material consideration in dealing with planning applications for development. The Framework superseded previous PPG and PPS guidance (Annex 3) and sets out the Government’s vision of sustainable development, which should be interpreted and applied locally to meet local aspirations. It provides a framework within which local people and their ‘accountable’ councils can produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities (Paragraph 1). It also states that the Framework should be read and interpreted as a whole (Paragraph 6).

11.2.5 Section two of the NPPF provides a definition of what is meant by delivering sustainable development and sets out three components of what this means for the planning system. The three components are planning for prosperity (the economic role), planning for people (a social role) and planning for places (an environmental role). Throughout the Framework document it emphasises that at the heart of the Framework is a presumption in favour of sustainable development and requires policies in Local Plans to follow this approach (Paragraphs 14 and 15 of the NPPF).

11.2.6 The Framework goes on to state, in paragraph 15, the following:

² Horsham District Council (HDC) November 2015 – Horsham District Planning Framework – Horsham District Council

³ Communities and Local Government (DCLG) March 2012 “National Planning Policy Framework” Communities and Local Government (DCLG)

⁴ Communities and Local Government (DCLG) March 2014 “National Planning Policy Guidance” Communities and Local Government (DCLG)

⁵ Horsham District Council (HDC) November 2015 – Horsham District Planning Framework – Horsham District Council

⁶ Communities and Local Government (DCLG) March 2012 “National Planning Policy Framework” Communities and Local Government (DCLG)

“All plans should be based upon and reflect the presumption in favour of sustainable development, with clear policies that will guide how presumption should be applied locally.”

11.2.7 At paragraph 17 of the Framework, it sets out a set of twelve core land-use planning principles which should underpin both the plan-making and decision-taking. In relation to landscape issues, 6 bullet points are relevant. These are:

- *“not simply be about scrutiny, but instead be a creative exercise in finding ways to enhance and improve the places in which people live their lives;*
- *always seek to secure high quality design and a good standard of amenity for all existing and future occupants of land and buildings;*
- *take account of different roles and character of different areas, promoting the vitality of our main urban areas, protecting the Green Belts around them, recognising the intrinsic character and beauty of the countryside and supporting thriving rural communities within it;*
- *contribute to conserving and enhancing the natural environment and reducing pollution. Allocations of land for development should prefer land of lesser environmental value, where consistent with other policies in this Framework;*
- *promote mixed use developments, and encourage multiple benefits from the use of land in urban and rural areas, recognising that some open land can perform many functions (such as for wildlife, recreation, flood risk mitigation, carbon storage, or food production);*
- *conserve heritage assets in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of this and future generations.”*

11.2.8 In Section 7 ‘Requiring good design’, the Framework emphasises the Government importance that it attaches to the design of the built environment and goes on to state that:

“Good design is a key aspect of sustainable development, is indivisible from good planning, and should contribute positively to making places better for people”.

11.2.9 At paragraph 58, it states that:

“Planning policies and decisions should aim to ensure that developments:

- *will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;*

-
- *establish a strong sense of place, using streetscapes and buildings to create attractive and comfortable places to live, work and visit;*
 - *optimise the potential of the site to accommodate development, create and sustain an appropriate mix of uses (including incorporation of green and other public space as part of developments) and support local facilities and transport networks;*
 - *respond to local character and history, and reflect the identity of local surroundings and materials, while not preventing or discouraging appropriate innovation;*
 - *create safe and accessible environments where crime and disorder, and the fear of crime, do not undermine quality of life or community cohesion; and*
 - *are visually attractive as a result of good architecture and appropriate landscaping."*

11.2.10 In Section 8 'Promoting healthy communities', the Framework provides guidance on the role that the planning system can play in facilitating social interaction and creating healthy, inclusive communities. In paragraph 73 it goes on to state:

"Access to high quality open spaces and opportunities for sport and recreation can make an important contribution to the health and well-being of communities. Planning policies should be based on robust and up-to-date assessments of the needs for open space, sports and recreation facilities and opportunities for new provision. The assessments should identify specific needs and quantitative or qualitative deficits or surpluses of open space, sports and recreational facilities in the local area. Information gained from the assessments should be used to determine what open space, sports and recreational provision is required."

11.2.11 Whilst paragraph 74 states:

"Existing open space, sports and recreational buildings and land, including playing fields, should not be built on unless:

- *an assessment has been undertaken which has clearly shown the open space, buildings or land to be surplus to requirements; or*
- *the loss resulting from the proposed development would be replaced by equivalent or better provision in terms of quantity and quality in a suitable location; or*
- *the development is for alternative sports and recreational provision, the needs for which clearly outweigh the loss."*

-
- 11.2.12 In Section 11 ‘Conserving and enhancing the natural environment’ the Framework provides guidance on the natural and local environment and, in paragraph 109, it goes on to state that:

“The planning system should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, geological conservation interests and soils;*
- recognising the wider benefits of ecosystem services;*
- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government’s commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*
- preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and*
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.”*

- 11.2.13 Whilst paragraph 110 goes on to state:

“In preparing plans to meet development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment. Plans should allocate land with the least environmental or amenity value, where consistent with other policies in this Framework.”

- 11.2.14 Paragraph 113 of the Framework also requires local planning authorities to:

“.....set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks.”

- 11.2.15 Whilst paragraph 114 requires that local planning authorities should:

- “set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure; and*

-
- *maintain the character of the undeveloped coast, protecting and enhancing its distinctive landscapes, particularly in areas defined as Heritage Coast, and improve public access to and enjoyment of the coast.*
- 11.2.16 The NPPF, at paragraph 115, provides guidance on the protection of valued landscape and 'great weight' should be given to protecting the landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty.
- 11.2.17 However, the guidance in paragraph 115 is not relevant to the application site and proposed development as the application site is not located within a nationally protected landscape, such as National Park or Area of Outstanding Natural Beauty although the land to the east and south east of the application site lies within the High Weald Area of Outstanding Natural Beauty.
- 11.2.18 Annex 1 of the Framework sets out the implementation of the Framework and states that:
- "The policies in this Framework apply from the day of publication"*
- 11.2.19 Whilst paragraph 211 goes on to state that:
- "For the purposes of decision-taking, the policies in the Local Plan (and the London Plan) should not be considered out-of-date simply because they were adopted prior to the publication of this Framework."*
- 11.2.20 Paragraph 212 to paragraph 216 of the Framework, provides guidance on the weight to be given to relevant policies. Of particular relevance to the application site and development proposals, in this instance, is paragraph 215 which states that:
- "In other cases and following this 12-month period, due weight should be given to relevant policies in existing plans according to their degree of consistency with this framework (the closer the policies in the plan to the policies in the Framework, the greater the weight that may be given)."*
- 11.2.21 Whilst paragraph 216 goes on to state:
- "From the day of publication, decision-takers may also give weight to relevant policies in emerging plans according to:*
- *the stage of preparation of the emerging plan (the more advanced the preparation, the greater the weight that may be given);*
-

-
- *the extent to which there are unresolved objections to relevant policies (the less significant the unresolved objections, the greater the weight that may be given); and*
 - *the degree of consistency of the relevant policies in the emerging plan to the policies in this Framework (the closer the policies in the emerging plan to the policies in the Framework, the greater the weight that may be given).*

Local Planning Policy

11.2.22 Of relevance to the development of the application site are the following HDPF⁷ policies:

- Policy 1: Sustainable Development – this policy sets out Horsham District Councils approach that reflects the presumption in favour of sustainable development;
- Policy 2: Strategic Policy – Strategic Development – this policy sets out Horsham District Councils overarching policy in relation to the location and amount of development within the District;
- Policy SD1: Land North of Horsham – this policy sets out the key principles and strategic requirement for the strategic Land North of Horsham site;
- Policy SD5: Open Space, Sport and Recreation – this policy sets out the specific approach and provision of open space, sport and recreation in relation to the Land North of Horsham site;
- Policy SD6: Landscape Buffer, Landscape Character, Biodiversity and Green Infrastructure - this policy sets out the specific approach and provision of landscape buffer(s), landscape characteristic and biodiversity qualities, green infrastructure / green corridors and strategic landscape proposals in relation to the Land North of Horsham site;
- Policy SD7: Design – this policy sets out the design principles and design requirements in relation to the Land North of Horsham site;
- Policy 25 The Natural Environment and Landscape Character – this policy seeks to ensure that all new development protects, conserves and enhances the landscape and townscape character and other natural environment features of the District as well as maintaining settlement separation;

⁷ Horsham District Council (HDC) November 2015 – Horsham District Planning Framework – Horsham District Council

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- Policy 26: Countryside Protection – this policy seeks to ensure that outside settlement boundaries the rural character and undeveloped nature of the countryside is protected from inappropriate development and lists a number criteria against which new development will be judged;
 - Policy 27: Settlement Coalescence – this policy seeks to protect landscapes from development which would result in the coalescence of settlements and for development between settlements it lists a number of criteria that new development will be assessed against;
 - Policy 31: Green Infrastructure and Biodiversity – this policy seeks to ensure that development does not cause a net loss in biodiversity, including protected trees and ancient woodlands, and provides a net gain in biodiversity where possible;
 - Policy 32: The Quality of New Development – this policy seeks to ensure that development in the district promotes a high standard of urban design, architecture and landscape. Development will be required to enhance and protect the locally distinctive characters, through good design, landscaping (both within a scheme and having regard to the impact on surrounding landscapes), creating a 'sense of place', and in ensuring that local, social and environmental characteristics are considered.
 - Policy 33: Development Principles – this policy seeks to ensure that development is of high quality, well designed and takes account of the existing character of the area the following design policy will apply to all new development. It goes on to set out 11 criteria against which new developments will be assessed.
 - Policy 34: Cultural and Heritage Assets – this policy seeks to sustain and where appropriate, enhance the significance of the district's heritage assets, including where those qualities which make the asset special and historic. It goes on to set out 8 criteria against which new developments will be assessed.
 - Policy 43 Community Facilities, Leisure and Recreation – this policy seeks to retain and enhance existing facilities and services, and ensure that new facilities are provided at an appropriate level of provision where a need is identified. It should be recognised that the provision of community leisure and recreation facilities will contribute to the provision of Green Infrastructure and this should be incorporated into development proposals.

Other Planning Considerations

- 11.2.23 Two woodland areas within the application site are protected by Tree Preservation Orders (TPOs). These are TPO No.1474 – Woodland East of

Graylands (confirmed 3rd December 2015) and TPO No.1476 – Bush Copse (confirmed 5 April 2016). The TPO areas are shown on Appendix 11.21. In addition, a number of woodlands within or immediately adjoining the application site are designated as ‘Ancient Woodlands’ and therefore subject to Policy 25 – The Natural Environment and Landscape Character and Policy 31 – Green Infrastructure and Biodiversity of the HDPF⁸. This policy seeks to ensure continued protection of woodlands and trees and the Council will take this into account when considering development proposals.

11.2.24 The adopted Proposals Map indicates that the application site contains a number of Scheduled Ancient Monuments which are subject to Policy 34 – Cultural and Heritage Assets. These archaeological sites include the following which are shown on Appendix 11.2 – Application Site Appraisal Plan and include the following:

- A. The ‘Castle’ moated site – south east of Old Hawkbourne Farm;
- B. Area around the Moated House Farm, Rusper Road;
- C. Moated site - north of Graylands Farm, Langhurstwood Road
- D. Motte and bailey at Chennells Brook Farm, south of A264

11.2.25 The adopted Proposals Map also identifies a number of Listed Buildings within or in the vicinity of the application site. These are shown on shown on Appendix 11.2 – Application Site Appraisal Plan and include the following:

- 1) Flat 1 to 10 Holbrook Park, Old Holbrook, Horsham
- 2) Holbrook Park House, Old Holbrook, Horsham
- 3) Hollywick Farmhouse (also known as Rapelands Farm), Old Holbrook, Horsham
- 4) Hawkesbourne Farmhouse, Rusper Road, Horsham (located within the application site)
- 5) The Moated House, Rusper Road, Horsham (located within the application site)
- 6) King’s Farmhouse, Wimland Road, Faygate (located adjoining the application site)
- 7) Brook House, Wimland Road, Faygate (located close to the application site)

⁸ Horsham District Council (HDC) November 2015 – Horsham District Planning Framework – Horsham District Council

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- 8) Barn south west of Brook House, Wimland Road, Faygate (located adjacent close to the application site)

11.2.26 In addition, there are a number of listed buildings close to the application site but separated from it by the railway line and / or A264. These include:

- 9) Clyst Hayes, Brook Lane, Faygate
- 10) Roffey Place, Crawley Road, Faygate
- 11) Newhouse Farmhouse, Crawley Road, Faygate
- 12) Clovers, Crawley Road, Fatgate

11.2.27 In addition to the above, the application site contains two historic parkscapes as identified in the West Sussex Historic Environment Record. These include the former parklands related to Graylands within the north western parts of the application site and former parkland associated with Holbrook Park within the central parts of the application site. The historic parklands have no statutory status and are treated as non-designated heritage assets although they are a material planning matter.

11.2.28 In addition, as part of the Local Development Framework, the Council have prepared and adopted a number of Supplementary Planning Documents (SPD) to provide guidance on the interpretation of policies contained in the Core Strategy. Of relevance to the development proposals for the application site are the following:

Horsham District Landscape Character Assessment October 2003

11.2.29 The Horsham District Landscape Character Assessment⁹ (HDLCA) study has helped to inform the Core Strategy and provides a basis to ensure that the landscape of the District is protected and enhanced, whilst at the same time enabling necessary change to occur and thus meet the future needs of people living and working in the District. Paragraphs 11.1.74 to 11.1.91 of this chapter set out the relevant extracts taken from the HDLCA which have been used to inform the assessment of the application site and development proposals.

Horsham District Landscape Capacity Assessment April 2014

11.2.30 In April 2014, Horsham District Council published 'Horsham District Landscape Capacity Assessment'¹⁰ as part of the evidence base for the review of the Core Strategy and was used to inform the preparation of the

⁹ Horsham District Council (HDC) October 2003 "Horsham District Landscape Character Assessment" Horsham District Council (HDC)

¹⁰ Horsham District Council (HDC) April 2014 "Horsham District Landscape Capacity Assessment" Horsham District Council (HDC)

Horsham District Development Framework. This assessment draws upon the earlier County character assessment and Horsham District Landscape Character Assessment. Paragraphs 11.1.92 to 11.1.101 of this chapter set out the relevant extracts taken from the Landscape Capacity Assessment and have been used to inform the assessment of the application site and development proposals.

11.3 Methodology

11.3.1 The methodology for the landscape and visual assessment is one based on the "Guidelines for Landscape and Visual Impact Assessment: Third Edition"¹¹ which is widely regarded by the landscape profession as the "industry standard". The Countryside Agency (now part of Natural England) "Landscape Character Assessment Guidelines"¹² and Topic Paper No.6 – Assessment Landscape Capacity¹³ are also referred to as appropriate. Landscape and visual assessment, in common with many assessments of environmental effects, includes a combination of objective and subjective judgements and it is therefore important that a structured and consistent approach is used. The methodology for this assessment is set out in full in Appendix 11.14.

11.3.2 At the outset of the assessment of landscape and visual effects it is useful to provide a definition of the terms "Landscape effects" and "Visual effects".

- Landscape effects: These consist of direct and indirect effects or changes in the fabric, character, individual features or elements and condition, (quality) of the landscape i.e. landscape receptors within the application site or surrounding area, and;
- Visual effects: These are the predicted effects on views available to the public from publicly accessible areas and residential dwellings i.e. visual receptors. Specific effects result from changing the consistent elements within an existing view. This may be caused by construction of a new feature/element, or the obstruction or modification of an existing view. The overall effect upon visual amenity can range from degradation to enhancement.

¹¹ Landscape Institute and Institute of Environmental Management and Assessment, April 2013 "The Guidelines for Landscape and Visual Impact Assessment. Third Edition "(GLVIA3) Spons

¹² The Countryside Agency and Scottish Natural Heritage April 2002 "Landscape Character Assessment Guidance for England and Scotland" Countryside Agency Publications

¹³ The Countryside Agency and Scottish Natural Heritage: Undated "TOPIC PAPER 6: Techniques and Criteria for Judging Capacity and Sensitivity" Countryside Agency Publications.

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- 11.3.3 In line with best practice, this chapter describes the effects of the proposed development on both landscape receptors and visual receptors.

Scoping

- 11.3.4 The EIA Scoping Report provided the basis for defining the scope of the EIA and the landscape and visual work required. The scoping report considered which landscape and visual effects could be 'scoped out' from the EIA and concluded that no topics could be identified which could be 'scoped out' from further assessment.
- 11.3.5 The scoping report was submitted to Horsham District Council in July 2014 and their response was received in September 2014. In relation to landscape issues the Council and Natural England requested that the EIA should include a full assessment of the potential impacts of the development local landscape character using Landscape Character Assessment (LCA) methodologies and stated that the use of the Guidelines for Landscape and Visual Impact Assessment, produced by the Landscape Institute and the Institute of Environmental Assessment and Management is also supported.
- 11.3.6 In addition, they requested that the landscape assessment should also refer to the West Sussex Landscape Character Areas, the Landscape Strategy and the Land Management Guidance, together with the West Sussex Historic Landscape Characterisation studies. The EIA should also refer to the Horsham District Landscape Character Assessment, 2014 whilst Natural England wished to see details of local landscape character areas 'mapped at a scale appropriate to the development site and any relevant management plans or strategies pertaining to the area' and it should an assessment of visual effects.
- 11.3.7 The Council also request that as part of the Landscape Character Assessment work, the following should be taken into consideration:
- i) Identify any change to the Horsham District Landscape Character Areas (in the HDC landscape character assessment) and also examine the impact of development on distinctive local character areas within and immediately surrounding the development site.
 - ii) The impact on specific landscape features should also be assessed e.g. field and boundary trees, hedges, woodlands, ponds and watercourses and other historic landscape features which contribute to the landscape e.g. hedgerow/woodland banks, old country lanes, drove routes, old railway lines.
 - iii) The EIA should include assessments of visual effects on the surrounding area and landscape together with any physical effects on the development, such as changes in topography. Changes in

characteristic views e.g. to the South Downs or to local landmarks may need to be considered.

- iv) Viewpoints for visual impact assessment should be agreed in advance with HDC in accordance with good practice.
- v) Photomontages should be prepared for key viewpoints of the development-again locations to be agreed with HDC. Any particularly tall elements of the development are likely to need to be shown on cross sections to understand their impact.
- vi) The landscape and visual assessment should take account of the 'worst case scenario' in terms of winter views and also the effects of mitigation planting in year 1 of the development and after 15 years of establishment.

11.3.8 In addition to the submission of EIA Scoping Report, Matthew Bright – Landscape Officer at Horsham District Council (at the time) was consulted, in June 2014, and in relation to the number of photomontages to be included in the assessment. Nine photomontage locations were agreed as follows:

- i) VP1- Looking west across the landscape buffer towards the development from Wimlands Rd;
- ii) VP2- Looking north towards the development from a high point on the A264 (this was later revised in October 2014 to refer to the view towards the application site approximately 50 metres east of the Public Footpath No.1586 crossing);
- iii) VP3 – Looking north towards the development from the public footpath near Moathouse Farm;
- iv) VP4 – Looking east from a gateway on Old Holdbrook Lane;
- v) VP5 – Panoramic view of the development and the wider landscape beyond from the hut on the ridge;
- vi) VP6 – Looking west towards the development from the public footpath
- vii) VP7 – Looking north west towards the development from the public footpath;
- viii) VP8 – Looking north west towards the development from the public footpath in front of Roffey Park;
- ix) VP9 – From Wimlands Rd at the junction with the bridleway looking north west.

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- 11.3.9 As requested by the Council and Natural England, this landscape assessment considers all the items listed above.

Community Consultations

- 11.3.10 Public consultation was undertaken regarding the proposals for development including meetings with the Local Planning Authority and Parish Councils (Horsham District Council and Rusper Parish Council). This level of public consultation was agreed with the Local Planning Authority. During these consultations no issues were raised which related to landscape and visual matters although comments were made regarding the alignment of the Horsham Riverside Walk and how this could be improved and integrated into the development.

Limitations, Constraints and Assumptions

- 11.3.11 In undertaking the landscape and visual assessment of the application site and wider surrounding area, there are a number of limitations and constraints affecting the work. These are identified as:
- i) The baseline assessment has been based on information readily available at the time of undertaking the assessment using sources listed in the methodology – Appendix 11.14;
 - ii) During the site visits undertaken during in June 2011, in March 2014 and also in September 2014, weather conditions and seasonal factors have influenced the visual assessment and photographic record of the application site. Every effort has been made to ensure that the photographs and their locations are “representative” of the application site and its surroundings, and;
 - iii) Access to assess the predicted visual effects from private individual properties has not been possible for all the residential dwellings surrounding the application site, and the assessment of likely effects has been made from vantage points and representative views taken from the nearest available public viewpoint.
- 11.3.12 In undertaking the assessment of landscape and visual effects of the proposed development, the following assumptions have been made:
- i) That the establishment and growth rates of the landscape mitigation proposals are based on established forestry (Forestry Commission/Enterprise) methods and it is assumed that new planting of trees and shrubs will achieve a height of 7 to 10 m after 10 – 15 years allowing for the environment. This timescale could be reduced/shortened if semi-mature specimens are used;

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- ii) That the construction programme for the core elements of the proposed development is as set out in Chapter 4 – “The Proposed Development”;
 - iii) That the residents who live or use properties that look towards the application site are habituated to a certain degree by the changes and activities that occur over time, and;
 - iv) That the implementation of the landscape (landscape screening / amenity planting and habitat creation) proposals set out in paragraph 11.1.22 to 11.1.107 of this chapter, will be phased and implemented either in advance (where possible) during, or immediately at the end of the construction works.
 - v) That the provision of areas of open space and following the establishment and maturing of the landscape planting, the green infrastructure associated with the proposed development will have beneficial ‘positive’ effects as parts of the application site will be made available for public use (the majority of areas of the application site are currently not available for the public to use) and planting proposals, in addition to assimilating and mitigating the impacts of the proposed development will improve and enhance the new development edge especially when viewed from locations to the east, west and north of the application site.

11.4 Baseline Environmental Conditions

Introduction

11.4.1 This section sets out the existing landscape and visual context of the study area in terms of:

- The landscape character and features of the application site;
- The townscape and landscape character of the surrounding area;
- The nature and extent of the application site’s visibility and identification of key views and visual receptors; and
- The sensitivity of the landscape and visual receptors to change.

Location

11.4.2 The application site is located to the north and west of the A264 / Crawley Road and north of the built up area of Horsham. The application site lies approximately 3 kilometres from the town centre of Horsham and about 1.0 kilometre from the Littlehaven railway station with the suburbs of Holbrook and Chennells Brook Bridge/Roffey lying immediately to the south of the

A264. These areas presently form the northern edge of Horsham. The application site forms an area of open countryside comprising a number of open and semi-enclosed fields in arable and pasture use and a several small copses adjoining Bush Lane in the eastern parts of the Study Area and woodland blocks located between Langhurstwood Road and Old Holbrook / Northlands Road.

- 11.4.3 To the north of the application site lie areas of open wooded countryside occupying the slopes of Hurst Hill / Rapelands Hill and a ridge of high ground which follows west to east alignment; with the village of Rusper lying beyond the ridge at about 3.6 kilometres from the application site. To the north west of the application site lies the Brookhurst Wood Landfill site / Lafarge brickworks and WSCC Waste recycling facility with Warnham Station and the Horsham to Dorking railway line lying the west of the application site beyond which is Boldings Brook valley and the A24 - London to Worthing Road. To the north east of the application site lies the Vale of Faygate, and this extends north eastwards towards the built up edge of Crawley.
- 11.4.4 The A264 / Crawley Road and the small village of Faygate occupy the floor of the vale approximately 1.3 kilometres from the application site, with the Crawley to Horsham railway line lying to the north of the A264 and following the edge of the vale to the east of Faygate but crosses the floor of the vale to the west of the village.
- 11.4.5 To the south of the Vale of Faygate, the rising land comprises open fields and extensive areas of woodland forming part of St Leonard's Forest and the High Weald Area of Outstanding Natural Beauty. The central parts of the application site surround the scattered settlement of Holbrook which forms a ribbon of development along Old Holbrook Road.

Topography

- 11.4.6 The topography of the surrounding area is dominated by the Faygate and Warnham Vale and ridgelines to the north and south east of the application site. The low lying land within the application site and vale lies about 45 to 95 metres AOD with the land rising gently then more steeply to about 120 metres AOD on Hurst Hill and rising to about 145 metres AOD along the south eastern ridge before falling slightly, to the south and east, to form a plateau of undulating high ground at between 90 to 130 metres AOD within the High Weald AONB.
- 11.4.7 The undulating topography together with the existing hedgerows and trees, and blocks of woodland in the area surrounding the application site provide enclosure and containment to views within the landscape. Appendix 11.3 illustrates the detailed topography within the application site.

Landscape Context

- 11.4.8 The landscape context of the application site and surrounding area is predominantly open farmland subdivided by field hedgerows, lines of mature trees and woodland blocks occupying the gently undulating floor of the Chennells Brook valley, Holbrook Gill valley, the shallow valley of a tributary stream to the Boldings Brook and the rising land to the north of the application site, with the built up area of Horsham situated to the south of the application site. The farmland uses consist of medium to large irregular shaped fields in arable and pasture uses with smaller regular shaped fields and horse paddocks located close to scattered farmsteads and residential properties within the landscape.
- 11.4.9 In terms of vegetation within the landscape surrounding the application site, the extent of tree cover is good with strong belts of trees adjoining the A264 and built up areas of north Horsham to the south, belts of mature trees and copses within the Faygate Vale to the north east, and extensive woodland areas located on sloping ground and ridges to the north west and north (Hurst Hill / Rapeland Hill). In addition, there are substantial areas of woodland situated to south east of the application site forming part of St Leonard's Forest.
- 11.4.10 Within the application site there are several linear blocks of woodland that extend southwards from the wooded areas on Hurst Hill, which together with the woodland blocks (Graylands Copse / Holbrook Plantation) within the western parts of the application site, effectively enclosed and compartmentalised the landscape on the south facing slopes of the ridge.
- 11.4.11 The low lying undulating topography in the landscape, together with the strong framework of woodlands and belts of trees in the vicinity of the application site contributes to the good enclosure and containment of views within the landscape, restricting views to short distance views from local roads, and sections of public footpaths / rights of way within the area. The extensive tree cover and rising topography to the north of the application site also curtails middle and long distance views across the countryside when looking northwards.

Public Right of Way

- 11.4.12 The public rights of way in the locality have been marked on Appendix 11.2 – Application Site Appraisal Plan. The application site is crossed by a number of public footpaths / public bridleways or right of way and, as this Plan demonstrates, there is a number of Public Rights of Way (PROW) found within the application site.

11.4.13 These include:

- i) Public Footpath No. 1575 which extends east from Old Holbrook road to connect to Rusper Road via Moated House Farm;
- ii) Public Bridleway No. 1585 which extends east from Rusper Road following Bush Lane via Owlscastle Farm to connect to Wimland Road on the east boundary of the application site;
- iii) Public Footpath No. 1586 which extends northwards from the built up area of north Horsham (off Bartholomew Way) to cross the A264 and follows existing field hedgerows and drainage ditches to connect to Bridleway No. 1585 near Owlscastle Farm;
- iv) Public Footpath No. 1421 which is located within the western parts of the application site and extends in a northerly direction from the A 264 / Langhurstwood Road junction following the field hedgerows and tree belts up on the ridge, and;
- v) Public Footpath No. 1573 which is located within north western part of the application site and extends in a west to east direction from Langhurstwood Road via Graylands and part of the application site to Northlands Road on the ridge.

11.4.14 In addition to the above PROW's, there are a number of Public Footpaths and Bridleways located within the vicinity of the application site. These are also shown on the Application Site Appraisal Plan and include:

- i) Public Bridleway No. 1590 that extends eastwards from Wimland Road to cross the railway line to connect to the A264 / Crawley Road near the Cherry Tree Inn Public House;
- ii) Public Footpath No. 1591 which extends south eastwards from Wimland Road to connect to Bridleway No. 1590;
- iii) Public Footpath No. 1592 which extends from Benson's Lane northwards to follow the edge of Northland Copse to connect to Wimland Road near Wimland Cottages;
- iv) Public Footpath No. 1593 which extends eastwards from Wimland Road near Budd's Farm to cross the open countryside and railway line to Faygate Lane to the north of the village;
- v) Public Footpath No. 1588 which extends south east from Clovers Way to the south of the A264 to cross the open fields to connect to Public Footpath No. 1587 near Roffey Park before continuing south eastwards to connect to Forest Road and;

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- vi) Public Footpath No. 1587 which extends north east from the built up area of Horsham crossing the north facing slope to connect to the A 264 / Crawley Road to the south of the Cherry Inn Public House.

Landscape Character

- 11.4.15 In terms of landscape character at a national / regional level, the application site and surrounding landscape lie within National Character Area Profile No.121 – ‘Low Weald’ as identified on the Natural England National Character Map of England published in April 2014¹⁴. This National Character Area (NCAP) forms a broad, low-lying clay vale which largely wraps around the northern, western and southern edges of the High Weald through Kent, Sussex and Surrey in a rough horseshoe shape.
- 11.4.16 The area covered by the Low Weald NCAP is approximately 182,420 hectares with around 9 per cent of it falling within the adjacent designated landscapes of the Surrey Hills, Kent Downs and High Weald Areas of Outstanding Natural Beauty and the South Downs National Park. About 23 per cent of the area is identified as greenbelt land.
- 11.4.17 Whilst the National Character Assessment is a generalised overview of the character of England, the assessment identifies the Low Weald as having the following characteristics:
- *Broad, low lying and gently undulating clay vales underlie a small-scale intimate landscape enclosed by an intricate mix of small woodlands, a patchwork of fields and hedgerows.*
 - *Topography and soils vary locally in relation to higher drier outcrops of limestone or sandstone, which are commonly application sites of settlements.*
 - *The Low Weald generally includes an abundance of ponds and small stream valleys often with wet woodlands of alder and willow.*
 - *Tall hedgerows with numerous mature trees link copses, shaws and remnant woodlands which combine to give the Low Weald a well-wooded character. Field trees, usually of oak but now declining, are characteristic of the area south-east of Dorking.*
 - *Grassland predominates on the heavy clay soils while lighter soils on higher ground support arable cropping in a more open landscape.*

¹⁴ Natural England, April 2014 “National Character Areas – NE450: NCA Profile: 121 Low Weald” - Natural England Publications.

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- *Rural in character with dispersed farmsteads, small settlements often include many timber and brick built traditional buildings where not now dominated by recent urban development.*
 - *Historic settlement pattern was dictated by a preference for higher drier outcrops of limestone or sandstone with moated manor houses being a characteristic feature.*
 - *Urban and airport related development sprawl in the flat plain around Gatwick, and in the Horley-Crawley commuter settlements, contrast with the pleasant, wet, woody, rural character of the area and as such are less distinctively Wealden.*
 - *Hop growing and orchards are still a distinctive land use in the east.*
 - *The Kentish Low Weald is traversed by numerous narrow lanes with broad verges and ditches; these are continuous with the drove roads of the North Downs.*

11.4.18 The assessment also identifies a number of changes in the countryside including:

- Urban influences have affected many large parts of the rural area, especially around Gatwick Airport and Horley, owing to the accessibility and popularity of the character area.
- Development pressure is focused mainly on the towns and the area on the boundary between the Low Weald and the High Weald (an Area of Outstanding Natural Beauty).
- Continuing creeping fragmentation of farmland around houses into gardens or pony paddocks, sometimes with conifer hedges.
- Past pressures on ancient woodland arising from past conversion to conifer plantations, damage through neglect, and/or damage through old consents for the working of clay pits.
- Loss and decline of hedges and hedgerow trees, and consequential fragmentation of landscape structure, due to lack of management and farm diversification.
- Riparian landscapes under pressure from decline and neglect, including loss of farm ponds, as agricultural practices have intensified.
- Loss of traditional hop gardens, orchards and associated wind-break features.

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- 11.4.19 The assessment also identifies a number of issues likely to shape the future of the landscape and of relevance to the area are the following:
- Conservation of characteristic shaws, ancient woodlands and coppice should be considered.
 - New woodland planting of shaws and hedgerows would help integrate existing and proposed developments.
 - The conservation of farm woodlands, riparian landscape features and ponds would be beneficial.
- 11.4.20 To the east of the application site, the landscape is identified as forming the western part of the High Weald Character Area No. 122. A copy of the summary description of National Character Area Profile No. 121 – Low Weald and National Character Area Profile No. 122 – High Weald taken from the Natural England website¹⁵ are contained in Appendix 11.15.
- 11.4.21 In October 2005, West Sussex County Council published the ‘A Strategy for the West Sussex Landscape’¹⁶ which provided an information base and increased the understanding of what makes West Sussex unique. The assessment sub divided the county into 42 unique character areas and for each area land management guidelines were produced. These provided advice to landowners, managers, local councils and other organisations. The application site is identified as lying within Character Area LW8 – Northern Vales and Character Area LW4 - Low Weald Hills. Copies of the relevant extracts taken from the ‘A Strategy for the West Sussex Landscape’ are included as Appendix 11.16.
- 11.4.22 At a local level, Horsham District Council published the ‘Horsham District Landscape Assessment’, in October 2003¹⁷, as part of the evidence base supporting the then Core Strategy documentation. This assessment built on the County Landscape Character Assessment and the application site is identified as lying predominantly within ‘Area K2 – Faygate and Warnham Vale’ character area, and it defines the landscape surrounding the application site as lying within four landscape character areas. These are:
- Area I2 – Warnham and Rusper Wooded Ridges; (north of the application site);

¹⁵ Natural England, April 2014 “National Character Areas – NE450: NCA Profile: 121 Low Weald and NCA Profile: 122 – High Weald” - Natural England Publications - <http://publications.naturalengland.org.uk/publication/12332031?category=587130>.

¹⁶ West Sussex County Council 2003 “Landscape Character Assessment of West Sussex” West Sussex County Council.

¹⁷ Horsham District Council (HDC) October 2003 “Horsham District Landscape Character Assessment” Horsham District Council (HDC)

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- Area L1 – St Leonard’s Forest (south east of the application site);
 - Area P1 – Upper Arun Valley (west of the application site), and;
 - Horsham and Broadbridge Heath Settlement Area (south of the application site).

11.4.23 The Faygate and Warnham Vale area is described as:

“This area comprises a narrow vale on Weald Clay, with a medium to large scale field pattern of mainly arable farmland. The traditional hedgerowed field pattern has become fragmented or lost, and only small isolated patches of woodland occur. Much of the area retains a low density of settlement pattern with a few scattered farmsteads, and small hamlets. However, in the south significant large scale urban development around Broadbridge Heath has eroded character. Major road and rail routes truncate the area. There is also localised intrusion from sand and gravel works. The large area of historic parkland at Warnham with its prominent tree clumps in grassland, extensive boundary tree belts and avenue tree features provides a distinct contrast to the west of the character area”.

11.4.24 The key characteristics of Area K2 are identified as follows:

- Flat to gently undulating clay vale.
- Medium to large scale field pattern of arable farmland, with smaller areas of pasture.
- Isolated patches of woodland.
- Semi enclosed or open character.
- Dominance of major road and rail communication routes.
- Significant area of historic parkland of Warnham Court.
- Visual intrusion in parts from retail and industrial areas, housing and sand and gravel workings.

11.4.25 This assessment goes on to identify that the landscape condition of this area is considered to be declining (locally poor), due to intensive arable agriculture, the visual and noise intrusion of major traffic routes.

11.4.26 The assessment goes on to consider the “sensitivity of the landscape to change” and for Area K2, it states that:

“Overall, the area has a moderate sensitivity to change reflecting its mostly moderate intervisibility and only moderate intrinsic landscape qualities.”

11.4.27 The assessment identifies the key sensitivities to be:

- Large scale commercial development.
- Minor and major road improvements.
- Any change that would result in loss of existing woodlands, hedgerows and hedgerow trees, historic parkland.

11.4.28 A small portion of the south western parts of the application site are identified as lying within Character Area P1 – Upper Arun Valley with this character area extending northwards following the Bolding Brook. The area is described as follows:

“The Upper Arun Valleys include the upper reaches of the Arun from Pulborough northwards to Horsham, and its main tributaries of North River and Bolding Brook. Throughout they meander through relatively narrow valleys, with gently to strongly undulating valley sides. Occasional curving strips of woodland are a feature of the valley sides whilst seasonally flooded wet pastures occur on the valley floor. There is very little settlement apart from small scattered farmhouses, except in the north around Rookwood Park and Tower Hill. Few roads cross the rivers, although those that do are busy in nature. As a result, the area has a mostly unspoilt rural character with only limited visual and noise intrusion around Horsham”.

11.4.29 The key characteristics of Area P1 are identified as follows:

- Mostly narrow valleys with undulating valley sides.
- Lush valley bottoms with small drained irregularly shaped pastures.
- Occasional curving strips of woodland on valley sides.
- Tightly meandering and steeply banked river and stream courses.
- A few widely dispersed small farms on elevated valley sides.
- The Wey and Arun Junction Canal, which is currently being restored.
- Mostly rural unspoilt character, except for urban edge influence around Horsham and some road and aircraft noise in places.

11.4.30 The assessment goes on to identify that this character area is in a ‘good’ condition and that its overall sensitivity to change is ‘high’. The assessment also goes on to state:

“Overall sensitivity to change is high reflecting many landscape qualities of the area, visual prominence of some valley sides.”

11.4.31 The assessment identifies the key sensitivities to be:

- Any development that would damage the integrity of the valley floors.
- Any large scale development on valley sides.
- Unsympathetic flood defences.
- Change in agricultural practices – pasture improvements and land drainage.
- Localised increases in horse paddocks.

11.4.32 A small portion of the application site and land to the north of Area K2 is defined as 'Area I2 – Warnham and Rusper Wooded Ridges'. The area is described as follows:

"This area is characterised by dense woodland covering the low ridges of the Weald clay, with mostly small irregular fields surrounded by large and small woodlands and many shaws / hedgerows. As a result, there is a strong sense of enclosure, and views are confined, except from some ridgetops. A distinctive pattern of north to south running lanes cut across the landscape becoming narrow and sunken as they descend valley sides, with broad grassy verges and hedgerow boundaries on the ridgetops. Despite noise intrusion from Gatwick, the area retains a rural unspoilt character, and the historic dispersed settlement pattern is largely intact."

11.4.33 The key characteristics of Area I2 are identified as follows:

- Undulating wooded ridges.
- Distinct escarpment to the north of Horsham.
- Secretive wooded ghylls.
- Strong pattern of shaws and hedgerows.
- Intricate patchwork of small pasture fields.
- North to south running narrow lanes, sunken in places.
- Linear ridgetop villages and hamlets. Farms and cottages dispersed along lanes.
- Strong historic vernacular of half-timber with plaster/brick, tile hanging and weatherboarding.
- Mostly rural character.

-
- 11.4.34 The assessment goes on to identify that this character area has a 'mostly good' condition and that its overall sensitivity to change is 'high'. The assessment also goes on to state:

"Despite the high degree of enclosure in many parts of the area, some ridgetops and slopes are prominent and the area has many intrinsic landscape qualities. Key sensitivities are to:

- *Any large scale housing/commercial development.*
- *Cumulative impact of vertical structures on ridge slopes/ ridgetops.*
- *Small scale incremental change, e.g. expansion of horse paddocks, erosion of the narrow country lanes."*

- 11.4.35 In addition to assessing the landscape character area of Horsham District, the report has a section on the character of settlements within the District and, in relation to Horsham, the report includes a description of the town with the land to the south of the application site being described as follows:

"The modern development of the town includes large estates of interwar suburban housing set around wide streets and crescents. The spacious layout of this development allows for some public trees and shrubs. Allotment gardens, recreation grounds and playing field open spaces break up the repeating street patterns. Close to the settlement edge, the late 20th Century housing is characterised by mainly detached houses of mixed suburban styles, variously orientated within cul-de-sacs."

- 11.4.36 In relation to the built up area to the south of the application site, the assessment identifies the relevant key characteristics of the area as follows:

- Extensive areas of inter-war suburbs and later 20th Century estates which are mostly undistinguished in character, but are softened by frequent greenspaces, treebelts and woodland around the settlement edge.
- Mostly well treed character of the town.

- 11.4.37 The landscape assessment also gives consideration to the character of the landscape setting areas around Horsham and identifies the area to the north of the town as Area 1. The key features of this area are defined as follows:

- Flat, gently undulating topography, rising onto a steep wooded of Hurst Hill.
- Medium scale field pattern of arable and pasture farmland.
- Occasional small woodlands.

- Historic drove road lanes, moated farmsteads and castle earthworks.
- Soft settlement edge with extensive woodland treebelts.

11.4.38 These characteristics are similar to those identified for Area K2, however, the report goes on to consider the 'sensitivity of landscape setting areas to urban extensions', with the criteria for assessing the 'sensitivity' is contained in section 5.2.2 of the report. In relation to the application site, the 'sensitivity assessment' concludes the following:

Table 11.1 – Settings Area 1 – North of Horsham

Landscape Setting Area	Intrinsic Landscape Qualities			Contribution to Distinctive Settlement			Visual Characteristics						Sensitivity		
	Many	Some	Few	Very Important	Partial	Very Limited	Visual Prominence			Intervisibility			High	Moderate	Low
							High	Moderate	Low	High	Moderate	Low			
1	•				•		•				•		•		

11.4.39 The conclusions reached on the 'sensitivity' of Area 1 are different to the earlier assessment conclusions for Area K2 which were that the area has a 'moderate' sensitivity to change. Copies of the relevant extracts taken from the Horsham District Landscape Character Assessment are contained in Appendix 11.17.

11.4.40 In April 2014, Horsham District Council published 'Horsham District Landscape Capacity Assessment'¹⁸ (Capacity Study). This study was prepared as part of the evidence base for the review of the Core Strategy and was used to inform the preparation of the Horsham District Development Framework. The Capacity Study considers land around existing Category 1 and Category 2 settlements in the district and assesses the capacity of these areas to accommodate housing and / or employment.

11.4.41 The Capacity Study follows a detailed methodology and draws upon the earlier County Landscape Character Assessment and Horsham District Landscape Character Assessment in reaching judgements on the capacity of areas of the district to accommodate different types and scales of development including small to medium scale housing development (up to 100 dwellings), medium scale housing development (approximately 100 to 500 dwelling), large scale housing development (500 or more dwellings) and large scale employment developments.

¹⁸ Horsham District Council (HDC) April 2014 "Horsham District Landscape Capacity Assessment" Horsham District Council (HDC).

11.4.42 The key objectives of the study are to:

- 1) Provide a transparent, consistent and objective assessment of the landscape capacity of the land around existing Category 1 and Category 2 settlements to accommodate housing and employment development.
- 2) Identify areas where new development could best be accommodated without unacceptable adverse landscape and visual impacts.

11.4.43 The study goes on to state

"It should be noted that the levels of landscape sensitivity and capacity that are identified as part of the study are, by necessity generalised statements across each area, and provide a pointer to detailed landscape and visual issues that would need to be addressed in a site allocation or development management context. Landscape sensitivity and capacity levels are not absolute, and it is expected that further analysis would need to be carried out in relation to specific applications with significant landscape and visual effects, or where there are cumulative impacts of several developments. In this respect, the identification of an area as having a moderate or greater capacity should not be taken to mean the whole area has potential for development. Reference should be made to both the definitions given in table 6 in respect of capacity levels and the specific commentary regarding capacity provided for each local landscape character area in section 3."

11.4.44 The Capacity Study identifies the key landscape character sensitivity, visual sensitivity, and landscape value of each area before considering the landscape capacity of each LLCA to accommodate medium scale housing, large scale housing and large scale employment with Section 5.0 of the report stating at paragraph 5.1 the following:

"It is clear from the detailed assessments of landscape capacity for both large and small scale development that there is a limited landscape capacity for development in many of the local landscape character areas covered by this study. Even very close to settlement edges many landscapes have features, characteristics and qualities that in combination make them sensitive to development. These include the predominantly small-medium scale field pattern that is common in the District, together with the strong network of hedgerows, shaws and woodlands. Much of the landscape is also in good condition, and strongly rural in character (i.e. limited intrusion from road, rail or other urban influences) all of which increase the sensitivity of the landscape to development. A number of landscape character areas in the District (particularly those between Horsham and Crawley, Horsham and Southwater and between Storrington and West Chiltington Common also have an important role to play in maintaining a sense of separation between these settlements. Some landscape areas also play an important role in the setting of a particular setting of a town or village, often creating a rural approach or feel to the entrance to a particular area."

11.4.45 And then goes on to state:

“Whilst many areas of the District have features which limit the capacity of the landscape for development, there are some areas where it is considered the landscape has the capacity to accommodate development (taking account of appropriate mitigation). In general terms, most of these areas have already been impacted on by urbanising influences, including larger scale development at Gatwick airport and Warnham Brickworks or more cumulative development such as the combination of road and rail network, pylons, storage uses, or are impacted by an existing harsh urban edge. The landscape value of areas which have a greater capacity for development is also generally lower; with for example low levels of tranquillity, and the loss of important landscape features such as hedgerows which result in a lower landscape condition.

11.4.46 The Capacity Study identifies the application site as lying within five Local Landscape Character Areas (LLCAs). These are:

- LLCA 10 – Kilnwood Copse to Graylands;
- LLCA 12 – Wimland Road to Castle Copse;
- LLCA 13 – Moated House Farm and Rusper Road;
- LLCA 14 – Holbrook Park;
- LLCA 16 – Land North of Horsham.

11.4.47 The local landscape areas with the some capacity for housing and employment development are summarised in the Table 11.2 below as follows:

Table 11.2 – Summary of Landscape Capacity for LLCA’s within the Application Site

Capacity for Development	LLCA	Housing	Employment
Moderate – High	16: Land north of Horsham	✓	✓
Moderate	13: Moated House Farm & Rusper Road	✓	
Low – Moderate	12 – Wimland Road to Castle Copse	✓	
	13: Moated House Farm & Rusper Road		✓
	14 – Holbrook Park	✓	✓

-
- 11.4.48 The Capacity Study concludes that the majority of the land to the north of Horsham has the capacity to accommodate large scale housing development, which is confirmed by this assessment, which demonstrates:
- i) that the area does have a number of intrinsic landscape qualities such as woodlands, hedgerows, important archaeological and ecological features the majority of the land is open arable and pasture farmland with limited intrinsic quality;
 - ii) that the visual prominence of the area is not high as containment within the area is good and there are very few views into and across the area;
 - iii) that intervisibility within the area is limited, due to the enclosure and screening provided by mature trees, hedgerows and woodland areas in the application site;
 - iv) that the application site makes a limited contribution to the built up edge of Horsham.
- 11.4.49 Copies of the relevant extracts taken from the Horsham District Landscape Capacity Assessment¹⁹ dated April 2014 are included as Appendix 11.18. Consideration is given in this chapter to the potential effects of the proposed development on landscape character and visual amenity of the area surrounding the application site.

Application Site Appraisal

- 11.4.50 The existing layout and features of the application site are shown on Appendix 11.2 – Application Site Appraisal Plan. The drawing shows the existing land uses, landscape features and the existing trees, wooded areas and hedgerows within and adjacent to the application site and adjoining land uses.
- 11.4.51 The application site forms a roughly rectangular parcel of land of 229.32 hectares to the west and east of Holbrook Park. The application site comprises a number of open and semi-enclosed irregular shaped fields in arable and pasture use and a several small copses adjoining Bush Lane in the eastern parts of the application site and larger woodland blocks located between Langhurstwood Road and Old Holbrook / Northlands Road

Application Site Boundaries

- 11.4.52 The boundaries to the application site are well defined to the south by the A264 / Crawley Road and its adjoining belts of trees and hedgerows. These belts of trees provide a soft edge to Horsham restricting views from the

¹⁹ Horsham District Council (HDC) April 2014 "Horsham District Landscape Capacity Assessment" Horsham District Council (HDC).

A264 and built up area looking northwards towards and into the application site. They also provide containment to the application site along this edge and reduce the visual effect of the A264 and its traffic. Midway along the southern there is a ribbon of development on Old Holbrook Road which extends into the application site up to the entrance to Morris Farm. Dwellings within this area include: Berheley's, Casamanda, Redfeathers, Holbrook Park House and Flats, The Garden Lodge, Holbrook Cottage, Sprucefield, Wall House, North End House, Cuckmere Farm, Cuckmere Bungalow, Rapelands Farm, Oak Cottage, Morris Cottages (1 to 4), and Cedar Farm.

- 11.4.53 To the west, the boundary of the application site is defined by the alignment of Langhurstwood Road and existing hedgerows and wooded areas adjoining the road. The boundary extends around Graylands Farm to connect to Langhurstwood Road and then follows the road northwards. Adjoining Langhurstwood Road are existing tall robust hedgerows and substantial belts of trees including Oak and Ash trees along the road corridor. These hedgerows and tree belts provide enclosure and containment to the western parts of the application site and curtail the majority of views into the application site from public vantage point to the west although glimpsed transient views may be obtained from a short section of the A24 near Tylden House.
- 11.4.54 The northern edge of the application site follows an irregular alignment west to east and is defined by the edge of the woodlands, belts of trees and tall hedgerows between Langhurstwood Road and Old Holbrook / Northlands Road. Between Old Holbrook Road and Rusper Road, the northern boundary follows a line extending eastwards from Leaside Cottage to connect to an area of woodland before extending northwards to follow the eastern edge of an area of woodland up to Hurst Wood and then roughly follows the 95 metre AOD contour to Rusper Road.
- 11.4.55 To the east of Rusper Road, the boundary extends southwards following the east side of the road and follows an existing field boundary to the south of a cluster of properties around Old Hawkesbourne Farm to then turn northwards then eastwards following an existing field boundary and western edge of Bakehouse / Castle Copse (adjoining Horsehead Gill) before turning east and north east following the southern edge of Castle Copse, and existing tributary stream up to Seagraves Copse to then the boundary crosses an open field to connect to Wimland Road near Benson's Farm.
- 11.4.56 The extent of woodland and rising topography along the northern boundary to the application site provides strong containment and enclosure, limiting views northwards although there are open views south from a short section of Public Footpath No.1573 to the north west of the application site between Graylands Plantation and Morris Wood.

Topography

- 11.4.57 As mentioned earlier, the application site lies within an area of undulating topography dominated by the Faygate and Warnham Vale with ridgelines of high ground at approximately 120 m AOD to the north and about 145 m AOD to the south. The topography of the application site and surrounding area is illustrated on Appendix 11.3.
- 11.4.58 The land form within the application site has a general slope north to south lying between 45 to 95 m AOD although parts of the central southern area application site appears flat in places. The Chennells Brook meanders across the eastern parts of the application site in a north east to south west direction with its three tributary streams and drainage ditches connecting to the brook prior to flowing under the A264 near the A264 / Rusper Road roundabout.
- 11.4.59 A tributary stream to the Bolding Brook flows south west across the western parts of the application site. This stream starts at a pond within Graylands Copse at about 70 m AOD and creates a shallow valley landform following a south west alignment to Langhurstwood Road prior to flowing south and south west across the adjoining land to flow under the Horsham to Dorking railway near the A264.
- 11.4.60 The highest point within the application site at about 95 metres AOD is located along the northern boundary, west of Rusper Road, with the land falling southwards towards the Chennells Brook and low point on the A264 boundary at about 53 metres AOD. Within the central parts of the application site, the Moated House Farm and complex of buildings lie on a slightly raised area of land at about 60 m AOD with the land falling to the south west, south and south east of the farm complex. Within the western parts of the application site there is a low knoll of slightly raised ground at about 60 m AOD to the south east of Graylands Farm with the land falling to the south west, south and south east towards the A264 boundary.

Vegetation

- 11.4.61 Vegetation in the vicinity of the application site comprises predominantly Oak, Ash, Willow and Sycamore tree species with hedgerows consisting of mainly blackthorn, hawthorn, holly, field maple, and mixed deciduous species, approximately 2 metres in height. Within or immediately adjoining the central and eastern parts of the application site there are a number of woodland blocks and copses including Hawkesbourne Wood, Castle Copse, Bush Copse and triangular area of woodland west of Owlscastle Farm and a number of trees around Moat House Farm.
- 11.4.62 To the north, tree cover increases significantly with woodlands occupying the slopes of Hurst Hill including Lower Rapelands Plantation, Furze field Copse, Hurst Wood, Bakehouse Copse, Little Bakehouse Copse and

Northland Copse. The majority of the woodland is deciduous with conifer and rhododendron species included in the woodland mix, particularly the eastern parts of the woods, north east of Old Hawksbourne Farm.

- 11.4.63 Within or immediately adjoining the western parts of the application site the number of woodland blocks within the area increases with several irregular shaped copses and linear belts of trees providing enclosure and containment. These wooded areas include Graysland Copse, Holbrook Plantation, blocks of trees to the north and south east of Graylands Farm and a number of linear tree belts extending southwards from Morris Wood and Graylands Plantation with a further line / belt of trees extending northwards into the application site from the A264 boundary. Large sections of the woodlands are identified as ancient woodlands and are of high ecological value. There are also a number of irregular shaped ponds located within the application site which feed the network of local ditches and tributary streams to the Boldings and Chennells Brook.
- 11.4.64 A detailed arboricultural survey of the trees within and adjoining the application site has been completed by CBA Trees in accordance with BS 5837:2012. The survey identified a total of 658No. individual trees / groups of trees, wooded areas and hedgerows which have been recorded within the assessment. Of the 658No. Trees / groups of trees, wooded areas and hedgerows the survey identified 86No. category 'A' trees, 213No. category 'B' trees, 270No. category 'C' trees and 24No. category 'U' trees. The assessment however, recommended that the 24No. category 'U' trees/groups of trees should be removed for sound arboricultural reasons.

Land Uses

- 11.4.65 The land uses within the application site and surrounding area are predominantly arable and pasture fields subdivided by trimmed hedgerows and blocks of woodland. In addition to the open farmland, there are several farmsteads and residential properties within or adjoining the application sites boundaries and associated with these dwellings are areas of horse paddocks and pasture.
- 11.4.66 Within the eastern parts of the application site is Owlscastle Farm, Owlscastle Barn, a smallholding within Bush Copse and Kings Farm House, and Benson's Farm Cottages located adjoining the eastern boundary of the application site. Immediately to the east of the application site on Wimland Road is Brook House, Brook House Barn, Sunnybank Farm, Benson's Farm and outbuildings and small cluster of residential dwelling grouped around the Frog and Nightgown public house.
- 11.4.67 Within the central western parts of the application site is Moated House Farm and cluster of farm buildings and commercial building including Global 4 offices and its car park with Old Hawkesbourne, The Granary, Hawkesbourne House, The Diary and Old Hawkesbourne Farm situated to the west of

Rusper Road outwith the central northern parts of the application site. Old Hawkesbourne is a Listed Building.

- 11.4.68 Within the central portion of the application site, there is a ribbon of development on Old Holbrook Road which extends into the application site up to the entrance to Morris Farm near Leaside Cottages. Dwellings within this area include: Berheley's, Casamanda, Redfeathers, Holbrook Park House and Flats, The Garden Lodge, Holbrook Cottage, Sprucefield, Wall House, North End House, Cuckmere Farm, Cuckmere Bungalow, Rapelands Farm, Oak Cottage, Morris Cottages (1 to 4), and Cedar Farm. To the north of this ribbon of development but within the application site are Morris Farm and Leaside Cottages (Willow House).
- 11.4.69 In the western parts of the application site, immediately adjoining Langhurstwood Road, there are a number of dwellings outwith the application site and these include: Home Farm, Abbotslea, Pondtail Cottage, Pondtail House, Pondtail Farm, Graylands Farm Cottages (No.1 to 3), Southlands Cottage, Meadowview Cottage, Midsummer Barn, Northlands Cottage, Haybarn Cottage, Lower Gate House, Tockholes, Wealdon, Langhurst Moat Cottage, Bramblehurst with Graylands House (Lafarge Training Centre) situated to the north west of the application site.
- 11.4.70 There are also a number of low level electricity lines on poles crossing the south eastern parts of the application site adjoining the railway line.
- 11.4.71 The landscape condition of the application site is considered to be 'low - moderate', due to its existing uses and the state of the existing field boundary hedgerows and trees as they are generally in a reasonable / maintained condition. The existing uses are described in Chapter 4 of this ES. The overall sensitivity of the application site to change is also considered to be 'medium to low' due to the application site's uses and its location within the open countryside. However, the natural containment of the application site provided by surrounding hedgerows and trees ensure that any change to the application site is localised to the vicinity of the application site.

Visual Appraisal

- 11.4.72 An assessment of the visibility of the application site within its surroundings has been carried out in June 2011 and more recently in March 2014 and September 2014, by walking and travelling along the network of local roads, footpath, bridleways and other paths in the area surrounding the application site. This assessment identified that the application site is generally well screened and contained in views from locations within the area surrounding (outside) the application site.
- 11.4.73 However, to confirm the potential vantage points for views towards and of the application site as well as to assist in the identification of further

potential vantage points, a computer generated theoretical Zone of Visual Influence Plan (See Appendix 11.4) was prepared for the Proposed Development using OS base mapping, topographical data, estimating the height of existing vegetation within the area surrounding the application site and 10 No. evenly spread target points representing the heights of proposed buildings as indicated by the Building Heights Parameter Plan – drawing No.2153A-102 within the Proposed Development.

- 11.4.74 The visual assessment of the application site was carried out from public accessible viewpoints within the surrounding landscape such as roads, public footpaths and public open spaces. The visual assessment confirmed that there are no long distance views towards the application site from elevated ground to the north and land south of Horsham, nor along the A 264 / Faygate Vale nor long distance views from other parts of the High Weald AONB to the east and south east of the application site.
- 11.4.75 In particular, consideration was given to views towards the application site from 45No. properties within and immediately surrounding the application site – see Table 11.3.
- 11.4.76 Consideration was also given to views towards the application site from Public Rights of Way (PROW) within and in the vicinity of the application site including: sections of the A264 / Dorking Road, Wimland Road, Rusper Road and Langhurstwood Road as well as the public footpaths and bridleways across and in the vicinity of the application site (PROW No's.1575, 1585, 1586, 1421, 1573) and longer distance views from public footpaths to the north east and south east of the application site (PROW No's. 1590, 1591, 1592, 1593, 1588, 1577 and 1587) and very long distance views from outlying areas to the south west of Horsham (PROWs 1623, 1626 and 1651)
- 11.4.77 During the site visits, a series of photographic panoramas (See Appendix 11.11 - Photographic Appendix - Visual Assessment Photograph No.1 to 45) were taken to illustrate the views towards the application site from within and locations adjacent to the application site and the wider countryside. These viewpoints have been selected as “representative” views and used to inform the assessment of the application site. The locations from which the photographs were taken are shown on Appendix 11.5 – Location of Visual Assessment Photographs Plan, and Appendix 11.6 – Location of Visual Assessment Photographs Distant Views whilst Appendix 11.2 – Application Site Appraisal Plan illustrates the nature and extent of views into and towards the application site.
- 11.4.78 Representative vantage points include.
- i) Local open and partial views from sections of the A264 / Crawley Road (Photograph No's. 3, 32, 33, 34, and 35) looking north and north westwards;

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- ii) Local open and glimpsed views from section of Wimland Road (Photograph No's. 4, 5, and 6) looking north and westwards;
 - iii) Local open and glimpsed views from sections of Rusper Road looking east and west (Photograph No's. 17 and 18);
 - iv) Local glimpsed views from a section of Old Holbrook Road looking eastwards (Photograph No. 22 and 23);
 - v) Local open and glimpsed from short sections of Bridleway No. 1585 within the application site looking north and south (Photograph No's. 6, 7, 8, 9, 10, 14, 15, and 16);
 - vi) Local open and glimpsed views from sections of Public Footpath No. 1586 (Photograph No's. 11, 12, 13, and 38) looking north, west and east across the open southern parts of the application site;
 - vii) Local open and glimpsed views from short sections of Public Footpath No. 1575 (Photograph No's. 19, 20 and 21) looking west and east;
 - viii) Local open and glimpsed views from a section of Public Footpath No. 1421 (Photograph No's 24, 25, 26, 27, 28, and 29) looking north, east, south and west;
 - ix) Local open views from a short section of Public Footpath No. 1573 (Photograph No. 30) looking south towards Horsham;
 - x) Local open and glimpsed views from a section of Langhurstwood Road (Photograph No's 31) looking east and west;
 - xi) Middle distance views from short section of Old Crawley Road and Public Footpath No. 1564 to the east of the A264 (Photograph No's 1 and 2) looking northwards towards the eastern parts of the application site;
 - xii) Middle distance restricted views looking northwards towards the eastern parts of the application site from Earles Meadow Open Space to the south of the A 264 (Photograph No. 36);
 - xiii) Middle distance elevated views from a section of Public Footpath No. 1588 near Roffey Park and Public Footpath No. 1587 near Roffey Hurst within the High Weald AONB (Photograph No. 37 and 41) looking north eastwards towards the south eastern parts of the application site across the intervening open fields and tree lined A264 / Crawley Road;

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- xiv) Middle distance open views from section of Bridleway No. 1509 and Public Footpath No. 1591 looking westwards towards the eastern parts of the application site (Photograph No. 38);
 - xv) Middle distance views from a section of Public Footpath No. 1592 near Benson's Cottage (Photograph No. 39) looking south westwards towards the eastern parts of the application site;
 - xvi) Middle distance elevated views from Wimland Road near Wimland Cottages (Photograph No. 40) looking towards the eastern parts of the application site across and over the intervening open fields and surrounding hedgerows and trees.
 - xvii) Middle distance views from a short section of Public Footpath No.1577 near Warnham (Photograph No.42) looking eastwards towards the application site across and over the intervening fields, A24 and surrounding hedgerows and trees;
 - xviii) Very long distance views from short sections of footpaths (Public Footpath No's.1623, 1626, and 1651) near Itchingfield looking north eastwards towards the application site across and over the intervening open fields, surrounding hedgerows and trees and built up areas of Horsham (Photograph No's 43, 44 and 45)

- 11.4.79 Within the ZVI, there are a number of visual barriers, the most of notable of these is the ribbon of development and associated areas of woodland / trees following Old Holbrook Road within the central western parts of the application site; which, together with the existing woodland blocks and linear belts of trees that form other visual barriers, compartmentalise the landscape. Within the north western parts of the application site, there is an opportunity (from a short section of Public Footpath No.1573) to obtain a long distance views over the application site looking south towards and over the built up area of Horsham; although the low lying parts of the application site (south of Holbrook Plantation) tend to be screened by existing areas of woodland.
- 11.4.80 It is considered that, apart from sections of the north eastern boundary, the boundaries to the application site are well defined by existing landscape features with containment provided by belts of trees and the built up area of Horsham to the south, by Hurst Hill and extensive areas of woodland and trees to the north, by areas of woodland and trees as well as rising ground to the south east. To the west, the land is relatively low lying with containment provided by mature trees and vegetation following the Horsham to Dorking railway line and belts of trees adjoining Langhurstwood Road.
- 11.4.81 In the immediate vicinity of the application site, the perception of the application site and its surroundings varies depending on the location of the viewer. In the majority of views only a relatively small part of the application
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site can be seen or perceived as open arable or pasture farmland. This is due to the low lying topography of the application site, the existing hedgerows and belts of mature hedgerow trees and copses within the application site, which effectively curtails middle or long distance views. Partial or glimpsed views can be obtained from elevated sections of the A264 / Crawley Road but in most cases the application site is partially screened by the belts of mature trees adjoining the road (See Photograph No's. 1, 2, 3, 32, 33, 34, 35 and 36) and this limits the extent of views with the rising ground and wooded areas to the north forming the back drop to the application site.

- 11.4.82 Views from Old Holbrook Road are restricted by the mature hedges and trees immediately adjoining the road with glimpsed views possible through a few gaps with long distance views eastwards curtailed or restricted by hedgerows and trees within the application site (See Photograph No's. 22 and 23).
- 11.4.83 In views from the middle distance, including elevated views from the south east and east of the application site within the High Weald AONB (Photograph No. 37), only parts of the application site are seen due to the existing vegetation along the A264 with the views extending over the trees to the lower slopes of Hurst Hill and wooded areas occupying the ridgeline. In these views, the open fields east of Old Hawkesbourne Farm and around Moated House Farm are just perceived but the low lying parts of the application site tend to be screened from view.
- 11.4.84 In views from the east, from Bridleway No.1590 (Photograph No.38), the surrounding low lying undulating landform and existing vegetation along Wimland Road restricts distant views with only a small portion of the application site visible; and Owlscastle Farm just perceived, with a backdrop of Bush Copse to the west.
- 11.4.85 In views from the north east on Wimland Road (Photograph No's. 39 and 40) only a small portion of the south eastern parts of the application site are seen in the views with the open fields effectively screened from view, due to the intervening mature trees and hedgerows. Northland Copse effectively curtails views westwards to the remaining central and eastern parts of the application site.
- 11.4.86 In middle distance views from the west near the village of Warnham (Photograph No.42), the majority of the application site is screened from view due the intervening areas of woodland, trees and hedgerows adjoining the A24 / Dorking Road and surround Warnham Work site with a small portion of the elevated north western parts of the application site perceived.
- 11.4.87 The ZVI indicates that there are also theoretically several distant locations to the south west of the application site and Horsham where very long distance views towards the application site can be obtained. These views are from footpaths which are over 7.0 kilometres from the application site where only

small area of elevated northern parts of the application site are seen due to existing intervening vegetation (and also built up areas of Horsham) screening low lying views towards and of the application site. However, due to the distances involved, the extent of intervening vegetation (woodlands and hedgerows) and very limited area of the application site perceived in the wider views it is considered that the likely impact and visual effect of the development would be negligible and therefore not considered in detail in later sections of this chapter.

Consideration of the Landscape / Visual Settings of Listed Buildings

- 11.4.88 As part of the assessment of landscape and visual impacts of the development, it is important to understand the visual settings of listed buildings within and immediately adjoining the application site as this informs in part the sensitivity of these receptors. In the section, below consideration is given to the visual settings of the eight listed buildings within or immediately adjoining the application site as opposed to the three-step approach of the assessing the significance and setting of heritage assets dealt with in the Archaeology and Heritage chapter (Chapter 13) of the ES.

Holbrook Park (1), and Holbrook Park House (2), Old Holbrook, Horsham

- 11.4.89 Holbrook Park is a mid-19th century country house which Holbrook Park House may have been the stables converted to residential use. These properties were located on the eastern edge of a large landscaped park including parkland trees which extended westwards and southwards with a more formal designed landscape of enclosed gardens, and series of ornamental water features in the immediate vicinity of the Holbrook Park. To the east is Old Holbrook (well vegetated rural lane) with smaller scale fields subdivided by hedgerows and trees beyond.
- 11.4.90 The original rural setting of these properties has changed with the intensification of agricultural practice during the 20th century although much of the formal designed areas associated with the main house remaining. The parkland to the west has changed/disappeared and is now a large open field, with all the former trees removed, whilst the south, part of the formal grounds are in separate ownership (Squirrels) and the parkland areas beyond to the south now forming part of north Horsham separated by the A264. The western edge of the formal gardens are now heavily vegetated including robust tree belts with a high proportion of evergreen species (leylandii and laurel) which effectively curtail views westwards although there are occasional glimpsed views possible outwards and partial views of the rooftop of the house looking eastwards from the adjoining open fields / Public Footpath No.1421. To the east, visibility is constrained by the tall evergreen hedgerows and trees adjoining Old Holbrook with partial views towards the two houses from the entrances with the hedgerows and trees on the east side of the lane limiting views across the adjoining horse paddocks although

as with the land to the west there are glimpsed views of the upper parts of the houses from the Public Footpath No.1575.

- 11.4.91 The visual setting of these two listed buildings is therefore relatively limited and well confined to the immediate area of the two properties with little intervisibility with the surrounding area and application site.

Hollywick Farmhouse (3), Old Holbrook, Horsham (located outside the application site)

- 11.4.92 The property dates from the 17th century and is a timber-framed house with rebuilding and alterations and separate garage block and greenhouse to the north and swimming pool to the south east, set within an enclosed garden on the eastern side of Old Holbrook and surrounded by an open arable field to the north, east and south. As with Old Holbrook and Old Holbrook House, much of the original rural setting of the property has changed with the intensification of agricultural practice during the 20th century and removal of hedgerows and amalgamation fields.

- 11.4.93 Old Holbrook, and its robust hedgerows and trees, defines the western boundary of the property and effectively curtails and screens into and out of the grounds along this edge. The northern edge of the property is formed by garden vegetation (trees / shrubs) at varying heights with a low section of trimmed hedgerow forming the north eastern corner allowing open views across the adjoining field to the wooded ridgeline and vice versa. The western boundary to the property is formed a tall hedgerow 3 to 4 metres high and this effectively screens views into and out of the grounds whilst the southern boundary is formed at its eastern section by tall hedgerow 3 to 4 metres in height with the remaining western section formed by a number of mature trees and dense shrub planting.

- 11.4.94 The visual setting of the property is therefore well confined to the immediate formal garden areas to the north west, west, south and east with views into and out of the property to the north east and its setting extending into the adjoining field contributing, in part, to a rural setting to the property.

Hawkesbourne Farmhouse (4), Rusper Road, Horsham (located outside the application site)

- 11.4.95 This property dates from the 16th – 17th century and comprises a timber-framed house with later changes located to the east side of Rusper Road close to the northern boundary of (but out with) the application site. To the north is Old Hawkbourne Farm and cluster of residential dwellings and outbuildings. The original rural setting of the property still survives to some extent with Hawkbourne Farmhouse and Old Hawkbourne Farm surrounded by small scale fields subdivided by hedgerows or fencing albeit the majority of the land is now used for horse paddocks.

11.4.96 The farmhouse occupies a slightly elevated position with partial views looking southwards and eastwards towards the application site. The western boundary of the property is formed by the robust hedgerow and trees adjoining Rusper Road and this effectively controls and curtails views in this direction. To the north existing built development provides enclosure and containment and limited outward views in this direction whilst the eastern edge of the property follows an irregular alignment and is formed by timber fencing, hedgerows and garden trees and shrubs which provide a high degree of enclosure and containment limiting eastward views in this direction. To the south the property boundary is variable consisting of sections of fencing trees and hedgerows which allow southward views across the adjoining fields / horse paddocks.

11.4.97 The visual setting of the listed building is well confined to the west and north with views into and out of the property to the south and east across the adjoining small scale paddocks and therefore the setting of the listed building extending eastwards and southwards into the adjoining paddocks but its importance reducing with distance.

The Moated House (5), Rusper Road, Horsham (located within the application site)

11.4.98 This property comprises a 17th century tile-hung brick farmhouse situated within an earlier irregular moat possibly originating in the medieval period. The original rural setting of the house would have been one of an isolated settlement located within a small scale fields and farmland although this has now changed with the intensification of agricultural practice during the 20th century and removal of hedgerows and amalgamation of fields and introduction of large modern agricultural buildings to the east and modern business buildings to the south.

11.4.99 In terms of the visibility and visual setting issues relating to the Moated house, the southern and eastern edges of the property are well enclosed and contained by existing hedgerows and trees and built development which curtails and screens views into and out of the property. To the west, the grounds to the house are formed by a robust tall hedgerow and groups of trees which allow partial and glimpsed views across the adjoining open pasture field whilst to the north, the enclosure and containment is less strong with open views possible out across a large arable field to the wooded ridgeline and vice versa.

11.4.100 The visual setting of the Moated House is therefore limited to the south, east and west whilst to the north extends into the adjoining arable field with its importance reducing with distance.

King's Farmhouse (6), Wimland Road, Faygate (located outside the application site)

- 11.4.101 This listed building probably dates from the 17th century and comprises a farmhouse with later alternations / changes. The property is located to the western side of Wimland Road within a small narrow parcel of land situated between Chennells Brook and its tall belts of vegetation and Wimland Road.
- 11.4.102 The original rural setting of the property would have been more complex and intimate consisting of a mosaic of small field, hedgerows and tree belts and tracks. To the south west and south east of the property this rural setting has changed significantly with the construction of the railway line and A264 whilst to the north west and north east changes resulting from the intensification of agricultural practice during the 20th century and removal of hedgerows and amalgamation fields have influence the landscape character of the area.
- 11.4.103 Wimland Road and its tall hedgerows and trees to the east side of the road form the east side of setting of this property whilst a strong belt of trees and adjoining low barn and small paddock form the south side and conifer trees and hedgerows form the north east side of the setting, limiting views into and out of the property. There are open outwards views north west over the Chennells Brook and across the large arable field (easternmost part of the application site) and vice versa.
- 11.4.104 The visual setting of the king's Farmhouse therefore limited to the south west, south east and north east whilst to the north west it extends into the adjoining arable field with its importance reducing with distance.

Brook House (7), and Barn (8) south west of Brook House, Wimland Road, Faygate (located outside the application site)

- 11.4.105 These two listed buildings are located on the eastern side of Wimland Road and date from the medieval period and 16th and 17th century. Brook House was a medieval open hall with rear additions of 16th and early 20th century period whilst the Barn is of 16th – 17th origins and has been converted to residential use.
- 11.4.106 As with King's Farmhouse, the original rural setting of the property would have been more complex and intimate consisting of a mosaic of small field, hedgerows and tree belts and tracks. To the south west and south east of the property this rural setting has changed significantly with the construction of the railway line in 1848 and more recently the A264 whilst to the north west and north east the landscape has changed with the intensification of agricultural practice during the 20th century and removal of hedgerows and amalgamation fields.

11.4.107 There presently open views from both these properties looking across the easternmost part of the application site and vice versa and the settings of these listed buildings still reflect an agricultural character albeit modern although these views are partially screened by front garden hedgerows and the trimmed hedgerows adjoining the west side of Wimland Road. The setting of these properties therefore extends to a degree into the application site although the importance reduces with distance.

Sensitivity of Visual Receptors to Change

11.4.108 The following sensitive receptors have been identified and these include:

- i) Existing and potential views from residential properties within, adjoining or in close proximity to the application site - see paragraph 11.1.160 below ;
- ii) Users of a section of the A264 / Dorking Road (4.1 kilometres) including the Moorhead and Rusper Road roundabouts immediately to the south east, south and south west of the application site;
- iii) Users of section of the local road network including Old Crawley Road (800 metres), Clovers Way (1.0 kilometre), Wimland Road (1.7 kilometres), Benson Lane (500 metres), Bush Lane / Public Bridleway No.1585 (1.3 kilometres), Rusper Road (1.4 kilometres), access tracks to Moathouse Farm (280 metres), Old Holbrook / Northlands Road (1.15 kilometres), access tracks to Morris Farm and Cuckmere Farm (200 metres), Langhurstwood Road (1.1 kilometres) and the access road to Graylands (300 metres);
- iv) Users of sections of Public Bridleway No.1585 (1300 metres) and Public Footpath No.1575 (660 metres), No.1586 (600 metres) and Footpath No.1421 (1.10 kilometres) within the application site;
- v) Users of sections of Public Footpath No.1588 (600 metres), No.1589 (250 metres) No.1590 (400 metres), No.1590 (200 metres) and Footpath No.1592 (300 metres) to the south east, and east of the application site;
- vi) Users of a short section of Public Footpath No.1573 (170 metres) to the north of the application site to the north of Morris Farm;
- vii) Users of sections of the Horsham to Crawley railway line on the eastern edge of the application site (up to 1.2 kilometres) and the Horsham to Dorking railway line (about 550 metres) to the west of the application site;

11.4.109 Table 11.3 below identifies the core group of visual receptors (public and private) which would potentially obtain views of the proposed development

(construction and completed phases) together with their sensitivity, type of view and whether the views are of the temporary (construction) or permanent (application site on completion).

Table 11.3 -Sensitivity of Visual Receptors within the Local and Wider Study area

Note: * denotes Listed Buildings

Ref No.	Receptor	Approximate distance from Application Site (metres)	Type of View	Direct view	Oblique View	Construction Works	Permanent Works	Sensitivity of Receptors
Residential Properties / Commercial Premises								
1	Moated House Farm *	0 - within site	Front / rear ground and upper level views – partially screened by garden vegetation and intervening trees and other vegetation	✓	✓	✓	✓	Very High
2	Moated House Farm – working farm outbuildings	0 - within site	Ground level views – partially screened by intervening buildings, trees and other vegetation	✓	✓	✓	✓	Low
3	Moated House Farm – office complex	0 - within site	Ground level views – partially screened by intervening buildings, trees and other vegetation	✓	✓	✓	✓	Low
4	Smallholding within Bush Copse	0 - within site	Ground level views – partially screened by intervening trees and other vegetation	✓	✓	✓	✓	Low
5	Owlscastle Farm and Owlscastle Barn	0 - within site	Front / rear ground and upper level views – partially screened by garden vegetation and intervening trees and other vegetation	✓	✓	✓	✓	High
6	King's Farmhouse*	0 – 30 metres	Rear ground and upper level views – partially screened by garden vegetation and intervening trees and other vegetation adjoining Chennells Brook.	✓	✓	✓	✓	Very High
7	Benson's Farm Cottages No.1 and 2	0 - within site	Rear ground and upper level views – partially screened by garden vegetation and intervening trees and other vegetation	✓	✓	✓	✓	High
8	Brook House*, Brook House Barn* and Sunnybank Farm	20 – 50 metres	Front / side ground and upper level views – partially screened by garden vegetation and	✓	✓	✓	✓	Very High

Ref No.	Receptor	Approximate distance from Application Site (metres)	Type of View	Direct view	Oblique View	Construction Works	Permanent Works	Sensitivity of Receptors
			intervening trees and other vegetation					
9	Benson's Farm – working farm and outbuildings	0 – 80 metres	Ground and upper level views – partially screened by garden vegetation and intervening buildings, trees and other vegetation	✓	✓	✓	✓	High
10	Frog and Nightgown public house (Ceased trading 2014)	150 metres	Oblique upper level views – partially screened by garden vegetation and intervening trees and other vegetation	X	✓	✓	✓	High
11	Benson's House	280 metres	Oblique front ground and upper level views – heavily screened by garden vegetation and intervening trees and other vegetation	X	✓	✓	✓	High
12	Benson's Lane - working farm outbuildings	80 metres	Ground level views from yard – partially screened by buildings and adjoining vegetation	✓	✓	✓	✓	Low
13	Benson's Cottage	140 metres	Potential rear ground and upper level views – heavily screened by garden vegetation and intervening woods and other vegetation	x	✓	✓	✓	High
14	Budds Farmhouse and outbuildings	550 metres	Front ground and upper level views – partially screened by garden vegetation and intervening hedgerows, trees and other vegetation	X	✓	✓	✓	High
15	Clyst Hayes *	260 metres	Potential oblique ground and upper level views – heavily screened by garden vegetation and intervening trees and other vegetation	X	✓	✓	✓	Medium
16	Clovers* and Rose Cottages No.6 to 10	400 – 500 metres	Front ground and upper level oblique views – heavily screened by garden vegetation and intervening trees and other vegetation	X	✓	✓	✓	Medium
17	Roffey Place* (Christian Training Centre)	350 – 400 metres	Front ground and upper level views – heavily screened by fences / garden vegetation and intervening trees and other	X	✓	✓	✓	High

Ref No.	Receptor	Approximate distance from Application Site (metres)	Type of View	Direct view	Oblique View	Construction Works	Permanent Works	Sensitivity of Receptors
			vegetation					
18	Newhouse Farm Grain Store – working farm	170 metres	Ground level views – heavily screened by garden vegetation and intervening trees and other vegetation	X	✓	✓	✓	Low
19	Newhouse Farmhouse *	140 metres	Front ground and upper level views – screened by garden vegetation and intervening roadside trees and other vegetation	X	✓	✓	✓	Medium
20	New Barn	100 metres	Front ground and upper level views – screened by garden vegetation and intervening roadside trees and other vegetation	X	✓	✓	✓	Medium
21	Newhouse Farm Business Park	150 metres	Ground level views – screened by garden vegetation, buildings and intervening roadside trees and other vegetation	X	✓	✓	✓	Low
22	Moorhead Farm and outbuildings	30 – 70 metres	Rear ground and upper level views – heavily screened by garden vegetation and intervening roadside trees and other vegetation	X	✓	✓	✓	Low
23	Berheley's and Casamanda	0 - within site	Rear ground and upper level views – partially screened by garden vegetation and intervening trees and other vegetation	✓	✓	✓	✓	High
24	Redfeathers	0 – 60 metres	Rear ground level views – partially screened by garden vegetation and intervening trees and other vegetation	✓	✓	✓	✓	High
25	Squirrels	15 – 90 metres	Rear ground level views – partially screened by garden vegetation and intervening trees and other vegetation	✓	✓	✓	✓	High
26	Holbrook Park *, Holbrook Park House No. 1 to 10, and Garden Lodge	50 – 80 metres	Rear ground and upper level views – heavily screened by garden vegetation and intervening trees and other vegetation	X	✓	✓	✓	High
27	Holbrook Cottage and Sprucefield	10 – 30 metres	Rear and side ground and upper level views –	✓	✓	✓	✓	High

Ref No.	Receptor	Approximate distance from Application Site (metres)	Type of View	Direct view	Oblique View	Construction Works	Permanent Works	Sensitivity of Receptors
	Cottage		partially screened by garden vegetation and intervening trees and other vegetation					
28	Wall House and North End House	20 metres	Front ground and upper level views – partially screened by garden vegetation and intervening trees and other vegetation on Old Holbrook	X	✓	✓	✓	Medium
29	Cuckmere Bungalow	20 metres	Front and rear ground level views – substantially screened by garden vegetation and intervening trees and other vegetation on Old Holbrook	✓	✓	✓	✓	Medium
30	Cuckmere Farm and outbuildings	60 – 270 metres	Front, side and rear ground and upper level views – partially screened by garden vegetation and intervening trees and other vegetation	X	✓	✓	✓	Medium
31	Hollywick Farmhouse* / (Rapelands Farm)	20 metres	Rear and side ground level views – substantially screened by garden vegetation and intervening trees and other vegetation	✓	✓	✓	✓	Very High
32	Morris Cottages No.1 to 4 and Leaside Cottage (Willow House)	0 – 50 metres / Leaside Cottage within site	Front and rear ground level views – partially screened by garden vegetation and intervening trees and other vegetation	✓	✓	✓	✓	High
33	Morris Farm	0 - within site	Front ground level open views	✓	✓	✓	✓	High
34	Cedar Farm	120 metres	Front and side ground and upper level elevated views – partially screened by intervening trees and other vegetation	✓	✓	✓	✓	High
35	Morris Wood	260 metres	Rear ground and upper level elevated views – partially screened by intervening trees and other vegetation	✓	✓	✓	✓	High
36	Morris Farm – outbuildings /	0 - within	Front ground level open views	✓	✓	✓	✓	Low

Ref No.	Receptor	Approximate distance from Application Site (metres)	Type of View	Direct view	Oblique View	Construction Works	Permanent Works	Sensitivity of Receptors
	workshops	site						
37	Graylands House (Lafarge Training Centre)	0 – 50 metres	Front ground and upper level elevated views – partially screened by intervening trees and other vegetation	✓	✓	✓	✓	Medium
38	Graylands Business Park and car park	50 – 150 metres	Views substantially screened by adjoining buildings	✓	✓	✓	✓	Very Low
39	Home Farm, Abbotslea, and Pondtail Cottage	10 metres	Front ground and upper level views – partially screened by intervening trees and other vegetation	X	✓	✓	✓	High
40	Pondtail House and Pondtail Farm	10 – 20 metres	Front ground and upper level views – partially screened by intervening trees and other vegetation	✓	✓	✓	✓	High
41	Graylands Farm complex [Graylands Cottages (No.1 to 3), Southlands Cottage, Meadowview Cottage, Midsummer Barn, Northlands Cottage, and Haybarn Cottage]	20 – 80 metres	Predominantly rear ground and upper level views – partially screened by intervening trees and other vegetation	✓	✓	✓	✓	High
42	Wealdon and Langhurst Moat Cottage	10 metres	Front ground and upper level views – partially screened by intervening trees and other vegetation	✓	✓	✓	✓	High
43	Bramblehurst	0 - 10 metres	Front ground and upper level views – partially screened by intervening trees and other vegetation	✓	✓	✓	✓	High
44	Old Hawkesbourne, The Granary, Hawkesbourne Farmhouse*, The Diary and Old Hawkesbourne Farm	30 – 150 metres	Ground rear and upper level views – partially screened by intervening buildings, trees and other vegetation	✓	✓	✓	✓	High
45	Roffey Park *	+ 1.0 km	Rear ground and upper level views – open parts of the application site substantially screened by boundary vegetation and framework of trees / woods within the application site	✓	✓	✓	✓	High
Public Rights of Way (Roads / Byways / Footpaths and Bridleways)								
46	Users of Public Bridleway No.1585	0 - within	Transient open and partial views of eastern portion of	✓	✓	✓	✓	High

Ref No.	Receptor	Approximate distance from Application Site (metres)	Type of View	Direct view	Oblique View	Construction Works	Permanent Works	Sensitivity of Receptors
		site	the application site - substantially screened in places by intervening woodland and pathway trees and hedgerows					
47	Users of Public Footpath No.1586 north of A264	0 - within site	Transient open and partial views of eastern portion of the application site - partially screened in places by intervening trees and hedgerows	✓	✓	✓	✓	High
48	Users of Public Footpath No.1586 south of A264	0 - within site	Transient open views of a very small part of the application site at the A264 crossing – there are no views of the application site south of the A264 due to road embankment and tree belt	✓	✓	✓	✓	High
49	Users of Public Footpath No.1587 and 1588	350 – 1000 metres	Transient open and partial views of eastern portion of the application site - partially screened in places by intervening trees and hedgerows	✓	✓	✓	✓	Very High (in AONB)
50	Users of Public Footpath No.1589	40 – 350 metres	Transient open and partial views of eastern portion of the application site - partially screened in places by intervening trees and hedgerows	✓	✓	✓	✓	High
51	Users of Public Footpath No.1590	20 – 450 metres	Transient open and partial views of a small part of the eastern portion of the application site - partially screened in places by intervening trees and hedgerows	✓	✓	✓	✓	High
52	Users of Public Footpath No.1591	250 – 450 metres	Transient open and partial views of a small part of the eastern portion of the application site - partially screened in places by intervening trees and hedgerows	✓	✓	✓	✓	High
53	Users of Public Footpath No.1592	180 – 250 metres	Transient open and partial views of a small part of the eastern portion of the	✓	✓	✓	✓	High

Ref No.	Receptor	Approximate distance from Application Site (metres)	Type of View	Direct view	Oblique View	Construction Works	Permanent Works	Sensitivity of Receptors
			application site					
54	Users of Public Footpath No.1575	0 - within site	Transient open and partial views of the central portion of the application site - partially screened in places by intervening trees and hedgerows	✓	✓	✓	✓	High
55	Users of Public Footpath No.1421	0 - within site	Transient open and partial views of the western portion of the application site - partially screened in places by intervening trees and hedgerows	✓	✓	✓	✓	High
56	Users of Public Footpath No.1574 / Mercer Road	0 – 350 metres	Transient partial views of a small part of the western portion of the application site - partially screened in places by intervening trees and hedgerows	✓	✓	✓	✓	High
57	Users of Public Footpath No.1573	300 metres	Transient open elevated views of a small part of the western portion of the application site – views partially curtailed by surrounding trees and landform.	✓	✓	✓	✓	High
58	Users of Public Footpath No.1577	1000 to 1400 metres	Transient open views of a small part of the north western portion of the application site – views substantially curtailed by surrounding trees and landform.	✓	✓	✓	✓	High
59	Users of a section of the A264 / Dorking Road	0 - within site	Transient open views along the road with oblique partial views looking north towards the main part of the application site which are substantially screened by intervening woodland and roadside hedges / trees	✓	✓	✓	✓	Low
60	Users of a section of Rusper Road north of the A264	0 – majority within site	Transient open views along the road with oblique partial views looking east and west towards the central parts of the application site which are partially screened by	✓	✓	✓	✓	Low

Ref No.	Receptor	Approximate distance from Application Site (metres)	Type of View	Direct view	Oblique View	Construction Works	Permanent Works	Sensitivity of Receptors
			intervening roadside hedges / trees					
61	Users of a section of Old Holbrook / Northlands Road	0 – 350 metres	Transient open views along the road with oblique partial and glimpsed views looking east and west towards part of the application site – majority of views are substantially screened by intervening roadside hedges / trees	✓	✓	✓	✓	Low
62	Users of a section of Langhurstwood Road	0 – 100 majority within site	Transient open views along the road with oblique partial and glimpsed views looking east towards the western parts of the application site – majority of views are substantially screened by intervening roadside hedges / trees	✓	✓	✓	✓	Low
63	Users of a section of the access road to Warnham Works	0 50 – adjoining the site	Transient partial views of a small part of the western portion of the application site - partially screened in places by intervening trees and hedgerows	✓	✓	✓	✓	Low
64	Users of a section of Graylands House (Lafarge Training Centre) access road	0 – 10 metres	Transient open and partial elevated views of a small part of the western portion of the application site - partially screened in places by intervening trees and hedgerows	✓	✓	✓	✓	Low
65	Users of a section of the access road to Morris Farm	0 - within site	Transient open views of a small part of the application site	✓	✓	✓	✓	Low
66	Users of a section of the access road to Cuckmere Farm	5 – 150 metres	Transient open northward views of a small part of the application site	✓	✓	✓	✓	Low
67	Users of a section of Rusper Road south of the A264	0 – 100 metres - majority within site	Transient open views along the road looking northwards of the application site – majority of the application site north of the A264 screened	✓	✓	✓	✓	Low
68	Users of a section of Wimland Road	0 – 550 metres - part	Transient open views along the road with oblique partial views looking east	✓	✓	✓	✓	Low

Ref No.	Receptor	Approximate distance from Application Site (metres)	Type of View	Direct view	Oblique View	Construction Works	Permanent Works	Sensitivity of Receptors
		within site	towards the eastern parts of the application site which are partially screened by intervening roadside hedges / trees					
69	Users of a section of Benson's Lane	150 metres	Transient open and oblique partial views looking east towards the eastern parts of the application site which are partially screened by intervening roadside hedges / trees	✓	✓	✓	✓	Low
70	Users of a section of Old Crawley Road / Clovers Way	50 – 500 metres	Transient open and oblique partial views looking north towards the eastern parts of the application site which are partially screened by intervening roadside hedges / trees	✓	✓	✓	✓	Low
71	Users of a section of the access track to Owlscastle Farm	0 - within site	Transient open and partial views of a small part of the eastern parts of the application site	✓	✓	✓	✓	Low
72	Users of a section of Horsham to Crawley railway line	0 – 700 metres - part within site	Transient open and partial views of a small part of the eastern parts of the application site	✓	✓	✓	✓	Low
73	Users of a section of Horsham to Dorking railway line	400 metres	Transient open, partial and glimpsed views looking east towards the western parts of the application site – majority of views are substantially screened by trackside vegetation and intervening trees and hedgerows adjoining Langhurstwood Road	✓	✓	✓	✓	Low
Community facilities / Open spaces								
74	Users of Earles Meadow Public Open Space to south of the A264	50 – 200 metres	Open views across the open space looking northwards towards the application site – views of the eastern parts of the application site substantially screened by intervening trees and other vegetation occupying the	✓	✓	✓	✓	High

Ref No.	Receptor	Approximate distance from Application Site (metres)	Type of View	Direct view	Oblique View	Construction Works	Permanent Works	Sensitivity of Receptors
			A264 embankments					
75	Chennells Brook Farm – Motte and Bailey Castle	0 – 50 metres	Partial views northwards from castle – substantially screened by surrounding vegetation and hedgerow along A264	✓	✓	✓	✓	Medium

Baseline Lighting Assessment

11.4.110 The baseline assessment for the lighting studies involved gathering and mapping information about existing lighting in the locality. The methodology for the assessment of the effects of the lighting associated with the Proposed Development has been developed from the document entitled “Lighting in the Countryside: Towards Good Practice” (1997)²⁰ and “Guidance Notes for the Reduction of Obtrusive Light” 2011²¹. These documents sets out the initial step in the baseline assessment, which is primarily a desk top exercise to identify any planning policy areas or other designations that may need to be taken into account whilst the Guidance Notes for the Reduction of Obtrusive Light includes a range of environmental zones useful in describing the area within which a development sits. This work has already been completed as part of the baseline studies with the relevant landscape designations covering the area.

11.4.111 The next stage is to consider how dark the area surrounding the application site is at present. Existing sources of light in the area include:

- Existing security lighting associated with existing farms and residential dwellings within the application site and within the immediate surrounding area;
- Lighting associated with the A264 / Dorking Road and its roundabout junction;

²⁰ Countryside Commission, July 1997: “Lighting in the Countryside: Towards Good Practice” - out of print - only available online www.communities.gov.uk - The National Archives <http://webarchive.nationalarchives.gov.uk/20120919132719/http://www.communities.gov.uk/archived/publications/planningandbuilding/lighting> .

²¹ Institute of Lighting Professionals (ILP) 2011, “Guidance Notes for the Reduction of Obtrusive Light” (GN01:2011) ILP.

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- General “night sky glow” from existing urban areas to the north (Horsham) and to the west (Warnham Works) of the application site.

11.4.112 The main potential receptors of additional light (pollution) include existing properties within and adjoining the application site and users of the existing roads and public footpaths in the immediate area of the application site, all of which are currently affected to some degree by the existing light sources. The application site is already affected to a degree by existing lighting from existing built up area of Horsham and lighting on the A264 at the Ruser Road and Moorhead roundabouts. However, the area generally devoid of light sources creating relatively ‘dark skies’ within the area surrounding the application site.

11.4.113 The sensitivity of the local landscape to the introduction of additional lighting has been considered. The sensitivity of the landscape depends on visibility remoteness and scenic quality with the degree of enclosure afforded by landform and vegetation being key factors, along with land use patterns such as field boundaries and settlement dispersal.

11.4.114 Remoteness and scenic quality are interrelated and are reflected in the character of an area. The area is not designated as forming part of an Area of Outstanding Natural Beauty or Special Landscape Area which seeks to protect the unique high landscape quality of the area but an area of countryside, albeit the planning policy aims for the countryside include minimizing light pollution. Therefore the general area is sensitive to the introduction of new lighting although the application site is already subject to existing lighting from security lighting associated with existing farms and residential dwellings within the application site and within the immediate surrounding area.

Overall Findings on Lighting

11.4.115 The baseline assessment showed that the landscape condition of the application site is considered to be ‘low - moderate’, due to its existing uses and the state of the existing field boundary hedgerows and trees as they are generally in a reasonable / maintained condition. The overall sensitivity of the application site to change is also considered to be ‘medium to low’ due to the application site’s uses and its location within the open countryside. However, the natural containment of the application site provided by surrounding hedgerows and trees ensure that any change to the application site is localised to the vicinity of the application site.

11.4.116 The baseline assessment also indicates that the area surrounding the application site is sensitive to the introduction of new lighting but the application site is already affected to a degree by lighting at night time from development close to and within the application site. On the basis of the above and by reference to the “Guidance Notes for the Reduction of

Obtrusive Light” 2011²² and the environmental zones set out in this document it is considered that the application site is located within Environmental Zone – E2 – Rural (low district brightness) albeit it is located close to the High Weald AONB.

11.5 Key Impacts and Likely Significant Effects

11.5.1 In this section, an assessment of the landscape and visual effects of the proposed development without mitigation has been undertaken for the predicted effects during construction as well as those effects on completion. In latter sections, the residual effects of the proposed development after mitigation are described. Details of the Proposed Development are set out in Chapter 5 – “The Proposed Development” but in summary they are as follows:

“The Proposed Development is for the creation of a mixed use strategic development at Land North of Horsham to include housing, a business park, retail, community centres, leisure facilities, education facilities, public open space, landscaping and related infrastructure. The development will include:

- Up to 2,750 homes, with a mix of house types and tenures to meet local needs;
- 46,450 m² (500,000 ft²) business park;
- two primary schools;
- a secondary school;
- provision for special educational needs;
- ‘early years’ provision;
- local centres and community facilities;
- retail provision of 4,900 m² (52,744 ft²) sales floorspace, together with other appropriate local shopping facilities;
- multi-use community centre;
- land safeguarded for a parkway railway station and associated uses including car parking;
- open space including a nature park, sport and recreation facilities, and allotments;

²² Institute of Lighting Professionals (ILP) 2011, “Guidance Notes for the Reduction of Obtrusive Light” (GN01:2011) ILP

-
- landscape buffers;
 - a cemetery;
 - commercial leisure facilities;
 - local transport infrastructure to include delivery of and/or contributions towards highway improvements, comprising:
 - o closure of Langhurstwood Road left in / left out junction onto A264 and re-alignment of Langhurstwood Road to the east with a new signalised roundabout on the A264;
 - o upgrade of the Rusper Road roundabout to a signalised roundabout;
 - o a new left in left out junction into the development east of Rusper Road;
 - o a new roundabout on Rusper Road;
 - o a new roundabout on Langhurstwood Road;
 - o a new crossroads junction on Old Holbrook;
 - o a new emergency access on Wimland Road;
 - o priority access for buses to/from Pondtail Drive;
 - o new pedestrian and cycle crossing points on the A264; and
 - o a number of off-site highways improvements.

11.5.2 The design principles below will be accorded to throughout the development in its entirety, and in each main phase:

- The development will be high quality and will respond to and complement the unique character, qualities and local distinctiveness of Horsham and the local area.
- The development will be well designed, with character areas and accessible focal points.
- The design and layout of the development will provide an appropriate transition to the 'landscape buffer' and the wider countryside beyond.
- The design of the development will demonstrate best practice design, sustainability and construction approaches from the UK and Europe".

11.5.3 The effects have been considered / assessed at three stages during the course of the proposed development. These include:

- Construction phase include retention and protection of existing vegetation, site clearance, land changes and construction of the proposed development. Chapter 4 contains the details of the construction period and any phasing;
- On completion – Year 1; it is assumed that many of the landscape mitigation measures will have been undertaken and start to establish; and
- Residual effects – 15 years after completion

11.5.4 The likely effects have been assessed based on the proposed building heights of the Proposed Development shown on the Building Height Parameter Plan Appendix 5.6/Drawing No.2153A-102G). The maximum height of the residential buildings would be up to 3 storeys (16 metres) and a maximum building height of 15 metres for commercial, retail and school development, as described in Chapter 4 of the ES.

Predicted Landscape Effects – Construction

Landscape Overview

11.5.5 The construction period of 15 years which will be phased over three phases of 5 year periods (subject to gaining planning permission) will generate a number of irreversible landscape changes. The principle activities that could have an effect upon the fabric, quality and character of the landscape during the enabling works and construction phases of the proposed development are set out in Table 11.4 below. The table facilitates a brief consideration of the potential landscape changes for each identified construction activity.

Table 11.4: Construction Phase – Predicted Landscape Changes and Effects

Identified Activity	Predicted Changes and Consequent Landscape Effects (Construction Phase)
Loss of landscape elements due to construction activities	Loss of some elements such as open arable and pasture fields, rough grasslands, sections of hedgerow, individual trees, groups of trees and small areas of woodland including Ancient Woodland primarily to provide access to various parts of the application site. These will be replaced initially by re-profiled ground levels to create building platforms for dwellings, community and school and retail / business park buildings, school playing fields, new sport pitches / facilities, 2m to 4m high noise bunds along the A264 depending the final design, a number of water attenuation ponds as well as construction compound sites.

Identified Activity	Predicted Changes and Consequent Landscape Effects (Construction Phase)
	<p>A number of buildings will also be removed (although they will be replaced as part of the development in another form) during the construction, namely outbuildings to the east and south of the Moated House Farm, commercial buildings near Morris Farm, building near Old Holbrook and number of barns / agricultural buildings within the eastern parts of the application site.</p> <p>The removal of existing land uses will have the consequence of creating a new temporary landscape of differing contrasting landscape character and elements with continual change and activity in differing parts of the application site over the 15 year construction period.</p> <p>However, the important landscape features within or surrounding the Site such as the majority of the hedgerows, large number of individual mature trees, groups of trees and areas of woodland including Ancient Woodland found within and on the boundaries of the application site will be protected and retained.</p>
<p>Introduction of new temporary elements including materials stockpiles, site compounds, lighting, fencing/hoardings around the trees/groups of trees and wooded areas to protect them and to the perimeter of the each parcel of housing / commercial areas / community facilities etc to be constructed within the different phases of the application site.</p>	<p>Introduction of new, contrasting temporary elements within the application site area which will form a new landscape pattern and temporary change to the character of the application site. The change will result in a temporary change of differing parts of the application site relating to each phase and to a lesser extent within the immediate surrounding area.</p>
<p>Increased movement of plant and vehicles on local roads leading to the A264 and the application site including some crane activity</p>	<p>Increases in movement and noise levels albeit temporarily will generate a series of shifting patterns across different parts of the application site during the 15 years (three phases) of the construction phase. As these changes extend over the application site and differing areas are built out (completed / become operational) the landscape character of the application site will change, some as permanent changes such the housing / built development and other as temporary change such as the sports and open space areas. The use of mobile cranes during the construction period is likely to have a more widespread effect (primarily on local views).</p>
<p>Highway improvements as a consequence of the new development.</p>	<p>Temporary disruption of traffic flow patterns primarily during construction of the three new road junctions on to the A264 in the initial phases of the development, and increased</p>

Identified Activity	Predicted Changes and Consequent Landscape Effects (Construction Phase)
	traffic during the 15 year construction period may have a consequential landscape effect.

11.5.6 The magnitude of change resulting from the above would be 'medium' (i.e. partial loss/alteration or moderate enhancement of the landscape resource) although in relation to removed buildings the change would be 'very high'. The sensitivity of the application site and surrounding landscape is considered to be 'low to medium' due to its existing uses and the state of the existing field boundary hedgerows and trees as they are generally in a reasonable / maintained condition and its location within the open countryside. However, the natural containment of the application site provided by surrounding hedgerows and trees ensure that any change to the application site is localised to the vicinity of the application site. The effects of the construction works on the landscape would generally be adverse due to site clearance and the cumulative effects of various construction activities across the application site.

11.5.7 In accordance with the methodology described in paragraph 11.1.40 Table 11.7.1 contained in Appendix 11.19; considers the construction effects without mitigation on the landscape character and features during the construction phase of the development and assess their significance. It should be noted that whilst the construction works will continue over a relatively long period (15 years), the landscape effects will be relatively short and temporary depending on the stage of development in differing parts of the application site.

Conclusions on Landscape Effects – Construction

11.5.8 In total ten potential landscape receptors have been identified and considered in this assessment. Moderate adverse impacts will occur on the application site due to its low to medium sensitivity and medium magnitude of change to features within the site and change in the landscape pattern's and character within the application site and also some local character areas but the effect on the wider surrounding area and surrounding local character areas would reduce marginally to moderate to moderate / minor adverse impacts primarily due to the natural containment of the application site provided by surrounding hedgerows and trees that ensure that any change to the application site is localised to the vicinity of the application site.

11.5.9 However, the impact of the construction activities will be for a relatively short period depending on the area of the application site involved and the majority of the activities would be contained within in the application site itself with a relatively limited number of trees, lengths of hedgerow and areas of woodland lost due to the construction works considering the size and scale of the development. There will be substantial adverse effects on a

very small area of ancient woodland as this is required to be removed to provide an access route between the eastern and central parts of the application site and moderate to moderate / minor adverse effects on the remaining trees, hedgerow and woodlands which are not ancient woodland.

- 11.5.10 The assessment of other receptors and character areas within the wider landscape, including the Policy 27 – Settlement Coalescence and High Weald AONB indicate that the likely construction works will have minor adverse to negligible impacts, primarily due to indirect impacts on views towards the application site when seen from the wider area due to the possible use of mobile cranes (and their activities) and these are assessed in a later section of the chapter.

Predicted Landscape Effects – On Completion

Landscape Overview

- 11.5.11 Completion of the proposed development will result in a number of irreversible landscape changes. The principle activities that could affect the fabric, quality and character of the landscape on completion and in the longer term are set out in Table 11.5 below.

Table 11.5: On completion - Predicted Landscape Changes and Effects

Identified Activity	Predicted Changes and Consequent Landscape Effects (On Completion)
Introduction and use of new buildings including rear gardens, communal areas / open spaces, fencing and lighting using a range of building forms, sizes / types, heights and densities across the application site with taller buildings and densities generally located adjoining the A264 with a transition to lower heights and densities towards the edge of the application site including retaining areas of the application site 'open' within the more elevated parts of the application site and associated lighting.	The arrangement of new buildings and associated infrastructure will generate new patterns both in relationship to each other and in their relationship to existing elements. The new landscape character however will contrast to a degree with the surrounding landscape due to an increase in built forms (including building heights / densities) and arrangement of open spaces / new landscape areas and planting within and around the development. The existing landscape patterns and features within the application site have formed the general framework for the developments layout and design and have been retained where possible.
Introduction and use of new infrastructure in the form of revised road and lighting layouts, footbridge over the A264, street / amenity furniture, formal and informal play and sports areas and arrangement of new hard and soft landscape areas, water attenuation features, earth bunds / fences to reduce noise and new wildlife / ecological habitats and other features.	Introduction of a new road and public / private space layout, associated lighting, and arrangement of landscape planting etc will form a new different landscape pattern and character to the application site. The change however, will result in a permanent change to different parts of the application site and to a lesser degree to the immediate surrounding area. The proposed development will provide opportunities for landscape enhancements, management of the existing hedgerows and

Identified Activity	Predicted Changes and Consequent Landscape Effects (On Completion)
	trees, areas of woodland including Ancient Woodland located within and on the boundaries of the Application Site and create a transition with the adjoining countryside through the use of substantial landscape buffers / areas of open space to the east, south and west and new landscape planting and open spaces occupying the elevated northern parts of the application site.
Highway access changes / improvements as a consequence of the new development.	Introduction of new traffic calming features, street furniture, signage, lighting and change in traffic flow patterns (with diversions where necessary) following completion.

11.5.12 The magnitude of change would vary from medium to low depending on the location within the application site on completion (Year 1) and therefore the effects would also vary due to the low to medium sensitivity of the application site and immediate surrounding landscape. The effects of the proposed development on the landscape on completion would be from moderate to moderate / minor adverse as it would contrast with the adjoining areas of development to the south (North Horsham) and adjoining areas of countryside to the north, west and east and the cumulative effects of new elements and landscape features including the loss of a small area of ancient woodland.

11.5.13 In accordance with the methodology described in paragraph 11.1.40, Table 11.7.2 contained in Appendix 11.19; considers the effects without mitigation on the landscape character and features on completion and assess their significance.

Conclusions on Landscape Effects – On Completion

11.5.14 In total ten potential landscape receptors have been identified and considered in this assessment. Moderate to moderate / minor adverse effects will occur on the application site and some local landscape character areas which overlap with the application site which is to be expected. The character of the application site will inevitably change as the proposed development will create a new landscape character type (townscape) and elements predominantly built development which will replace the previous agricultural land. There will be substantial adverse effects due to the loss of a very small area of ancient woodland but this is required to be removed to provide an access route between the eastern and central parts of the application site and moderate / minor adverse effects on the remaining trees, hedgerow and woodlands which are not ancient woodland. However, the development would introduce of new areas of open space, landscape features and areas of new planting which would improve local environment, adding interest to the character of the surrounding area.

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- 11.5.15 In addition, the proposed development would form a logical extension and new neighbourhood to the settlement of Horsham with firm and defensible development boundaries and transition to areas of open countryside to the north, west and east through the use of lower building heights and densities and substantial landscape buffers / open space adjoining these boundaries.

Predicted Visual Effects and their Significance (Construction and On Completion – Year 1)

Visual Assessment Overview

- 11.5.16 Paragraphs 11.1.123 to 11.1.160 sets out the existing visual baseline appraisal of the application site and surrounding area and the assessment identified a limited number of potential visual receptors mainly near distance views towards the application site from Public Rights of Way (PROW- roads, byways, bridleways and footpaths) in the area as well as a number of residential properties within the local surrounding area.
- 11.5.17 A number of representative views have been selected (See Photographic Appendix 11.12 – Photomontages PM1 to PM9) where the proposed development is likely to be seen and assessed in Appendix 11.18. These viewpoints together with the Core Group of Visual Receptors [Residential/Commercial/PROW and Open spaces] in the area around the application site have also been assessed during construction and immediately following completion (Year 1). The predicted longer term effects (Year 15) have also been assessed. The location of the viewpoints and Core Group of Visual Receptors are shown on Appendix 11. 7 – Visual Impact Assessment - Baseline Plan.
- 11.5.18 In order to assist in the assessment of the likely visual effects of the proposed development nine wireframe day time photomontages have been prepared and these are included in the third part of the Photographic Appendix 11.12 – Photograph Sheets – Wireframe Photomontages – PM1 to PM9.
- 11.5.19 It is accepted that any development would result in adverse visual effects on the sensitive receptors. However, the effects of the proposed development are considered to be of local importance and there are, in addition to providing a new housing, business, commercial / retail development and community facilities, a number of proposals to compensate for the loss of trees due to the proposed development such as new planting and wildlife habitats and enhancements.

Conclusions on Assessment of Selected Viewpoints

- 11.5.20 Of the 9 viewpoints assessed, the majority apart from VP No.8 are located within the application site and of the 9 viewpoints, 6 (VP No's.3, 4, 5, 6, 7 and 9) are predicted to experience significant adverse visual effects

(Moderate / Substantial or higher) during construction and at completion Year 1.

- 11.5.21 These is primarily due to the sensitivity of the viewpoint location, the majority are situated on public footpaths (high sensitivity receptors) within the application site where the users focus is on the view / surrounding landscape, or the close proximity of the viewpoint to the built development which would result in very high magnitude of change. The remaining viewpoints are predicted to experience moderate to minor adverse visual effects and therefore not significant.

Core Group of Visual Receptors, Predicted Effects and their Significance

- 11.5.22 Table 11.7.3 contained in Appendix 11.19 sets out the Core Group of Visual Receptors within the vicinity of the application site, assess the change to views, and predicts the significance of effects for construction and on completion - Year 1 (and Year 15) of the proposed development.

Conclusion on Core Group of Visual Receptors

- 11.5.23 75No. visual receptors including a number of residential dwellings, commercial premises, roads and public bridleways, footpaths and areas of public open space in the area surrounding the application site have been assessed and a large number of these are located either within or in close proximity to the application site. All of the 75 core group of visual receptors which were assessed will experience a degree of change to views from the dwellings, work places public rights of way or public open spaces as expected as the majority of application site forms open countryside comprising a mosaic of agricultural land hedgerows trees and woodlands.
- 11.5.24 Of the 75 core group of receptors, half (35) will experience some or minimal (moderate or less significance) visual effects during construction with a slightly increased number of receptors (40) experiencing some or minimal (moderate or less) visual effects on completion / Year 1.
- 11.5.25 Two receptors are predicted to experience major adverse visual effects (Leaside Cottage / Willow House and Morris Farm) during construction and on completion / Year 1, primarily to the very close proximity of the northern link road to these properties. Three dwellings (Moated House Farm, King's Farmhouse and Hollywick Farmhouse) are predicted to experience substantial adverse visual effects whilst a further 12 residential and commercial receptors (Moated House Farm outbuildings, Brook House / Brook House Barn / Sunnybank Farm, Berheley's and Casamanda, Redfeathers, Squirrels, Holbrook Park / Holbrook Park House and Garden Lodge, Holbrook Cottage and Sprucefield Cottage, Cedar Farm, Graylands Farm complex and Bramblehurst) are predicted to experience Moderate / Substantial adverse visual effects during construction and on completion / Year 1. This is mainly due to the sensitivity of the dwellings as listed buildings, the proximity of the

dwelling to construction activities and development and the open nature and extent of the views from parts of the property.

- 11.5.26 The four footpaths through the application site (Public Footpath No's.1585, 1586, 1575 and 1421) and a number of the roads adjoining or extending through the application site (A264, Rusper Road (north and south), Old Holbrook and Langhurstwood Road) will experience varying effects from moderate / substantial adverse to negligible visual effects during construction mainly due to the sensitivity of the receptors or the introduction of new roundabouts, road improvement or crossing points on the routes, in place where, the magnitude of change would be prominent or recognisable new element (very high / high) or distinctive feature (medium) albeit these changes would be temporary and for a short period only.
- 11.5.27 Of the two areas of public open space which have been assessed (Earles Meadow Open Space and area around the Chennells Brook Farm motte and bailey castle, south of the A264), moderate / substantial adverse visual effects are likely to occur from the area of open space to the north of the motte and bailey castle during construction and on completion / Year 1. This is due to the introduction of a new footbridge immediately adjacent to the open space and loss of a short section of hedgerow and trees close to the road which is to be replanted and will take time to establish and mature before screening to lower portion of the new bridge structure.
- 11.5.28 In addition, views from the High Weald (Roffey Park House and Public Footpath No.1588) are predicted to experience moderate / substantial to moderate adverse visual effects primarily due to the sensitivity of the viewpoints / receptors as the perceived changed to the views will be negligible, some distance from the application site and development substantially screened by intervening vegetation and trees / vegetation within the application site itself.
- 11.5.29 Table 11.6 below summarizes the visual assessment of the core group of residential and other receptors without mitigation.

Table 11.6 – Summary of Visual Effects for the Core Group of Visual Receptors

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation
Residential Properties and Commercial Premises			
1	Moated House Farm*	Const	Substantial to Moderate / Substantial Adverse
		Year 1	Substantial to Moderate / Substantial Adverse
		Year 15	Moderate / Minor Beneficial
2	Moated House Farm –	Const	Moderate / Substantial Adverse

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation
	working farm outbuildings	Year 1	N/A
		Year 15	N/A
3	Moated House Farm – office complex	Const	Moderate / Minor to Minor Adverse
		Year 1	N/A
		Year 15	N/A
4	Smallholding within Bush Copse	Const	Moderate / Minor to Minor Adverse
		Year 1	N/A
		Year 15	N/A
5	Owlscastle Farm and Owlscastle Barn	Const	Moderate / Substantial to Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse
		Year 15	Minor Beneficial
6	King's Farmhouse*	Const	Substantial to Moderate / Substantial Adverse
		Year 1	Substantial to Moderate / Substantial Adverse
		Year 15	Moderate to Minor Beneficial
7	Benson's Farm Cottages No.1 and 2	Const	Moderate Adverse
		Year 1	Moderate Adverse
		Year 15	Minor Beneficial
8	Brook House*, Brook House Barn* and Sunnybank Farm	Const	Moderate / Substantial Adverse
		Year 1	Moderate / Substantial Adverse
		Year 15	Moderate / Minor Beneficial
9	Benson's Farm – working farm and outbuildings	Construction	Minor Adverse
		Year 1	Minor Adverse
		Year 15	Negligible / Minor Beneficial
10	Frog and Nightgown public house	Const	Moderate to Minor Adverse
		Year 1	Minor Adverse
		Year 15	Negligible / Minor Beneficial
11	Benson's House	Const	Moderate to Minor Adverse
		Year 1	Minor Adverse
		Year 15	Negligible / Minor Beneficial
12	Benson's Lane - working farm outbuildings	Const	Minor Adverse
		Year 1	Minor Adverse

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation
		Year 15	Negligible / Minor Beneficial
13	Benson's Cottage	Const	Minor Adverse
		Year 1	Minor Adverse
		Year 15	Negligible / Minor Beneficial
14	Budds Farmhouse and outbuildings	Const	Minor Adverse
		Year 1	Minor Adverse
		Year 15	Negligible / Minor Beneficial
15	Clyst Hayes*	Const	Moderate / Minor to Minor / Negligible Adverse
		Year 1	Moderate / Minor to Minor / Negligible Adverse
		Year 15	Negligible / Minor Beneficial
16	Clovers* and Rose Cottages No.6 to 10	Const	Moderate / Minor to Minor / Negligible Adverse
		Year 1	Moderate / Minor to Minor / Negligible Adverse
		Year 15	Negligible / Minor Beneficial
17	Roffey Place* (Christian Training Centre)	Const	Moderate Adverse
		Year 1	Moderate Adverse
		Year 15	Moderate to Minor Beneficial
18	Newhouse Farm Grain Store – working farm	Const	Minor Adverse
		Year 1	Minor Adverse
		Year 15	Negligible to Minor Beneficial
19	Newhouse Farmhouse*	Const	Moderate / Minor Adverse
		Year 1	Moderate / Minor Adverse
		Year 15	Negligible to Minor Beneficial
20	New Barn	Const	Moderate / Minor Adverse
		Year 1	Moderate / Minor Adverse
		Year 15	Negligible to Minor Beneficial
21	Newhouse Farm Business Park	Const	Minor Adverse
		Year 1	Minor Adverse
		Year 15	Negligible to Minor Beneficial
22	Moorhead Farm and outbuildings	Const	Minor Adverse
		Year 1	Minor Adverse
		Year 15	Negligible to Minor Beneficial

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation
23	Berheley's and Casamanda	Const	Major Substantial Adverse
		Year 1	N/A
		Year 15	N/A
24	Redfeathers	Const	Major Substantial Adverse
		Year 1	N/A
		Year 15	N/A
25	Squirrels	Const	Moderate / Substantial to Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse
		Year 15	Minor to Moderate Beneficial
26	Holbrook Park*, Holbrook Park House No. 1 to 10, and Garden Lodge	Const	Moderate / Substantial to Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse
		Year 15	Minor to Moderate Beneficial
27	Holbrook Cottage and Sprucefield Cottage	Const	Moderate / Substantial Adverse
		Year 1	Moderate / Substantial to Moderate Adverse
		Year 15	Minor to Moderate Beneficial
28	Wall House and North End House	Const	Moderate / Minor Adverse
		Year 1	Moderate / Minor Adverse
		Year 15	Minor to Negligible Beneficial
29	Cuckmere Lodge (bungalow)	Const	Moderate / Minor Adverse
		Year 1	Moderate / Minor Adverse
		Year 15	Minor to Negligible Beneficial
30	Cuckmere Farm and outbuildings	Const	Moderate / Minor Adverse
		Year 1	Moderate / Minor Adverse
		Year 15	Minor to Negligible Beneficial
31	Hollywick Farmhouse* / (Rapelands Farm)	Const	Substantial Adverse
		Year 1	Substantial to Moderate / Substantial Adverse
		Year 15	Minor Beneficial
32	Morris Cottages No.1 to 4 and Leaside Cottage (Willow House)	Const	Major Substantial to Moderate / Minor Adverse
		Year 1	Major Substantial to Moderate / Minor Adverse
		Year 15	Moderate / Substantial Adverse to Negligible Beneficial
33	Morris Farm	Const	Major Substantial to Moderate / Substantial

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation
			Adverse
		Year 1	Major Substantial to Moderate / Substantial Adverse
		Year 15	Moderate / Substantial Adverse to Negligible Beneficial
34	Cedar Farm	Const	Moderate / Substantial to Moderate Adverse
		Year 1	Moderate / Substantial to Moderate / Minor Adverse
		Year 15	Negligible / Minor Beneficial
35	Morris Wood	Const	Moderate / Minor Adverse
		Year 1	Moderate / Minor Adverse
		Year 15	Negligible / Minor Beneficial
36	Morris Farm – working outbuildings / employment area	Const	Moderate / Substantial Adverse
		Year 1	N/A
		Year 15	N/A
37	Graylands House (Lafarge Training Centre)	Const	Moderate / Minor Adverse
		Year 1	Moderate / Minor Adverse
		Year 15	Minor Beneficial
38	Graylands Business Park and car park	Const	Negligible Adverse / Neutral
		Year 1	Negligible Adverse / Neutral
		Year 15	Negligible Beneficial
39	Home Farm, Abbotslea, and Pondtail Cottage	Const	Moderate Adverse
		Year 1	Moderate Adverse
		Year 15	Minor Beneficial
40	Pondtail House and Pondtail Farm	Const	Moderate Adverse
		Year 1	Moderate Adverse
		Year 15	Minor Beneficial
41	Graylands Farm complex [Graylands Cottages (No.1 to 3), Southlands Cottage, Meadowview Cottage, Midsummer Barn, Northlands Cottage, and Haybarn Cottage]	Const	Moderate / Substantial to Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse
		Year 15	Minor Beneficial
42	Wealdon and Langhurst Moat Cottage	Const	Moderate Adverse
		Year 1	Moderate Adverse

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation
		Year 15	Minor Beneficial
43	Bramblehurst	Const	Moderate / Substantial to Moderate Adverse
		Year 1	Moderate Adverse
		Year 15	Minor Beneficial
44	Old Hawkesbourne, The Granary, Hawkesbourne Farmhouse*, The Diary and Old Hawkesbourne Farm	Const	Moderate Adverse
		Year 1	Moderate Adverse
		Year 15	Moderate / Minor Beneficial
45	Roffey Park House *	Const	Minor Adverse
		Year 1	Minor Adverse
		Year 15	Neutral
Public Rights of Way (Roads / Byways / Footpaths and Bridleways)			
46	Users of Public Bridleway No.1585 / Bush Lane	Const	Moderate / Substantial to Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse
		Year 15	Minor Beneficial
47	Users of Public Footpath No.1586 north of A264	Const	Moderate / Substantial to Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse
		Year 15	Minor Beneficial
48	Users of Public Footpath No.1586 south of A264	Const	Moderate to Minor Adverse
		Year 1	Minor Beneficial
		Year 15	N/A
49	Users of Public Footpath No's.1587 and 1588	Const	Moderate / Substantial to Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse
		Year 15	Minor Beneficial
50	Users of Public Footpath No.1589	Const	Moderate to Minor Adverse
		Year 1	Moderate to Minor Adverse
		Year 15	Negligible / Minor Beneficial
51	Users of Public Footpath No.1590	Const	Moderate to Minor Adverse
		Year 1	Moderate to Minor Adverse
		Year 15	Negligible / Minor Beneficial
52	Users of Public Footpath No.1591	Const	Moderate to Minor Adverse
		Year 1	Moderate to Minor Adverse

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation
		Year 15	Negligible / Minor Beneficial
53	Users of Public Footpath No.1592	Const	Moderate to Minor Adverse
		Year 1	Moderate to Minor Adverse
		Year 15	Negligible / Minor Beneficial
54	Users of Public Footpath No.1575	Const	Moderate / Substantial to Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse
		Year 15	Minor Beneficial
55	Users of Public Footpath No.1421	Const	Moderate / Substantial to Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse
		Year 15	Minor Beneficial
56	Users of Public Footpath No.1574 / Mercer Road	Const	Moderate / Substantial to Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse
		Year 15	Minor Beneficial
57	Users of Public Footpath No.1573	Const	Moderate to Minor Adverse
		Year 1	Moderate to Minor Adverse
		Year 15	Negligible / Minor Beneficial
58	Users of Public Footpath No.1577	Const	Minor Adverse
		Year 1	Minor Adverse
		Year 15	Negligible / Minor Beneficial
59	Users of a section of the A264 / Dorking Road	Const	Moderate / Substantial to Negligible Adverse
		Year 1	Moderate / Substantial to Negligible Adverse
		Year 15	Minor Beneficial
60	Users of a section of Rusper Road north of the A264	Const	Moderate / Substantial to Negligible Adverse
		Year 1	Moderate / Substantial to Negligible Adverse
		Year 15	Minor Beneficial
61	Users of a section of Old Holbrook / Northlands Road	Const	Moderate / Substantial to Negligible Adverse
		Year 1	Moderate / Substantial to Negligible Adverse
		Year 15	Minor Beneficial
62	Users of a section of Langhurstwood Road	Const	Moderate / Substantial to Negligible Adverse
		Year 1	Moderate / Substantial to Negligible Adverse
		Year 15	Minor Beneficial

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation
63	Users of a section of the access road to Warnham Works	Const	Moderate / Substantial to Negligible Adverse
		Year 1	Moderate / Minor to Negligible Adverse
		Year 15	Minor Beneficial
64	Users of a section of Graylands House (Lafarge Training Centre) access road	Const	Minor / Negligible Adverse
		Year 1	Minor / Negligible Adverse
		Year 15	Minor / Negligible Beneficial
65	Users of a section of the access road to Morris Farm	Const	Moderate / Substantial Adverse
		Year 1	N/A
		Year 15	N/A
66	Users of a section of the access road to Cuckmere Farm	Const	Minor Adverse
		Year 1	Minor Adverse
		Year 15	Minor to Negligible Beneficial
67	Users of a section of Rusper Road south of the A264	Const	Moderate / Substantial to Negligible Adverse
		Year 1	Moderate / Substantial to Negligible Adverse
		Year 15	Minor Beneficial
68	Users of a section of Wimland Road	Const	Moderate to Negligible Adverse
		Year 1	Moderate to Negligible Adverse
		Year 15	Minor Beneficial
69	Users of a section of Benson's Lane	Const	Moderate to Negligible Adverse
		Year 1	Moderate to Negligible Adverse
		Year 15	Minor Beneficial
70	Users of a section of Old Crawley Road / Clovers Way	Const	Minor Adverse
		Year 1	Minor Adverse
		Year 15	Minor Beneficial
71	Users of a section of the access track to Owlscastle Farm	Const	Moderate / Minor to Minor Adverse
		Year 1	Moderate / Minor to Minor Adverse
		Year 15	Minor Beneficial
72	Users of a section of Horsham to Crawley railway line	Const	Moderate Adverse
		Year 1	Moderate Adverse
		Year 15	Minor Beneficial
73	Users of a section of	Const	Minor Adverse

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation
	Horsham to Dorking railway line	Year 1	Minor Adverse
		Year 15	Minor Beneficial
Community facilities / Open spaces			
74	Users of Earles Meadow Public Open Space to south of the A264	Const	Moderate / Minor Adverse
		Year 1	Moderate / Minor Adverse
		Year 15	Negligible to Minor Beneficial
75	Chennells Brook Farm - Motte and Bailey Castle	Const	Moderate / Substantial to Negligible Adverse
		Year 1	Moderate / Substantial to Negligible Adverse
		Year 15	Minor Beneficial

Effects of Proposed Lighting

- 11.5.30 The baseline assessment also indicates that the area surrounding the application site is sensitive to the introduction of new lighting but the application site is already affected to a degree by lighting at night time from development close to and within the application site and concluded that the environmental zone that the application site is located within is Environmental Zone – E2 – Rural (low district brightness) albeit it is located close to the High Weald AONB.
- 11.5.31 The proposed development is likely to generate additional lighting over and above the existing situation and this is a matter that will need to be carefully considered at the detail application stage. However, at this stage the details of the lighting of the proposed development are unknown but it is anticipated that additional lighting will be minimized by careful design, positioning of street lighting and lights to illuminate public areas / buildings and by the use of low lux levels and directional cut off lanterns and fittings that reduce light spill and night glow / pollution. The main source of additional light pollution is likely to be the floodlights associated with the sport hubs located within the eastern parts of the application site. However, the use of directional cut off light fittings and introduction of limitation on the evening and late night uses of the facilities will minimize the likely visual effects on this part of the application site and immediate surrounding wildlife habitats.
- 11.5.32 On the basis of the above, it is considered, overall, that on completion of the proposed development that the effect of new lighting on the surrounding area would be minor adverse significance.

Cumulative Impacts

- 11.5.33 Cumulative impacts result from the combined impacts of multiple developments. The effects from a single development may not be significant on their own but when combined with other developments and their impacts may become significant. Chapter 3 of the ES identifies the committed developments to be assessed as part of this Environmental Statement although of the listed committed development proposals in the area surrounding the application site none would result in additional cumulative landscape and visual impacts arising from the proposed development.
- 11.5.34 However, Britaniacrest Recycling Ltd has submitted a planning application to Surrey County Council for development of a recycling, recovery and renewable energy facility (3Rs) on the Wealden Brickworks site to the west of Langhurstwood Road and west of the application site.

Cumulative Effects on Landscape Character

- 11.5.35 By reference to Figure 11.1, the Wealden Brickworks site lies within Local Landscape Character Area No.15 - Warnham Brickworks as defined in the HDC Landscape Character Assessment 2003²³ and adjoins LCA No.10 – Kilnwood Copse to Graylands and LCA No.14 – Holbrook Park.
- 11.5.36 LCA No.15 – Warnham Brickworks contains areas of existing employment which are substantially screened from views in the surrounding area. The Britaniacrest 3Rs development would result in minimal change to the character of LLCA No.15 during construction and on completion, albeit the size, scale and massing of the new building and 90 metre high chimney will dominate the area and become the prominent form of development within the enclave of employment / commercial urban uses. The proposed 3Rs development would have no direct landscape impacts on the adjoining LLCA No's.10 and 14 although the size, scale and massing the development including the 90 metre high chimney stack would mean that the 3Rs would have a localised effect further urbanizing the area.
- 11.5.37 Whilst the combined magnitude of change due to the 3Rs development and proposed development on the application site will increase slightly; the cumulative effects will be localised to the locality and the impact of these changes is considered to have a minimal (Moderate to Moderate / Minor Adverse effects and not significant) on the wider landscape character.

²³ Horsham District Council (HDC) October 2003 "Horsham District Landscape Character Assessment" Horsham District Council (HDC)

Cumulative Visual Effects

- 11.5.38 By reference to Figure 11.4, this indicates that there is potential visibility between the two sites as the ZTV of the proposed development on the application site extends into part of the Wealden Brickworks. Whilst from a review of Chapter 5.0 - the Landscape and Visual Impact Assessment, (prepared by RPS included in the Britaniacrest planning application²⁴) and Figure 5.6 – ZTV and Viewpoint Locations, this figure illustrates that the potential visibility between the two sites is extensive with the 3Rs ZTV covering the application site and extending eastwards into the High Weald AONB and south westwards towards the village of Warnham coinciding with ZTV of the proposed development on the application site. In addition, the visual assessment of the area indicates that there are views available from the network of local roads and footpath where the proposed development on the application site and 3Rs development on the Wealden Brickworks site may be seen (in combination views i.e. where both sites are in the same arc of view and in succession views i.e. where the observer turns his / her head to see the developments).
- 11.5.39 The visual assessment of the area indicates that a number of visual receptors including residential dwellings / commercial, public rights of way (roads, byways, footpaths and bridleways) are likely to have views of both developments. Visual receptors which will have views of some parts of 3Rs development and also the proposed development on the application site are VRs 37, 39, 40, 41, 42, 43, 45, 49, 54, 55, 58, 59, 62, 63, 64, and 73).
- 11.5.40 Viewpoints / receptors close the 3Rs proposals are likely to get glimpsed / partial views of the 3Rs scheme, due the extent of mature vegetation around the Wealden Brickworks, whilst in medium and longer distance views vegetation in the foreground of the views and other intervening vegetation will assist in limiting and restricting the extent of the views with 90 metre high chimney stack being the more noticeable change to the views.
- 11.5.41 In the longer distance views from slightly elevated positions (e.g. Receptors No.45 and 49) the size, scale and mass of the 3Rs proposals together with the 90 metre high chimney stack will be an apparent change to the views although they will be seen at a distance and part of the wider views. The proposed colouration of the large 3Rs proposals (predominantly grey tones) will be more evident during the summer month as it will contrast with surrounding green / darker vegetation surrounding the Wealden Brickworks site and forming a backdrop whilst during the winter month the grey colouration will assist in reducing the impact of the proposals. However, also during the winter period when vegetation is not in leaf visibility will increase.

²⁴ Britaniacrest Ltd / RPS 2016, Environmental Statement accompanying Planning Application Ref: WSCC/062/16/NH, available on West Sussex County Council website planning portal

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- 11.5.42 In views from the network of local footpaths to the south west (Receptor No.58) there will be a noticeable change to the views due to the introduction of the 3Rs as the large scale, size and massing of the 3Rs buildings together with the tall chimney stack will be evident in some views from the footpath appearing above the tree line with a small portion of the proposed development on the application site perceived to the east resulting in moderate to substantial adverse effects primarily due to the 3Rs proposals.
- 11.5.43 In views from receptors within or immediately adjoining the application site (VR No's. 37, 39, 40, 41, 42, 43, 54, 55, 58, 59, 62, 63, 64, and 73) the magnitude of change due to the introduction of the 3Rs proposals will vary due to intervening screening vegetation and time of the year but it is predicted that the effects would range from substantial to minor adverse effects during construction and on completion of the 3Rs scheme during the early phases of the proposed development on the application site or until construction works adjoining these receptors occur with the views curtailed / screened to a larger degree by new residential development on the application site. Whilst the 3Rs proposals will result in some cumulative visual impacts initially the introduction of mitigation measures within the proposed development on the application site will assist in reducing the visual effects in the longer term but some visual significant impacts may remain (Receptors No's.39, 40, 41, 42, 43, 56, 62, 59, 73).
- 11.5.44 In longer distance views from locations to the east (Receptor No.45 and 49) near Roffey Park House / Public Footpath No.1587, the predicted visual effects due to the proposed development on the application would range from moderate / substantial to moderate adverse during construction and on completion. However, the proposed 3Rs scheme would form a noticeable new element in the landscape to the west of the application site increasing the magnitude of change experienced from users of the footpath within the High weald AONB.
- 11.5.45 Appropriate mitigation measures within the proposed development on the application site will significantly reduce the visual effects of the proposed residential development (resulting in beneficial effects in the longer term) but due to the large size, scale and massing of the 3Rs scheme together with its 90 metre chimney stack, limited mitigation measures are available to reduce the visual effects of the proposals on views from the High Weald AONB. As a consequence of the above, there will be some additional cumulative visual effects from these distance viewpoints.

11.6 Mitigation Measures

- 11.6.1 The assessment of the proposed development has identified that mitigation measures would be required to reduce some of the landscape and visual effects. This section sets out the mitigation measures that would be undertaken during construction and also sets out the landscape strategy / mitigation measures which will be incorporated in to the details of proposed
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development (future detailed applications) and forms the basis of longer term mitigation.

Construction Mitigation

11.6.2 It is inevitable with a development in close proximity to residential properties and other receptors that some landscape and visual effects would be caused during the construction period. However whilst the construction period extends over a 15 years, in three phases, each area of construction is likely to be relatively short so the effects will be temporary and localised impacts, and there are a number of measures which could be incorporated in to the scheme which would minimise these effects.

11.6.3 During construction the mitigation measure would include:

- Locate contractor's compound and material stockpiles away from nearby sensitive receptors i.e. locate compound within the eastern well screened parts of the application site;
- Minimise length of construction time required for scaffolding, and use of designated routes within and around the site, and;
- Reduce the visual effects of mobile cranes by minimising the length of time required for crane activity, ensuring that the cranes are maintained in good order with fresh paint and establishing guidelines to ensure that they do not operate outside unsociable hours.

Landscape Strategy/Designed Mitigation Measures

11.6.4 Following completion of the construction phase, a number of mitigation measures will be introduced across the application site. Landscaping is a reserved matter in this application and therefore the details and materials to be used for landscaping have not been finalised. However, the text below outlines the design principles behind the open space and landscape strategy and has been used to inform of the landscape and visual assessment.

Landscape/Ecology Concept

11.6.5 The landform and existing features within and adjoining the site together with the urban design layout for the development have strongly influenced the landscape/ecology strategy and location of areas of public open space within the site. The key features of the development are:

Existing Landscape Features

- The retention of existing boundary trees and shrubs within the application site which are worthy of retention; and their protection to be compliant

with BS5837:2012 – ‘Trees in relation to design, demolition and construction – Recommendations’;

- Retaining and strengthening with new planting, where possible, the majority of existing hedgerows, shaws within the application site area, as well as retaining areas of woodlands, both within the application site and adjoining it, including the provision of appropriate ‘buffer’s to the woodlands;

Ecological Habits / Enhancements

- The retention and enhancement of existing high quality wildlife habitats within the application site, where possible;
- The creation of new habitats to enhance the biodiversity value within the application site, and compliment the surrounding habitats including the introduction / creation of a new dormouse crossing point within the eastern parts of the application site to ensure that this species does not become isolated from section of habitat along and adjoining the Chennells Brook;
- The provision of new bird and bat roosting habitat;
- Retention and enhancement of the existing great crested newt (GCN) and reptile populations within the application site;
- The provision of appropriate buffers to existing badger setts and incorporation of green-corridors within the development to provide foraging and dispersal routes for badgers;

Landscape / Open Space Provision

- Provision of substantial areas of multifunctional greenspace, natural and semi-natural greenspace, parks and amenity space, youth and children’s play spaces, sports and recreational areas and community facilities including cemetery and allotment(s) which exceed the requirements of Policy SD1, SD5, and SD7 of the Horsham District Planning Framework²⁵;

A) Elevated parts of the application site:

- Avoiding, where possible, the more visible, open elevated parts of the application site located on (and adjoining) the wooded ridge (Hurst Hill - between Graylands and Wimland Rd). These areas would be retained in open uses with the central northern part of the application site proposed as a Natural Greenspace including parts of a recreational route around the

²⁵ Horsham District Council (HDC) November 2015 – Horsham District Planning Framework – Horsham District Council (HDC)

development (see bullet point below regarding views); whilst the western elevated parts of the application site are proposed for cemetery and allotments uses. It is envisaged that the central northern area would be predominantly open grassland habitat with appropriate landscape planting and 'buffers' along the edge of housing parcels whilst within the cemetery the landscape approach would be more formal with a parkland character. Within the development parcels adjoining these areas careful consideration is to be given building heights and building densities in order to create a transition from built development to open countryside. This would also assist in creating a natural northern boundary to the development;

B) Structural Landscape 'Buffers'

- The provision of a wide landscape 'buffers', up to 30 metres in width, along the western, eastern and southern edges of the development comprising of the following:
 - The design and uses within the buffers is to include predominantly open uses, such as youth and children's play areas, sustainable urban drainage (SuDs), noise reduction measures, earth mounding, recreational areas [footpaths, cycle ways, seating areas, exercise trail(s), educational signage and other facilities], allotments and areas of new landscape planting;
 - The primary objective of the design of the buffer on the eastern edge of the application site adjoining Wimland Road is to reduce and mitigate, in the longer term, any potential landscape and visual impacts on the existing Horsham to Crawley gap landscape to the east. It is envisaged that substantial screen planting will be provided within the buffer including parts of a recreational route around the development;
 - The primary objective of the design of the buffer along the western edge of the application site, adjoining Langhurstwood Road, is to provide an appropriate transition to the wider countryside to the west and maintain the rural character of Langhurstwood Road as well as providing some separation to properties along the road. It is envisaged that some screen planting will be provided within the buffer together with areas of open space including parts of a recreational route around the development. The northern section of the buffer is to connect to the existing areas of ancient woodland to the north and include areas of new planting to provide an appropriate edge to the woodland;
 - The primary objective of the design of the buffer along the southern edge of the application site adjoining the A264 is to provide physical and visual separation from the road. The buffer would include noise

reduction measures such as earth mounding and noise barrier fencing (design to be agreed) which would be heavily planted as well as SuDs as this is the lowest lying parts of the application site. It is envisaged that some of the SuDs are to be permanent ponds with the pond sides to be carefully designed with appropriate safe gradients and slopes allowing the public access to the water's edge as well as for pond dipping etc, whilst other SuDs are to be dry attenuation areas apart from during peak periods of rainfall. Areas of existing vegetation adjoining the A264 would be retained, where possible, with additional screen planting and landscape planting provided to supplement and maintain the existing belt of trees / hedgerow along this edge with areas of open space created including parts of a recreational route around the development.

C) Key Views

- The retention of long distance, panoramic views southwards from the wooded ridge looking over the Low Weald to the AONB and to the South Downs, although it is appreciated that these views would change and be experienced in the context of increased urban development on the lower land in the foreground within the application site.

D) Listed Buildings

- The provision of appropriate buffers to listed buildings within and adjoining the application site to safeguard / protect their rural landscape settings and minimize impacts where possible, albeit the context of the buildings will change due the proposed development;

E) East – West 'Green' Link and New 'Greenways'

- The creation of a strong east-west 'Green' link between Wimland Road and Langhurstwood Rd through the development. This would include retention of the existing east to west bridleway and footpath (Bridleway No.1585 and Footpath No.1575) between Wimland Road and Old Holbrook, and extension of the 'Green' link westwards to connect to Graylands Copse and Langhurstwood Road. The existing routes and new section of footpath / cycleway would be located within a wide corridor of open space including retaining existing hedgerows, trees and wooded adjoining existing routes and new areas of tree, shrub, and hedgerow planting provided to enhance the routes together with incidental seating areas, play areas and open spaces. It is envisaged that Bridleway No.1585 would remain essentially unchanged and form part of an extended section of the Horsham Riverside Walk between Wimland Road and Rusper Road (with a new footbridge provided over the A264) whilst the complete east – west 'Green' link would form an integral part of a Heritage trail and Wildlife trail around and through the application site connect places / points of interest;

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- A number of new 'greenways' will be created along the principal access routes, bus routes and cycle paths and through development parcels which take the form of planted corridors of varying width depending on the location of the pedestrian / cycle route. It is envisaged that these routes would be aligned adjoin to existing hedgerows and hedgerow trees, where possible, new areas of tree, shrub, and hedgerow planting provided to enhance and create attractive routes and places for residents to use and enjoy;
 - The provision of new tree and shrub 'buffer' planting adjoining the new east – west link road (within the northern central parts of the application site) to soften the effects of the road, integrate with adjoining areas of ancient woodland and to create a further wildlife corridor within this part of the application site.

F) Sport / Recreation Provision

- The provision of a 'Sport Hub' including formal sport pitches and other facilities together with area of 'Natural Greenspace' within the central eastern parts of the application site including vegetation adjoining Chennells Brook and its tributary streams and Bush Copse. It is envisaged that the sports hub will include sport changing facilities and car parking areas, an enclosed 3G artificial sport pitch with floodlighting, number of sports pitches (senior and junior pitches), multi-use games areas (MUGA's) and youth facilities and children's play area whilst the area of natural greenspace will use the existing habitats along the Chennells Brook as a starting point with these being improved and new habitats created to provide an area of informal recreational and educational interest for use by existing and new residents to experience and enjoy. The exact design for the 'natural greenspace' has yet finalised but it is anticipated that this area would be relatively low key and designed in conjunction with the District Council and interested stakeholders.

G) Long term Management of Open Spaces and Ancient Woodland

- At this stage, it is envisaged that the long term landscape management of existing and new landscape areas will be undertaken by two management companies to be set up by Liberty Property Trust UK Ltd. One company would deal with the commercial areas of the development whilst the other management company will deal with the residential areas (not adopted by the highway authority) which would include representative from the new residents until such time that the residents take full control of the company when the development is complete.
- It is likely that Commercial Areas Management Company will oversee the management and maintenance of the commercial areas of the development including the areas outside the site curtilage of the individual

commercial buildings, which include the roads, footpaths, street lighting and communal soft and hard landscaped areas; and another Residential Areas Management Company would be set up to oversee the maintenance of the common areas within the residential estate, such as the un-adopted roads and footpaths in the residential areas, communal areas and amenities such as the play areas and equipment, and the natural greenspaces / parks, including litter picking and dog waste. This company may also manage the sports hub / facilities within the development.

- It is envisaged that the majority of the open spaces will be accessible to new and existing residents unless there is a need to limit or prohibit access for safety or other reasons for instance access to areas of ancient woodland would be limited and controlled with some fenced off and access discouraged. Access will be provided to discrete areas of ancient woodland where access can be readily managed and controlled and information provide through the use of interpretation signs to educate residents.
- A Landscape and Biodiversity Management Strategy (LBMS) will be prepared and agreed with Horsham District Council at the appropriate time (following the grant of outline permission and prior to completion of each phase of the development). At this stage, it is anticipated that the contents of LBMS would include or may include all or part of the following:
 - Introduction – scope and purpose and long term ‘vision’;
 - Management Aims and Objectives;
 - Inventory – Existing and Proposed Landscape Components;
 - Component Descriptions (by area), Landscape Management Objectives and Prescriptions;
 - Implementation, Work Programme and Funding;
 - Monitoring and Review

11.6.6 The distribution of the proposed open spaces and natural greenspaces within the development is shown on the Open Space Strategy / Green Infrastructure Plan forming part of the planning application.

11.7 Residual Impacts

11.7.1 The residual landscape and visual effects relate to the degree of change that will occur after the proposed mitigation measures (i.e. once they have

established and are maturing) have taken affect. In determining the residual effects the assumptions set out in paragraph 11.1.51 have been used.

Residual Landscape Effects

- 11.7.2 Table 11.7.4 in Appendix 11.19 considers the landscape effects of the proposed development at Year 15 whilst Table 11.7 below sets out, in summary form, a comparison of the landscape effects without and with mitigation and the residual effects resulting from the proposed development.

Table 11.7: Summary Comparison of Landscape Effects Year 1 and Year 15.

Landscape Receptors		Period	Significance	Residual Effect
The Application Site				
1	Landscape elements	Year 1	Moderate to Minor Adverse	Minor Adverse
		Year 15	Moderate / Minor Beneficial effect	Minor / Moderate Beneficial effect
2	Landscape pattern's / application site character	Year 1	Moderate to Moderate / Minor Adverse	Minor Adverse
		Year 15	Moderate / Minor Beneficial effect	Moderate Beneficial effect
Landscape Character Areas				
National Character Area Profile (NCAP)				
3	Low Weald NCAP – Character Area No.121	Year 1	No significant effect	No significant effect
		Year 15	Minor Beneficial effect	Minor Beneficial effect
4	High Weald NCAP - Character Area No.122	Year 1	No significant effect	No significant effect
		Year 15	No significant effect	No significant effect

County Character Areas (West Sussex County Landscape Character Assessment)				
5	Character Area LW8 – Northern Vales	Year 1	Moderate to Moderate / Minor Adverse	Minor Adverse
		Year 15	Moderate / Minor Beneficial effect	Moderate Beneficial effect
6	Character Area LW4 – Low Weald Hills	Year 1	Moderate / Minor to Minor / Negligible Adverse	Minor Adverse / Negligible
		Year 15	Moderate / Minor to Minor Beneficial / Negligible	Moderate / Minor Beneficial
District Landscape Character Areas				
7	2003 Landscape Character Areas – LCA Area I2 – Warnham and Rusper Wooded Ridges; Area L1 – St Leonard’s Forest; Area P1 – Upper Arun Valley, and; Horsham and Broadbridge Heath Settlement Area and	Year 1	Moderate to Moderate / Minor Adverse	Minor Adverse / Negligible
	2014 LLCAs - Part of – LLCA 10 – Kilnwood Copse to Graylands; LLCA 11 – Faygate and Surrounds; LLC 12 – Wimland Road to Castle Copse; LLCA 15 – Warnham Brickworks; LLCA 17 – North East of Horsham and; LLCA 37 – Land North West of Horsham.	Year 15	Moderate to Moderate / Minor Beneficial effect	Moderate Beneficial effect
Landscape Designations				
8	Protected Trees and Ancient Woodlands	Year 1	Substantial to Moderate / Minor Adverse effect	Substantial toMinor Adverse effect
		Year 15	Moderate Adverse to Neutral effect	Moderate Adverse to Minor Beneficial effect
9	Countryside and Policy 27 – Settlement Coalescence	Year 1	Minor Adverse to Negligible	Negligible
		Year 15	Minor Beneficial to Negligible	Minor Beneficial to Negligible
10	High Weald Area of Outstanding Natural Beauty	Year 1	Negligible / No significant effect	Negligible / No significant effect
		Year 15	Negligible / No significant effect	Negligible / No significant effect

11.7.3 Moderate to minor adverse significant effects will occur to the landscape elements within the application site as expected in year 1 due to the loss of existing trees and loss of the openness of parts of the application site due to the introduction of the proposed development with similar effects occurring within the locality but predicted effects on the wider landscape character will be moderate / minor adverse to negligible. There will be substantial adverse effects on ancient woodland due to the loss of a small area of woodland that is required to be removed to provide an access route between the eastern and central parts of the application site and moderate / minor adverse effects on the remaining trees, hedgerow and woodlands which are not ancient woodland.

11.7.4 The assessment of other receptors and character areas within the wider landscape, including the wider countryside and the settlement coalescence policy (Policy 27) relating to land to the east of the application site, indicate that the development proposals will have a limited or no direct effect on these character areas / designation with the effects confined to a small localised enclosed area in the immediate vicinity of the application site. The resultant longer term effects are predicted to be minor adverse effects on the application site and wider surrounding landscape character areas but these effects are not considered significant.

Residual Visual Effects

11.7.5 Table 11.7.3 in Appendix 11.19 also considered the residual effects of the proposed development without mitigation Year 1 and at Year 15 and Table 11.8 below sets out in summary form a comparison of the visual effects on the core group of receptors and their residual effects.

Table 11.8: Summary Comparison of Visual Effects for Core Residential and Other Receptors.

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation	Predicted Residual Visual Effects after Mitigation
Residential Properties and Commercial Premises				
1	Moated House Farm *	Const	Substantial to Moderate / Substantial Adverse	Moderate to Minor Adverse
		Year 1	Substantial to Moderate / Substantial Adverse	Moderate / Minor Adverse
		Year 15	Moderate / Minor Beneficial	Moderate / Minor Beneficial
2	Moated House Farm –	Const	Moderate / Substantial Adverse	Moderate / Substantial Adverse

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation	Predicted Residual Visual Effects after Mitigation
	working farm outbuildings	Year 1	N/A	N/A
		Year 15	N/A	N/A
3	Moated House Farm – office complex	Const	Moderate / Minor to Minor Adverse	Minor Adverse
		Year 1	N/A	N/A
		Year 15	N/A	N/A
4	Smallholding within Bush Copse	Const	Moderate / Minor to Minor Adverse	Minor Adverse
		Year 1	N/A	N/A
		Year 15	N/A	N/A
5	Owlscastle Farm and Owlscastle Barn	Const	Moderate / Substantial to Moderate Adverse	Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse	Moderate / Minor Adverse
		Year 15	Minor Beneficial	Minor Beneficial
6	King's Farmhouse *	Const	Substantial to Moderate / Substantial Adverse	Moderate to Minor Adverse
		Year 1	Substantial to Moderate / Substantial Adverse	Moderate / Minor Adverse
		Year 15	Moderate to Minor Beneficial	Moderate to Minor Beneficial
7	Benson's Farm Cottages No.1 and 2	Const	Moderate Adverse	Minor Adverse
		Year 1	Moderate Adverse	Minor Adverse to Negligible
		Year 15	Minor Beneficial	Minor to Moderate Beneficial
8	Brook House*, Brook House Barn* and Sunnybank Farm	Const	Moderate / Substantial Adverse	Moderate to Minor Adverse
		Year 1	Moderate / Substantial Adverse	Moderate / Minor Adverse
		Year 15	Moderate / Minor Beneficial	Moderate / Minor Beneficial
9	Benson's Farm – working farm and outbuildings	Construction	Minor Adverse	Minor Adverse / Negligible
		Year 1	Minor Adverse	Minor Adverse /

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation	Predicted Residual Visual Effects after Mitigation
				Negligible
		Year 15	Negligible / Minor Beneficial	Minor Beneficial
10	Frog and Nightgown public house (Ceased trading 2014)	Const	Moderate to Minor Adverse	Moderate to Minor Adverse
		Year 1	Minor Adverse	Minor Adverse / Negligible
		Year 15	Negligible / Minor Beneficial	Minor Beneficial
11	Benson's House	Const	Moderate to Minor Adverse	Moderate to Minor Adverse
		Year 1	Minor Adverse	Minor Adverse / Negligible
		Year 15	Negligible / Minor Beneficial	Minor Beneficial
12	Benson's Lane - working farm outbuildings	Const	Minor Adverse	Minor Adverse / Negligible
		Year 1	Minor Adverse	Minor Adverse / Negligible
		Year 15	Negligible / Minor Beneficial	Minor Beneficial
13	Benson's Cottage	Const	Minor Adverse	Minor Adverse / Negligible
		Year 1	Minor Adverse	Minor Adverse / Negligible
		Year 15	Negligible / Minor Beneficial	Minor Beneficial / Negligible
14	Budds Farmhouse and outbuildings	Const	Minor Adverse	Minor Adverse / Negligible
		Year 1	Minor Adverse	Minor Adverse / Negligible
		Year 15	Negligible / Minor Beneficial	Minor Beneficial
15	Clyst Hayes*	Const	Moderate / Minor to Minor / Negligible Adverse	Moderate to Minor Adverse
		Year 1	Moderate / Minor to Minor / Negligible Adverse	Minor Adverse / Negligible
		Year 15	Negligible / Minor Beneficial	Minor Beneficial
16	Clovers* and Rose	Const	Moderate / Minor to	Moderate to Minor

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation	Predicted Residual Visual Effects after Mitigation
	Cottages No.6 to 10		Minor / Negligible Adverse	Adverse
		Year 1	Moderate / Minor to Minor / Negligible Adverse	Minor Adverse / Negligible
		Year 15	Negligible / Minor Beneficial	Minor Beneficial
17	Roffey Place* (Christian Training Centre)	Const	Moderate Adverse	Moderate / Minor Adverse
		Year 1	Moderate Adverse	Moderate / Minor Adverse
		Year 15	Moderate to Minor Beneficial	Moderate to Minor Beneficial
18	Newhouse Farm Grain Store – working farm	Const	Minor Adverse	Minor / Negligible Adverse
		Year 1	Minor Adverse	Minor / Negligible Adverse
		Year 15	Negligible to Minor Beneficial	Minor Beneficial
19	Newhouse Farmhouse*	Const	Moderate / Minor Adverse	Minor Adverse
		Year 1	Moderate / Minor Adverse	Minor Adverse
		Year 15	Negligible to Minor Beneficial	Minor Beneficial
20	New Barn	Const	Moderate / Minor Adverse	Minor Adverse
		Year 1	Moderate / Minor Adverse	Minor Adverse
		Year 15	Negligible to Minor Beneficial	Minor Beneficial
21	Newhouse Farm Business Park	Const	Minor Adverse	Minor / Negligible Adverse
		Year 1	Minor Adverse	Minor / Negligible Adverse
		Year 15	Negligible to Minor Beneficial	Minor Beneficial
22	Moorhead Farm and outbuildings	Const	Minor Adverse	Minor Adverse / Negligible
		Year 1	Minor Adverse	Minor Adverse / Negligible
		Year 15	Negligible to Minor	Minor Beneficial

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation	Predicted Residual Visual Effects after Mitigation
			Beneficial	
23	Berheley's and Casamanda	Const	Major Substantial Adverse	Major Substantial Adverse
		Year 1	N/A	N/A
		Year 15	N/A	N/A
24	Redfeathers	Const	Major Substantial Adverse	Major Substantial Adverse
		Year 1	N/A	N/A
		Year 15	N/A	N/A
25	Squirrels	Const	Moderate / Substantial to Moderate Adverse	Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse	Moderate to Minor Adverse
		Year 15	Minor to Moderate Beneficial	Moderate Beneficial
26	Holbrook Park*, Holbrook Park House No. 1 to 10, and Garden Lodge	Const	Moderate / Substantial to Moderate Adverse	Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse	Moderate to Minor Adverse
		Year 15	Minor to Moderate Beneficial	Moderate Beneficial
27	Holbrook Cottage and Sprucefield Cottage	Const	Moderate / Substantial Adverse	Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse	Moderate to Minor Adverse
		Year 15	Minor to Moderate Beneficial	Moderate Beneficial
28	Wall House and North End House	Const	Moderate / Minor Adverse	Minor Adverse
		Year 1	Moderate / Minor Adverse	Minor Adverse
		Year 15	Minor to Negligible Beneficial	Minor to Negligible Beneficial
29	Cuckmere Lodge (bungalow)	Const	Moderate / Minor Adverse	Minor Adverse
		Year 1	Moderate / Minor Adverse	Minor Adverse
		Year 15	Minor to Negligible Beneficial	Minor to Negligible Beneficial
30	Cuckmere Farm and outbuildings	Const	Moderate / Minor Adverse	Minor Adverse

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation	Predicted Residual Visual Effects after Mitigation
		Year 1	Moderate / Minor Adverse	Minor Adverse
		Year 15	Minor to Negligible Beneficial	Minor to Negligible Beneficial
31	Hollywick Farmhouse* / (Rapelands Farm)	Const	Substantial Adverse	Moderate Adverse
		Year 1	Substantial to Moderate / Substantial Adverse	Moderate Adverse
		Year 15	Minor Beneficial	Minor Beneficial
32	Morris Cottages No.1 to 4 and Leaside Cottage (Willow House)	Const	Major Substantial to Moderate / Minor Adverse	Substantial to Minor Adverse
		Year 1	Major Substantial to Moderate / Minor Adverse	Moderate / Substantial to Minor Adverse
		Year 15	Moderate / Substantial Adverse to Negligible Beneficial	Moderate Adverse to Negligible Beneficial
33	Morris Farm	Const	Major Substantial to Moderate / Substantial Adverse	Substantial Adverse
		Year 1	Major Substantial to Moderate / Substantial Adverse	Moderate Adverse
		Year 15	Moderate / Substantial Adverse to Negligible Beneficial	Moderate Adverse to Negligible Beneficial
34	Cedar Farm	Const	Moderate / Substantial to Moderate Adverse	Moderate / Minor Adverse
		Year 1	Moderate / Substantial to Moderate / Minor Adverse	Moderate / Minor Adverse
		Year 15	Negligible / Minor Beneficial	Negligible / Minor Beneficial
35	Morris Wood	Const	Moderate / Minor Adverse	Minor Adverse
		Year 1	Moderate / Minor Adverse	Minor Adverse
		Year 15	Negligible / Minor Beneficial	Negligible / Minor Beneficial
36	Morris Farm – working outbuildings /	Const	Moderate / Substantial Adverse	Moderate / Substantial Adverse

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation	Predicted Residual Visual Effects after Mitigation
	employment area	Year 1	N/A	N/A
		Year 15	N/A	N/A
37	Graylands House (Lafarge Training Centre)	Const	Moderate / Minor Adverse	Minor Adverse / Negligible
		Year 1	Moderate / Minor Adverse	Minor Adverse / Negligible
		Year 15	Minor Beneficial	Minor Beneficial
38	Graylands Business Park and car park	Const	Negligible Adverse / Neutral	Negligible Adverse / Neutral
		Year 1	Negligible Adverse / Neutral	Negligible Adverse / Neutral
		Year 15	Negligible Beneficial	Negligible Beneficial
39	Home Farm, Abbotslea, and Pondtail Cottage	Const	Moderate Adverse	Minor Adverse
		Year 1	Moderate Adverse	Minor Adverse to Negligible
		Year 15	Minor Beneficial	Minor to Moderate Beneficial
40	Pondtail House and Pondtail Farm	Const	Moderate Adverse	Minor Adverse
		Year 1	Moderate Adverse	Minor Adverse to Negligible
		Year 15	Minor Beneficial	Minor to Moderate Beneficial
41	Graylands Farm complex [Graylands Cottages (No.1 to 3), Southlands Cottage, Meadowview Cottage, Midsummer Barn, Northlands Cottage, and Haybarn Cottage]	Const	Moderate / Substantial to Moderate Adverse	Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse	Moderate / Minor Adverse
		Year 15	Minor Beneficial	Minor Beneficial
42	Wealdon and Langhurst Moat Cottage	Const	Moderate Adverse	Minor Adverse
		Year 1	Moderate Adverse	Minor Adverse to Negligible
		Year 15	Minor Beneficial	Minor to Moderate Beneficial
43	Bramblehurst	Const	Moderate / Substantial to Moderate Adverse	Minor Adverse

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation	Predicted Residual Visual Effects after Mitigation
		Year 1	Moderate Adverse	Minor Adverse to Negligible
		Year 15	Minor Beneficial	Minor to Moderate Beneficial
44	Old Hawkesbourne, The Granary, Hawkesbourne Farmhouse*, The Diary and Old Hawkesbourne Farm	Const	Moderate Adverse	Moderate to Minor Adverse
		Year 1	Moderate Adverse	Moderate / Minor Adverse
		Year 15	Moderate / Minor Beneficial	Moderate / Minor Beneficial
45	Roffey Park House *	Const	Minor Adverse	Minor Adverse / Negligible
		Year 1	Minor Adverse	Minor Adverse / Negligible
		Year 15	Neutral	Neutral / Negligible
Public Rights of Way (Roads / Byways / Footpaths and Bridleways)				
46	Users of Public Bridleway No.1585 / Bush Lane review against latest MPlan	Const	Moderate / Substantial to Moderate Adverse	Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse	Moderate / Minor Adverse
		Year 15	Minor Beneficial	Minor Beneficial
47	Users of Public Footpath No.1586 north of A264	Const	Moderate / Substantial to Moderate Adverse	Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse	Moderate / Minor Adverse
		Year 15	Minor Beneficial	Minor Beneficial
48	Users of Public Footpath No.1586 south of A264	Const	Moderate to Minor Adverse	Minor Adverse
		Year 1	Minor Beneficial	Minor Beneficial
		Year 15	N/A	N/A
49	Users of Public Footpath No's.1587 and 1588	Const	Moderate / Substantial to Moderate Adverse	Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse	Moderate Adverse
		Year 15	Minor Beneficial	Minor Beneficial
50	Users of Public Footpath No.1589	Const	Moderate to Minor Adverse	Minor Adverse
		Year 1	Moderate to Minor Adverse	Minor Adverse / Negligible

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation	Predicted Residual Visual Effects after Mitigation
		Year 15	Negligible / Minor Beneficial	Minor Beneficial
51	Users of Public Footpath No.1590	Const	Moderate to Minor Adverse	Minor Adverse
		Year 1	Moderate to Minor Adverse	Minor Adverse / Negligible
		Year 15	Negligible / Minor Beneficial	Minor Beneficial
52	Users of Public Footpath No.1591	Const	Moderate to Minor Adverse	Minor Adverse
		Year 1	Moderate to Minor Adverse	Minor Adverse / Negligible
		Year 15	Negligible / Minor Beneficial	Minor Beneficial
53	Users of Public Footpath No.1592	Const	Moderate to Minor Adverse	Minor Adverse
		Year 1	Moderate to Minor Adverse	Minor Adverse / Negligible
		Year 15	Negligible / Minor Beneficial	Minor Beneficial
54	Users of Public Footpath No.1575	Const	Moderate / Substantial to Moderate Adverse	Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse	Moderate / Minor Adverse
		Year 15	Minor Beneficial	Minor Beneficial
55	Users of Public Footpath No.1421	Const	Moderate / Substantial to Moderate Adverse	Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse	Moderate / Minor Adverse
		Year 15	Minor Beneficial	Minor Beneficial
56	Users of Public Footpath No.1574 / Mercer Road	Const	Moderate / Substantial to Moderate Adverse	Moderate Adverse
		Year 1	Moderate / Substantial to Moderate Adverse	Moderate / Minor Adverse
		Year 15	Minor Beneficial	Minor Beneficial
57	Users of Public Footpath No.1573	Const	Moderate to Minor Adverse	Minor Adverse
		Year 1	Moderate to Minor Adverse	Minor Adverse / Negligible
		Year 15	Negligible / Minor	Minor Beneficial

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation	Predicted Residual Visual Effects after Mitigation
			Beneficial	
58	Users of Public Footpath No.1577	Const	Minor Adverse	Minor Adverse
		Year 1	Minor Adverse	Minor Adverse / Negligible
		Year 15	Negligible / Minor Beneficial	Minor Beneficial
59	Users of a section of the A264 / Dorking Road	Const	Moderate / Substantial to Negligible Adverse	Moderate / Minor to Negligible Adverse
		Year 1	Moderate / Substantial to Negligible Adverse	Moderate / Minor to Negligible Adverse
		Year 15	Minor Beneficial	Minor Beneficial
60	Users of a section of Rusper Road north of the A264	Const	Moderate / Substantial to Negligible Adverse	Moderate / Minor to Negligible Adverse
		Year 1	Moderate / Substantial to Negligible Adverse	Moderate / Minor to Negligible Adverse
		Year 15	Minor Beneficial	Minor Beneficial
61	Users of a section of Old Holbrook / Northlands Road	Const	Moderate / Substantial to Negligible Adverse	Moderate / Minor to Negligible Adverse
		Year 1	Moderate / Substantial to Negligible Adverse	Moderate / Minor to Negligible Adverse
		Year 15	Minor Beneficial	Minor Beneficial
62	Users of a section of Langhurstwood Road	Const	Moderate / Substantial to Negligible Adverse	Moderate / Minor to Negligible Adverse
		Year 1	Moderate / Substantial to Negligible Adverse	Moderate / Minor to Negligible Adverse
		Year 15	Minor Beneficial	Minor Beneficial
63	Users of a section of the access road to Warnham Works	Const	Moderate / Substantial to Negligible Adverse	Moderate / Minor to Negligible Adverse
		Year 1	Moderate / Minor to Negligible Adverse	Minor Adverse to Negligible
		Year 15	Minor Beneficial	Minor to Moderate Beneficial
64	Users of a section of Graylands House (Lafarge Training Centre) access road	Const	Minor / Negligible Adverse	Negligible Adverse
		Year 1	Minor / Negligible Adverse	Negligible Adverse
		Year 15	Minor / Negligible Beneficial	Minor / Negligible Beneficial
65	Users of a section of the access road to Morris	Const	Moderate / Substantial Adverse	Moderate / Substantial Adverse

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation	Predicted Residual Visual Effects after Mitigation
	Farm	Year 1	N/A	N/A
		Year 15	N/A	N/A
66	Users of a section of the access road to Cuckmere Farm	Const	Minor Adverse	Minor Adverse to Negligible
		Year 1	Minor Adverse	Minor Adverse
		Year 15	Minor to Negligible Beneficial	Minor to Negligible Beneficial
67	Users of a section of Rusper Road south of the A264	Const	Moderate / Substantial to Negligible Adverse	Moderate / Minor to Negligible Adverse
		Year 1	Moderate / Substantial to Negligible Adverse	Moderate / Minor to Negligible Adverse
		Year 15	Minor Beneficial	Minor Beneficial
68	Users of a section of Wimland Road	Const	Moderate to Negligible Adverse	Moderate / Minor to Negligible Adverse
		Year 1	Moderate to Negligible Adverse	Moderate / Minor to Negligible Adverse
		Year 15	Minor Beneficial	Minor Beneficial
69	Users of a section of Benson's Lane	Const	Moderate to Negligible Adverse	Moderate / Minor to Negligible Adverse
		Year 1	Moderate to Negligible Adverse	Moderate / Minor to Negligible Adverse
		Year 15	Minor Beneficial	Minor Beneficial
70	Users of a section of Old Crawley Road / Clovers Way	Const	Minor Adverse	Minor Adverse / Negligible
		Year 1	Minor Adverse	Minor Adverse / Negligible
		Year 15	Minor Beneficial	Minor Beneficial
71	Users of a section of the access track to Owlscastle Farm	Const	Moderate / Minor to Minor Adverse	Minor Adverse
		Year 1	Moderate / Minor to Minor Adverse	Minor Adverse
		Year 15	Minor Beneficial	Minor Beneficial
72	Users of a section of Horsham to Crawley	Const	Moderate Adverse	Moderate Adverse

Ref No.	Visual Receptor	Period	Predicted Visual Effects without Mitigation	Predicted Residual Visual Effects after Mitigation
	railway line	Year 1	Moderate Adverse	Moderate / Minor Adverse
		Year 15	Minor Beneficial	Minor Beneficial
73	Users of a section of Horsham to Dorking railway line	Const	Minor Adverse	Minor Adverse / Negligible
		Year 1	Minor Adverse	Minor Adverse / Negligible
		Year 15	Minor Beneficial	Minor Beneficial
Community facilities / Open spaces				
74	Users of Earles Meadow Public Open Space to south of the A264	Const	Moderate / Minor Adverse	Minor Adverse
		Year 1	Moderate / Minor Adverse	Minor Adverse
		Year 15	Negligible to Minor Beneficial	Minor Beneficial
75	Chennells Brook Farm - Motte and Bailey Castle	Const	Moderate / Substantial to Negligible Adverse	Moderate / Minor to Negligible Adverse
		Year 1	Moderate / Substantial to Negligible Adverse	Moderate / Minor to Negligible Adverse
		Year 15	Minor Beneficial	Minor Beneficial

11.7.6 During construction, about half (50%) of visual effects are predicted to be moderate adverse or lesser effects and are not significant. However, in relation to residential receptors, 3 properties (Berheley's, Casamanda, and Redfeathers) are to be demolished due to the construction of the proposed development whilst 2 further properties are predicted to experience major adverse visual effects (Leaside Cottage and Morris Farm) during construction, primarily to the very close proximity of the northern link road to these properties. Three dwellings (Moated House Farm, King's Farmhouse and Hollywick Farmhouse) are predicted to experience substantial adverse visual effects.

11.7.7 A further 10 residential and commercial receptors (Moated House Farm outbuildings, Brook House / Brook House Barn / Sunnybank Farm, Squirrels, Holbrook Park / Holbrook Park House and Garden Lodge, Holbrook Cottage and Sprucefield Cottage, Cedar Farm, Graylands Farm complex and Bramblehurst) are predicted to experience Moderate / Substantial adverse visual effects during construction. This is mainly due to the sensitivity of the dwellings as listed buildings, the proximity of the dwellings to construction

activities and development and the open nature and extent of the views from parts of the property.

- 11.7.8 Six public footpaths (Public Footpath No's.1585, 1586, 1575, 1421, 1587 and 1588) and a number of the roads adjoining or extending through the application site (A264, Rusper Road (north and south), Old Holbrook and Langhurstwood Road) will experience varying effects from moderate / substantial adverse to negligible visual effects during construction mainly due to the sensitivity of the receptors or the introduction of new works where the magnitude of change would result in a prominent or recognisable new element (very high / high) or distinctive feature (medium) albeit these changes would be temporary and for a short period only.
- 11.7.9 One of the two areas of public open space assessed (the Chennells Brook Farm motte and bailey castle, south of the A264), would experience moderate / substantial adverse visual effects during construction. This is due to the introduction of a new footbridge immediately adjacent to the open space and loss of a short section of hedgerow and trees close to the road which is to be replanted and will take time to establish and mature before screening to lower portion of the new bridge structure.
- 11.7.10 As with construction effects, visual effects on completion / Year 1 would be similar, with a slightly lesser number of receptors experiencing moderate or greater effects. This is mainly due to the sensitivity of the receptors or the introduction of new works where the magnitude of change would result in a prominent or recognisable new element (very high / high) or distinctive feature (medium) and at this stage any mitigation measures will do little to screen or curtail views or provide an appropriate setting to the proposed development. However, five visual receptors (Berheley's, Casamanda and Redfeathers, the Moated House Farm outbuildings, Morris Farm commercial area, and the smallholding within the eastern parts of the application site) would be replaced by new development.
- 11.7.11 However, following the establishment and maturing of the landscape proposals, say in 15 years' time, the majority of effects will be significantly reduced resulting on beneficial effects. This is primarily due to the establishment and maturing of landscape planting which will increase tree cover and habitat diversity within and throughout the development. The planting will also screen some parts of the development whilst controlling other views or forming a backdrop. Also existing residents will be accustomed to seeing buildings and activity. However, two residential properties (Leaside Cottage and Morris Farm) that will continue to experience moderate adverse visual effects due to the close proximity of the northern link road to these properties and limited space available to provide appropriate screening or softening of the views.

Residual Lighting Effects

- 11.7.12 The residual effects of new lighting on the surrounding area would reduce from minor adverse significance to negligible significance as the proposed planting on the boundaries and within the proposed development matures and reduces any light pollution.

Effects on Landscape Planning Policy

- 11.7.13 The effects on the landscape planning policies have been determined in accordance with national and local planning guidance.
- 11.7.14 The application site is identified as an allocation site for a mixed use development in Horsham District Planning Framework²⁶.
- 11.7.15 In respect of national guidance, the NPPF²⁷, the character and quality of the landscape has been considered in detail. The NPPF and National Planning Practice Guidance²⁸ sets out the Government's aims of a more sustainable pattern of development with the focus of development on previously developed land, to promote healthy communities including social interaction and inclusive communities as well as conserving and enhancing the natural environment.
- 11.7.16 The application site is also subject of a number of policies contained in the Horsham District Planning Framework (HDPF) ²⁹, including policy SD1 – Land North of Horsham, Policy SD5 – Open Space, Sport and Recreation, policy SD6 – Landscape Buffer, Landscape Character Biodiversity and Green Infrastructure, Policy SD 7 – Design, Policy 25 – The Natural Environment and Landscape Character, Policy 26 – Countryside Protection, Policy 27 – Settlement Coalescence, Policy 31 – Green Infrastructure and Biodiversity, policy 33 – Development Principles, policy 34 – Cultural and Heritage Assets, policy 43 – Community Facilities, Leisure and Recreation.
- 11.7.17 Policy 27 – Settlement Coalescence relates to the land to the east of the application site which covers an extensive area and includes a 2.8 kilometre gap between settlements. The distance and character of the gap ensures that the two settlements of Horsham and Crawley (Kilnwood Vale) remain as distinct urban settlements with a substantial area of open countryside in between thereby avoiding the perception of visual or physical coalescence.

²⁶ Communities and Local Government (DCLG) March 2012 "National Planning Policy Framework" Communities and Local Government (DCLG)

²⁷ Communities and Local Government (DCLG) March 2012 "National Planning Policy Framework" Communities and Local Government (DCLG)

²⁸ Communities and Local Government (DCLG) March 2014 "National Planning Policy Guidance" Communities and Local Government (DCLG)

²⁹ Horsham District Council (HDC) November 2015 – Horsham District Planning Framework – Horsham District Council (HDC)

In addition, the 'gap' already contains a number of existing built developments including the village of Faygate and individual scattered farmsteads with the landscape character of the gap varying being made up of five local landscape character areas (which together ensure that there is no intervisibility between the two main settlements nor between Horsham and Faygate) with those parts of the gap LLCAs 10, 11 and 17 remaining essentially unchanged.

- 11.7.18 The assessment acknowledges that the proposed development will not have any direct effect on land to the east of the application site although there may be indirect visual effects (assess a part of the Visual Impact Assessment section) but it concludes that changes to the majority of the land to the east of the application site, due to the development, will be negligible.
- 11.7.19 In addition, it is proposed that development includes substantial areas of landscape planting and recreational open spaces to ensure that the proposed development makes a positive contribution to the local landscape character and visual amenity of the immediate and surrounding area. Consequentially, the residual effects on landscape planning policy are considered to be of minor Beneficial significance.
- 11.7.20 On the basis of the assessment contained in this chapter, the proposed development would accord with policies contained in Horsham District Planning Framework³⁰ as the development would not result in any significant adverse effects upon the landscape or on visual amenity in the area surrounding the application site and includes proposals aimed at minimising the landscape and visual effect and assimilating the development in to the local area.

11.8 Monitoring/Conclusions

- 11.8.1 In summary, the proposed development would result in some local impacts but the effects of the development on character and visual appearance of the wider open countryside will not be significant or harmful.
- 11.8.2 The landscape effects would range from moderate to minor adverse effects on landscape elements within the application site during construction and on completion (Year 1) as expected, (due to the loss of existing trees and loss of the openness of parts of the application site due to the introduction of the proposed development) with similar effects occurring within the immediate locality but effects on the wider landscape character would reduce to minor adverse to negligible effects. The assessment of other receptors and character areas within the wider landscape, including the wider countryside and strategic gap, indicate that the development proposals will have a limited

³⁰ Horsham District Council (HDC) November 2015 – Horsham District Planning Framework – Horsham District Council

direct effect on these character areas / designation with the effects localised to the immediate vicinity of the application site.

- 11.8.3 Given the size and scale of the proposed development, the visual effects of the proposed development would be contained within a relatively limited area surrounding the application site and extending to the east, south east and west with several distant outlying areas (over 7.0 kilometres from the application site) where theoretically views of the application site can be obtained. However, whilst there are a large number of views or opportunities to view the application site from public vantage points, the vast majority of views are from the application site itself and / or from locations close to the application site.
- 11.8.4 There are no vantage points from where the whole of the application site can be seen and in virtually all cases only a small portion of the application site perceived due to the low lying topography of the application site, the existing hedgerows and belts of mature hedgerow trees and copses within the application site and on its boundaries, which effectively curtails middle or long distance views into and across the application site.
- 11.8.5 The assessment indicated that moderate adverse significant effects would occur to the landscape elements within the application site as expected in year 1 (apart from a small area of ancient woodland) due to the loss of existing trees and loss of the openness of parts of the application site due to the introduction of the proposed development with similar effects occurring within the locality but predicted effects on the wider landscape character will be moderate / minor adverse to negligible.
- 11.8.6 The assessment of other receptors and character areas within the wider landscape, including the wider countryside and strategic gap, indicate that the development proposals will have a limited direct effect on these character areas / designation with the effects confined to a small localised enclosed area in the immediate vicinity of the application site. The resultant longer term effects are predicted to be minor adverse effects on the application site and wider surrounding landscape character areas but these effects are not considered significant.
- 11.8.7 The visual assessment identified a total of 75 receptors potentially affected by the proposed development and during construction; about half (50%) of visual effects are predicted to be moderate adverse or lesser effects and not significant whilst visual effects on completion / Year 1 would be similar, with a slightly lesser number of receptors experiencing moderate or greater effects. This is mainly due to the sensitivity of the receptors or the introduction of new works where the magnitude of change would result in a prominent or recognisable new element (very high / high) or distinctive feature (medium) and at this stage any mitigation measures will do little to screen or curtail views or provide an appropriate setting to the proposed development. However, six visual receptors (Berheley's/ Casamanda and

Redfeathers, the Moated House Farm outbuildings and adjoining offices, Morris Farm commercial area, and the smallholding within the eastern parts of the application site) would be replaced by new development.

- 11.8.8 The longer term residual effects, following the establishment and maturing of the landscape proposals, say in 15 years' time, are predicted to be significantly reduced resulting on beneficial effects in the majority cases. This is primarily due to the establishment and maturing of landscape planting which will increase tree cover and habitat diversity within and throughout the development. The planting will also screen some parts of the development whilst controlling other views or forming a backdrop. There will be monitoring of the implementation of the landscape proposals by Horsham District Council throughout both the construction and operational stages of the scheme, through the Construction Environmental Management Plan and the long term Landscape Management Plan.
- 11.8.9 However, two residential properties (Leaside Cottage and Morris Farm) that will continue to experience moderate adverse visual effects due to the close proximity of the northern link road to these properties and limited space available to provide appropriate screening or softening of the views.
- 11.8.10 The residual effect of new lighting on the surrounding area are predicted to reduce from minor adverse significance to negligible significance as the proposed planting on the boundaries and within the proposed development matures and reduces any light pollution.
- 11.8.11 In conclusion, and on the basis of the assessment contained in this chapter, the proposed development would accord with policies contained in Horsham District Planning Framework, as the development would not result in any significant adverse effects upon the landscape or on visual amenity in the area surrounding the application site and includes proposals aimed at minimising the landscape and visual effect and assimilating the development in to the local area.

Chapter 12

Ecology

Bioscan

12 ECOLOGY

12.1 Introduction

12.1.1 Bioscan (UK) Ltd was commissioned by Liberty Property Trust to carry out an Ecological Impact Assessment (EclA) in relation to the proposed development of an expansive area of land to the north of Horsham ('Land North of Horsham') for a mixed use development. The proposed development is described in detail in Chapter 5.

12.1.2 This chapter of the ES assesses the likely significant effects of the proposed development on ecology and nature conservation. It sets out the assessment methodology followed; the baseline conditions existing at the application site and surroundings as derived from the surveys undertaken since 2010; the likely significant ecological effects arising from the proposed development, taking into account 'applied mitigation' incorporated into the masterplanning process; any additional mitigation measures required to prevent, reduce or offset any likely significant adverse effects; and the likely residual effects after these measures have been employed.

12.1.3 The indicative masterplan is the product of an iterative design process that initially considered a larger area of land. Initial ecological studies on this land were undertaken in order to inform the early stages of the masterplan and to assess the scope for ecological constraints to be present just outside of the application site. These initial ecological surveys (undertaken in 2010 and 2011) were undertaken over an area of approximately 336ha [hereafter referred to as 'the wider study area']. Following refinements and modifications in the masterplan a programme of further targeted specialist ecological surveys was undertaken in 2014, focussed on an area of approximately 265ha [hereafter referred to as 'the study area']. The survey methodology and results sections below largely refer to the study area, with the assessment focussed on the application site which comprises an area of approximately 250ha. See Appendix 12.1 for a plan of these different areas.

12.2 Policy Context

12.2.1 In February 2012 Bioscan undertook a scoping exercise for ecological surveys in support of a planning application for the site with the West Sussex County Ecologist (Don Baker). It was proposed to conduct the following surveys:

- Bat activity surveys and emergence/re-entry surveys of buildings within the site;
- Great crested newt surveys of waterbodies achieving an 'average' or above Habitat Suitability Index (HSI) or otherwise assessed as likely to support this species;

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- Dormouse survey of the more established hedgerows and woodland;
 - Update habitat and vegetation surveys
- 12.2.2 Mr Baker replied in his response that *“the scope seems comprehensive and I agree with your recommended surveys and that they will provide an acceptable level of supporting information on ecology to support a planning application for this site”*.
- 12.2.3 In May 2014 another scoping request was sent to Mr Baker and this request detailed a revised approach and scope of works in support of the current planning application. This scoping request was sent prior to the formal submission of the scoping report in order to understand if there were any additional surveys that Mr Baker would like to see carried out prior to the potential for missing survey windows. Mr Baker then verbally agreed with the scope of the surveys, but due to there being no service agreement set up between West Sussex County Council and Horsham District Council at that time, Mr Baker could not respond formally or in writing. It was assumed that Mr Baker would formally comment accordingly once Horsham District Council had sent him the scoping report.
- 12.2.4 The Environmental Impact Assessment Scoping Report was produced by Liberty Property Trust in July 2014 and submitted to Horsham District Council. The Scoping Report included the methodologies proposed to be used for the targeted ecological studies and provided the results of the surveys of the wider study area that were available at that time.
- 12.2.5 Horsham District Council responded on the 9th September 2014, with the scoping opinion incorporating views from statutory consultees. In respect of ecology there were two consultation responses; one was from Natural England, with the other from the Environment Agency. It was noted that there were no comments in respect of ecology from Mr Baker or Horsham District Council (possibly due to Mr Baker having not been consulted).
- 12.2.6 Natural England’s response set out generic guidance for what should be included in an Environmental Impact Assessment, based on established case law and guidance. No specific comments on particular ecological receptors, or on the ecological information provided within the scoping report, were provided.
- 12.2.7 The Environment Agency in their response provided the following:
- *‘The ecological survey should be used to inform the design of the development to prevent a detrimental impact on [wetland] areas. The ... report should incorporate mitigation and enhancement measures.’*
 - *‘Ecology should be conserved and enhanced for example by incorporating features into development proposals and exploring opportunities to open up culverted sections of watercourse.’*
-

- *'Any application should also address retaining and enhancing the site's ecological connectivity through ecological corridors and networks'.*

- *'The EA are pleased that the identified mitigation recognises the importance of measures to prevent pollution and siltation of the Channells Brook'.*

12.2.8 The targeted surveys of the study area, and the processes of inputting to the masterplan, were carried out in cognisance of these comments.

Horsham District Planning Framework

12.2.9 In November 2015 Horsham District Council adopted the Horsham District Planning Framework (HDPF)²⁹ following the Planning Inspector finding the HDPF 'sound' in October 2015³⁰. The HDPF includes the allocation of the Land North of Horsham for a mixed use development (as detailed in Chapter 5).

12.2.10 In regards to the North Horsham allocation site, the Planning Inspector's Report stated³⁰ *'... from all the written and oral evidence, including comments on supplementary studies in support of the [North Horsham] allocation, nothing has convinced me that the proposed allocation is not sound.'* In addition the Inspector stated *'There is no evidence of sensitive ecological habitat or protected species across the open farmland which comprises the majority of the site; other existing habitats along hedgerows and watercourses could be safeguarded on the masterplan and could be fully protected at the detailed design state, as required by MM18³¹. Substantial areas of open space would be retained alongside Old Holbrook and a nature park, incorporating Bush Copse ancient woodland, would be created in low lying land liable to flood.'*

12.2.11 Further details on policies in regards to ecology and the allocation site within the HDPF as set out below.

Statutory and Planning Context

12.2.12 The framework of UK legislation, planning policies and planning guidance relating to biodiversity and applicable to the proposed development and its assessment is summarised below.

²⁹ Horsham District Council (2015). Horsham District Planning Framework. Horsham District Council.

³⁰ Salter, G. (2015) Report on the Examination into Horsham District Planning Framework. The Planning Inspectorate

³¹ MM18 states "2nd para 2nd line add 'characteristics and biodiversity qualities of the site'"

Table 12.1 – Key Environmental Legislation

Statute	Summary of Provisions
<i>Conservation of Habitats and Species Regulations 2010 (as amended)</i>	The Conservation Regulations enact both the EC Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive) and EC Directive 2009/147/EC on the Conservation of Wild Birds (Birds Directive). Specifically, they provide for the protection of European Sites - Special Areas of Conservation (SAC) and Special Protection Areas (SPA) - and also those European Protected Species (as listed in the Annexes to the Directives) that occur naturally in the United Kingdom.
<i>Wildlife and Countryside Act (WCA) (1981) (as amended)</i>	The WCA remains one of the principal pieces of legislation relating to wildlife in the United Kingdom (UK). Contained within it are lists of species of flora and fauna subject to statutory protection, with the Act detailing the level of protection attributed to each, which in some instances extends to the habitats or structures they use or in which they are found. The WCA is also the primary piece of legislation relating to the designation and protection of Sites of Special Scientific Interest (SSSIs).
<i>Countryside and Rights of Way Act (CRoW) (2000)</i>	The CRoW Act strengthens the provisions of the WCA in several key areas: <ul style="list-style-type: none"> • in respect of SSSI protection; and • in the inclusion of 'reckless' in addition to the intentional nature of offences listed within parts of the WCA 1981. The CRoW Act also imposed for the first time a 'statutory duty' on Government bodies to 'have regard' to the conservation of biodiversity in the exercise of their functions.
<i>Natural Environment and Rural Communities Act (NERC) (2006)</i>	The NERC Act reinforces the requirements originally set down in the CRoW Act on the Government (and extending to all public bodies), to have regard to biodiversity and to identify and take steps to conserve species and habitats of 'principal importance'. This requirement has been addressed through the drawing up and maintenance of lists of species and habitats which are considered of 'principal importance' to biodiversity in the UK.
<i>Protection of Badgers Act (1992)</i>	This Act, as the title suggests, affords a high level of protection to both badgers and their setts, with the intention of combating persecution. The legislation was introduced primarily for reasons of animal welfare as opposed to any concern over the conservation status of what is one of the UK's more common larger mammals.

12.2.13 Tables 12.2 and 12.3 below summarise national and local planning policies that are relevant to the proposed development of the application site and which have informed the masterplanning process.

National

Table 12.2 – National Planning Policy on Ecology and Nature Conservation

National Policy	Key Provisions
<i>National Planning Policy</i>	Central government policy on nature conservation is set out within the NPPF, issued in March 2012. The NPPF clearly

<i>Framework (NPPF)</i>	<p>identifies that planning has a role in “<i>contributing to protecting and enhancing our natural... environment</i>” (paragraph 8) and “<i>helping to improve biodiversity</i>”, through protecting existing resources such as designated or otherwise valued resources, and by “<i>minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government’s commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures</i>” (paragraph 109).</p> <p>In particular, the NPPF has a common theme of recognising the importance of ecological networks, including ‘wildlife corridors’ and ‘stepping stones’, of seeking to ensure that development results in no net loss of biodiversity and of encouraging planning decisions to secure the enhancement of biodiversity where opportunities arise, in particular where the creation or restoration of habitats will enhance the function of these networks, and especially where they include designated sites.</p>
<i>National Planning Practice Guidance (NPPG)</i>	<p>The NPPG provides supporting guidance on how the commitments to biodiversity conservation set out in NPPF paragraphs 109 to 125 can be achieved. It directs decision makers to information sources such as the Government’s current UK Biodiversity Strategy (Biodiversity 2020), the Natural Environment White Paper and the still-in-force Circular 06/2005 in order to assist with understanding and interpretation of the weight to be attached to the differing tiers of nature conservation designations and incorporates standing advice issues by government agencies in relation to planning decisions affecting protected species, ancient woodland, priority habitats and species and ecological networks.</p>

Local

- 12.2.14 Table 12.3 below lists the policies related to ecology from the recently adopted Horsham District Planning Framework (2015).

Table 12.3 –Local Planning Policies (HDPF) Relevant to Ecology

Local Policy	Relevant Provisions
POLICY SD6 (Land North of Horsham)- Landscape Buffer, Landscape Character, Biodiversity and Green Infrastructure	<p>2. The development shall respond to and complement the positive landscape characteristics and biodiversity qualities of the site.</p> <p>3. A 'Nature Park' and the provision of green ways along the principal access roads, bus routes and cycle paths will be delivered as key features of a green infrastructure network.</p> <p>5. The development will enable the retention, enhancement and creation of two major green corridors - north to south at the western side of Old Holbrook and Holbrook Park; and east to west at Bush Lane connecting to Langhurstwood Road and Wimlands Road.</p>
POLICY 25- Strategic Policy: The Natural Environment and Landscape Character	<p>The Natural Environment and landscape character of the District, including the landscape, landform and development pattern, together with protected landscapes and habitats will be protected against inappropriate development. The Council will support development proposals which:</p> <ul style="list-style-type: none"> • Maintain and enhances the Green Infrastructure Network and addresses any identified deficiencies in the District. • Maintains and enhances the existing network of geological sites and biodiversity, including safeguarding existing designated sites and species, ensures no net loss of wider biodiversity, and provides net gains in biodiversity where possible.
POLICY 26 – Strategic Policy: Countryside Protection	<p>Outside built-up area boundaries, the rural character and undeveloped nature of the countryside will be protected against inappropriate development.</p> <p>In addition proposals must be of a scale appropriate to its countryside character and location. Development will be considered acceptable where it does not lead, either individually or cumulatively, to a significant increase in the overall level of activity in the countryside, and protects, and/or conserves, and/or enhances, the key features and characteristics of the landscape character area in which it is located, including;</p> <ol style="list-style-type: none"> 1. the development pattern of the area, its historical and ecological qualities, tranquillity and sensitivity to change; 2. the pattern of woodlands, fields, hedgerows, trees, waterbodies and other features; and 3. the landform of the area.
POLICY 31 – Green Infrastructure and Biodiversity	<ol style="list-style-type: none"> 1. Development will be supported where it can demonstrate that it maintains or enhances the existing network of green infrastructure. Proposals that would result in the loss of existing green infrastructure will be resisted unless it can be demonstrated that new opportunities will be provided that mitigates or compensates for this loss, and ensures that the ecosystem services of the area are retained. 2. Development proposals will be required to contribute to the enhancement of existing biodiversity, and

Local Policy	Relevant Provisions
	<p>should create and manage new habitats where appropriate. The Council will support new development which retains and /or enhances significant features of nature conservation on development sites. The Council will also support development which makes a positive contribution to biodiversity through the creation of green spaces, and linkages between habitats to create local and regional ecological networks.</p> <p>3. Where felling of protected trees is necessary, replacement planting with a suitable species will be required.</p> <p>4. a) Particular consideration will be given to the hierarchy of sites and habitats in the District as follows:</p> <ul style="list-style-type: none"> i. Special Protection Area (SPA) and Special Areas of Conservation (SAC) ii. Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs) iii. Sites of Nature Conservation Importance (SNCIs), Local Nature Reserves (LNRs) and any areas of Ancient woodland, local geodiversity or other irreplaceable habitats not already identified in i & ii above. <p>b) Where development is anticipated to have a direct or indirect adverse impact on sites or features for biodiversity, development will be refused unless it can be demonstrated that:</p> <ul style="list-style-type: none"> 1. The reason for the development clearly outweighs the need to protect the value of the site; and, 2. that appropriate mitigation and compensation measures are provided <p>5. Any development with the potential to impact Pulborough Brooks SPA or the Mens SAC will be subject to a HRA to determine the need for an Appropriate Assessment. In addition, development will be required to be in accordance with the necessary mitigation measures for development set out in the HRA of this plan.</p>
POLICY 33 – Development Principles	<p>In order to conserve and enhance the natural and built environment developments shall be required to:</p> <ul style="list-style-type: none"> 1. Make efficient use of land, and prioritise the use of previously developed land and buildings whilst respecting any constraints that exist; 3. Ensure that the scale, massing and appearance of the development is of a high standard of design and layout and where relevant relates sympathetically with the built surroundings, landscape, open spaces and routes within and adjoining the site, including

Local Policy	Relevant Provisions
	<p>any impact on the skyline and important views;</p> <ol style="list-style-type: none"> 4. Are locally distinctive in character, respect the character of the surrounding area (including its overall setting, townscape features, views and green corridors) and, where available and applicable, take account of the recommendations/policies of the relevant Design Statements and Character Assessments; 6. Presume in favour of the retention of existing important landscape and natural features, for example trees, hedges, banks and watercourses. Development must relate sympathetically to the local landscape and justify and mitigate against any losses that may occur through the development;
POLICY 35 – Strategic Policy: Climate Change	<p>Development will be supported where it makes a clear contribution to mitigating and adapting to the impacts of climate change and to meeting the district's carbon reduction targets as set out in the Council's Acting Together on Climate Change Strategy, 2009</p> <p>Measures which should be used to mitigate the effects of climate change include;</p> <ol style="list-style-type: none"> 1. Reduced energy use in construction; 2. Improved energy efficiency in new developments, including influencing the behaviour of occupants to reduce energy use; 3. The use of decentralised, renewable and low carbon energy supply systems; 4. The use of patterns of development which reduce the need to travel, encourage walking and cycling and include good accessibility to public transport and other forms of sustainable transport; and 5. Measures which reduce the amount of biodegradable waste sent to landfill. <p>Development must be designed so that it can adapt to the impacts of climate change, reducing vulnerability, particularly in terms of flood risk, water supply and changes to the district's landscape. Developments should adapt to climate change using the following measures:</p> <ol style="list-style-type: none"> 1. Provision of appropriate flood storage capacity in new building development; 2. Use of green infrastructure and dual use SuDS to help absorb heat, reduce surface water runoff, provide flood storage capacity and assist habitat migration; 3. Use of measures which promote the conservation of water and grey water recycling; and 4. Use of site layout, design measures and construction techniques that provide resilience to climate change (opportunities for natural ventilation and solar gain).
POLICY 38 – Strategic Policy: Flooding	<ol style="list-style-type: none"> 3. Where there is the potential to increase flood risk,

Local Policy	Relevant Provisions
	<p>proposals must incorporate the use of sustainable drainage systems (SuDS) where technically feasible, or incorporate water management measures which reduce the risk of flooding and ensure flood risk is not increased elsewhere.</p> <p>4. Consider the vulnerability and importance of local ecological resources such as water quality and biodiversity when determining the suitability of SuDS. New development should undertake more detailed assessments to consider the most appropriate SuDS methods for each site. Consideration should also be given to amenity value and green infrastructure.</p> <p>5. Utilise drainage techniques that mimic natural drainage patterns and manage surface water as close to its source as possible will be required where technically feasible.</p> <p>6. Be in accordance with the objective of the Water Framework Directive, and accord with the findings of the Gatwick Sub Region Water Cycle Study in order to maintain water quality and water availability in rivers and wetlands and wastewater treatment requirements.</p>

12.3 Methodology

- 12.3.1 Information on the study area's baseline ecological resource was established through a combination of desk-based data searches for information relating to the study area and adjoining areas and a programme of field surveys, which were carried out in several campaigns over 2010, 2011, 2014, 2015 and 2016.

Desk Study

- 12.3.2 Information on documented ecological interests within and surrounding the study area has been obtained from several sources. Data requests to the Sussex Biodiversity Record Centre (SBRC) were made in 2010 and 2014 to obtain third party data relating to protected and rare species records relating to the wider study area in 2010 and the study area in 2014 plus a 2km buffer. Information relating to nature conservation designations, such as Sites of Special Scientific Interest (SSSI's) and Sites of Nature Conservation Importance (SNCI's) within this search area was also requested.
- 12.3.3 The Government's Multi-Agency Geographic Information for the Countryside (Magic) (<http://www.magic.gov.uk>) was also checked for information relevant to the study area, in particular related to statutory designations and priority habitat types. A search was also made for internationally designated sites on the Magic website, with the search area extending out to 20km from the boundary of the study area.

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- 12.3.4 The Environment Agency's Water Framework Directive surface water status objectives for 2012 spreadsheet³² was checked for any information relevant to the watercourses within the study area.
- 12.3.5 An internet trawl was undertaken in 2014 in order to search for EIAs in support of schemes within the vicinity of the study area which could contain ecological information of relevance.
- 12.3.6 Bioscan's in-house archives were consulted for data relating to the study area and its vicinity.

Ecological Field Surveys

- 12.3.7 Initial habitat surveys of the wider study area were undertaken in 2010 and 2011. The results from these surveys aided in understanding the need or otherwise for specialist ecological surveys that would be required to be undertaken in 2014. Further targeted surveys were undertaken in 2015 and 2016. The following specialist surveys of the study area were conducted (with the details of the methodologies, the survey results and evaluation provided in the appropriate technical appendices listed below). Summary plans of these surveys are set out on the plans in Appendices 12.4 to 12.15.
- Extended Phase 1 Habitat Survey (Appendix 12.16)
 - Great Crested Newt Survey (Appendix 12.17)
 - Reptile Survey (Appendix 12.18)
 - Bat Activity Survey (Appendix 12.19a)
 - Bat building inspections and emergence/re-entry surveys (Appendix 12.19a)
 - Bat Survey Addendum Report (Appendix 12.19b)
 - Dormouse Survey (Appendix 12.20)
 - Water vole and Otter Survey (Appendix 12.21)
 - Breeding Bird Survey (Appendix 12.22)
 - Invertebrates (Appendix 12.23)
 - Badger (Confidential Appendix 12.24)

³² <http://data.gov.uk/dataset/wfd-surface-water-classification-status-and-objectives>

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- 12.3.8 Whilst undertaking the above surveys incidental records of other species were noted, and incorporated into the baseline dataset for the study area and used as the basis for this assessment.

Assessment Methodology

- 12.3.9 The assessment methodology is based on the guidelines produced for Ecological Impact Assessment (EclA) by the Chartered Institute for Ecology and Environmental Management³³ (CIEEM). The approach taken is set out below:

Identification and evaluation of Key Receptors

- 12.3.10 The key ecological receptors are identified from the baseline information amassed from desk and field surveys. The decision as to which ecological receptors are 'key' in this context is to some extent a value judgement, informed by factors such as national and local conservation status and legal protection. The current CIEEM guidance recognises that professional judgement and a certain level of subjectivity is unavoidable when apportioning value to individual ecological receptors. However, certain parameters and points of reference can be used to help ensure consistency.
- 12.3.11 Sites already possessing statutory or non-statutory nature conservation designations will have been subjected to some form of evaluation process and their importance defined at a geographical scale (e.g. international, national, local). For these, evaluation will generally reaffirm their qualifying attributes, or in some cases may identify where designation may no longer be appropriate.
- 12.3.12 Factors such as extent, naturalness, rarity, fragility and diversity are all relevant to the determination of ecological value, and for the evaluation of sites and habitat features outside designated sites, these and other criteria as described by Ratcliffe³⁴, may be applied. Ratcliffe's criteria are integral to the procedure for selecting both Sites of Special Scientific Interest (SSSI) and many non-statutory designation systems in the UK, and therefore remain an accepted standard for site evaluation.
- 12.3.13 In applying these criteria, attention may be drawn to the relative scarcity or abundance of features within the study area and in the wider geographical context. Some criteria are however absolute and not relative to scale. Ancient woodland, for example, is fragile irrespective of whether it is being considered in an international or local context. Similarly, the value of an otherwise poor habitat may be elevated if it is central to the survival of a rare species.

³³ CIEEM (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

³⁴ Ratcliffe, D.A. (1977). A Nature Conservation Review. *Cambridge University Press*.

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- 12.3.14 Where evaluation is important for the purposes of informing decisions related to land-use planning and development control, the above approach needs to be supplemented by consideration of whether individual species are subject to legal protection³⁵, or whether habitats or species are present which have been identified as 'priorities' for delivering the UK's international commitments to biodiversity conservation³⁶. Planning authorities have a statutory duty³⁷ to further biodiversity objectives in accordance with those commitments and the presence of 'priority' species or habitats may therefore be material to the determination of development control decisions. The government has drawn up lists of species and habitats of 'principal importance' to assist with meeting that duty.
- 12.3.15 Attention may be drawn to species not necessarily subject to legal protection or identified by Government as a priority for biodiversity conservation, but which nonetheless have an 'unfavourable' conservation status as defined by the Red Data Book system³⁸, the Red and Amber lists for birds³⁹, latest Species Status assessments using the IUCN Red List guidelines and as accredited by the JNCC, or species which are otherwise known to be rare or scarce in a local or regional context.
- 12.3.16 Scales of comparison varying from the international to the context of the local area may be used to define the measure of importance attached to individual features. In this evaluation, the following geographic frame of reference is used, as modified from the current CIEEM (2016) guidelines:
- International and European;
 - National (UK);
 - Regional;
 - Metropolitan, County, vice-county or other local authority-wide area (i.e. district);
 - Local;
 - Site (i.e. within the context of Application Site only)

³⁵ Principal legislation being the Wildlife and Countryside Act 1981 (as amended) and the Conservation (Natural Habitats &) Regulations 2010 (as amended) which implement the EC Habitats Directive. Some animals are protected under separate legislation (e.g. the Protection of Badgers Act 1992).

³⁶ JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012) UK Post-2010 Biodiversity Framework. July 2012. Action Plans which still underpin strategic objectives set out in the current England strategy

'Biodiversity 2020 – A strategy for England's wildlife and ecosystem services' (Defra 2012).

³⁷ Further to section 40 of the Natural Environment and Rural Communities Act 2006.

³⁸ Following the British Red Data books published by the JNCC/RSNC and the Nationally Notable (Nationally Scarce) categorisations recognised by the JNCC

³⁹ Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2015) Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. British Birds 108, 708–746.

Determining the Sensitivity of Key Receptors

12.3.17 In order to determine whether an individual effect on a key ecological receptor is 'significant', the sensitivity of the affected habitat, site or species must be considered. The sensitivity of an individual receptor is a product of various factors including:

- habitat extent or population size (at a given geographical level)
- habitat or population fragility (including ability to recover)
- the rarity of a species or habitat; and
- susceptibility to environmental change (e.g. from disturbance or pollution).

12.3.18 Applying the above criteria, sensitivity of individual receptors can be classified as follows:

Table 12.4 – Sensitivity

Sensitivity	Habitat Example	Species Example
High	Habitat is highly susceptible to nutrient enrichment or invasion from competitive species Habitat has highly specialised hydrological or soil/geology requirements (e.g. calcareous fen) Habitat is present as small and isolated fragments vulnerable to edge effects Habitat is fragile - i.e. takes an extended period to develop full suite of components (e.g. ancient woodland)	Species is highly intolerant of disturbance or pollution Species is present in a small and isolated population and/or has low dispersal rates Species has low recruitment rates and population recovery is likely to be very slow
Moderate	Habitat can tolerate some elevated levels of pollution or will recover within a short-medium term (e.g. < 20 years) Habitat has hydrological or soil/geology requirements that can be recreated or are fairly widely met Habitat may be isolated, but is present at an extent that provides resistance to edge effects and is better able to accommodate damage Habitat develops over a moderate timescale given the right conditions (e.g. unimproved acid grassland)	Species is able to tolerate some levels of disturbance or pollution (e.g. sub-lethal effects) Species population is restricted, but large enough to accommodate some temporary reduction without long term consequences for viability Species has moderate recruitment rates

Sensitivity	Habitat Example	Species Example
Low	<p>Habitat is highly resistant to nutrient enrichment or other forms of pollution and physical disturbance (e.g. improved grassland)</p> <p>Habitat has non-specific requirements that are readily met elsewhere</p> <p>Habitat is extensive and well able to accommodate localised or more extensive damage</p> <p>Habitat is easily recreated over a short timescale (e.g. improved grassland)</p>	<p>Species is highly resistant to disturbance and pollution (e.g. most urban wildlife)</p> <p>Species' population is widespread and recolonisation in the wake of any localised range reduction likely to occur readily</p> <p>Species has high recruitment rates likely to lead to rapid recovery of population levels</p>

- 12.3.19 Again, a certain amount of subjectivity and the application of professional judgment is unavoidable when determining sensitivity, however in addition to first-hand experience of the species/habitat and locality in question, a wealth of scientific literature and/or local conservation status information can often be drawn upon to inform such judgements.

Impact Magnitude

- 12.3.20 The following terms are used to quantify the 'magnitude' of identified impacts in this assessment:

Table 12.5 – Impact Magnitude

Impact Magnitude	Definition
Very High	An example of a very high magnitude impact would be direct mortality or displacement of a significant proportion of a species' population or loss of habitat at a level likely to remove its continued representation at the given geographical level being considered.
High	An example of a high magnitude impact would be direct mortality, indirect displacement or habitat loss that would be likely to substantially reduce the population level or degree of representation at the given geographical level being considered.
Moderate	Moderate impacts include those likely to result in a net reduction of population or habitat representation (at least in the absence of effective mitigation or compensation) at the given geographical level being considered.
Minor	Minor impacts include those that may result in loss of a few individuals from a species' population or minor reduction in habitat extent at the given geographical level being considered.
Negligible	Negligible impacts are those that are not likely to give rise to measurable effects on population level or habitat representation at the given geographical scale.

Significance of Effects

- 12.3.21 Whether a potential effect is 'significant' or not at the given geographical level that the receptor is valued at, is determined by quantifying the magnitude of effect on each of the receptors identified. Thus for receptors of national or international value and high sensitivity, negative effects measured at high or very high magnitude are likely to represent a significant impact at that geographical level. At the other end of the scale, minor magnitude effects on receptors of low sensitivity and only immediate local value are likely to be below EIA significance thresholds. Substantial effects on high value receptors that are of low sensitivity may fall either side of the significance threshold - in such cases avoidance should be considered or mitigation may be able to be employed to ameliorate effects. A key consideration is whether the 'integrity' of a site or ecosystem (e.g. its coherence of structure and function) and/or the 'conservation status' of a species or habitat (e.g. the ability of a population/habitat to maintain itself at pre-development levels/quality) will be compromised.

12.4 Baseline Conditions

Overview

- 12.4.1 The study area is dominated by agricultural fields intersected by mature hedgerows, trees and a number of watercourses, including Chennells Brook⁴⁰ which runs in a broadly east to south-west direction through the eastern part of the study area. A number of woodland parcels are contained within the study area, including Graylands Copse, Bush Copse, Castle Copse and Holbrook Plantation. Other habitat features include a total of 18 waterbodies scattered throughout the study area, the majority of which are ponds, but also include two historic moats. There are three main farm complexes within the study area; these are (from west to east): Morris Farm, Moated House Farm and Owlscastle Farm⁴¹/Barn. The majority of the study area descends from the north to the south with the land falling away more so in the area to the north of Chennells Brook.
- 12.4.2 The study area is bounded to the south by the A264 and associated embankments, to the west by Langhurstwood Road, to the north by a series of woodland blocks from Holbrook Wood in the west to Bakehouse Copse in the east, and to the east by Wimland Road. Holbrook Park (in the centre of the study area) was largely excluded from the suite of ecological studies undertaken in 2010, 2011 and 2014.
- 12.4.3 The study area is mapped as comprising of two soil types; the southern two-thirds (broadly comprising the application site) consists of slightly acid loamy and clayey soils with impeded drainage, whilst the northern third of the study

⁴⁰ Chennells Brook is referenced as 'Channells Brook' on some Ordnance Survey maps.

⁴¹ Owlscastle Farm is referenced as 'Owlcastle Farm' on some Ordnance Survey maps.

area comprises slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils⁴².

Desk study

12.4.4 The data obtained through the desk study confirmed that no part of the study area is subject to any statutory nature conservation designation.

12.4.5 Table 12.7 below details non-statutory nature conservation designations within 2km of the study area, statutory nature conservation designations within 5km, and internationally designated sites within 20km.

Table 12.7 List of statutory and non-statutory nature conservation designated sites within 2km of the study area.

Designation type	Site	Designation	Distance from application site	Orientation from application site	Notes
National Statutory	Warnham	Site of Special Scientific Interest (SSSI)	0.3km	North-west	A site of geological interest.
	Warnham Mill Pond	Local Nature Reserve (LNR)	0.45km	South-west	Site includes open water, marginal vegetation, freshwater marsh and plantation woodland. The pond is of ornithological interest.
	St. Leonard's Park Ponds	SSSI	2.4km	South	Species-rich ponds with diverse range of Odonata.
	St. Leonard's Forest	SSSI	2.5km	South	High forest with varied ground flora. Woodland bird assemblage is varied.
	House Copse	SSSI	2.7km	North-east	Small isolated woodland with small-leaved lime present.
	Buchan Hill Ponds	SSSI	3.3km	East	Three hammer ponds present. Uncommon woodland surrounding the ponds. Diverse range of Odonata.
	Clock House Brickworks	SSSI	4km	North	A site of geological interest.
	Target Hill Park	LNR	4.4km	East	Large area of grassland, scrub and birch woodland. Ponds and wetland have been created.
	Auclaye	SSSI	4.6km	North	A site of geological interest.
	Vann Lake and Ockley Woods	SSSI	4.6km	North-west	Wooded gill with a hammer pond. Ancient woodland present, with bryophytes and fungi present.

⁴² <http://www.landis.org.uk/soilscapes/>

Designation type	Site	Designation	Distance from application site	Orientation from application site	Notes
International Statutory	The Mens	Special Area of Conservation (SAC)	16km	South-west	Mature beech woodland rich in lichens, bryophytes, fungi and invertebrates. Barbastelle present.
	Mole Gap to Reigate Escarpment	SAC	17.1km	North	Supports the only area of box scrub in the UK. Also present are calcareous grassland types and yew woodland
	Ashdown Forest	SAC & SPA (Special Protection Area)	19.4km	East	Wet and dry heaths supporting important assemblages of beetles, odonata, butterflies and birds (notably nightjar and dartford warbler)
	Ebernoe Common	SAC	20.1km	South-west	Beech forest rich in epiphytic lichen. Important for Bechstein's bat and barbastelle
	Arun Valley	SAC (SCI (Site of Community Importance)) & SPA	20.1km	South-west	Site supports important numbers of wintering waterbirds including Bewick's swan. Ramshorn snail present
Non-statutory	Brookhurst Wood & Gill & Morris's Wood	Site of Nature Conservation Importance (SNCI)	Within site	-	See section 12.46 below
	Warnham Mill Pond	Site of Nature Conservation Importance (SNCI)	0.45km	South-west	Site includes open water, marginal vegetation, freshwater marsh and plantation woodland. The pond is of ornithological interest.
	Leechpool & Owlbeech Woods	Site of Nature Conservation Importance (SNCI)	1.2km	South-east	Large area of woodland adjacent to Horsham. Wood mainly consists of oak as well as beech. The site supports interesting flora, good populations of birds, amphibians and reptiles.
	St. Leonard's Forest	Site of Nature Conservation Importance (SNCI)	1.35km	South East	Large area of coniferous and deciduous plantation with heathy rides.

12.4.6 The desk study did confirm that there is one non-statutory designated site within the study area: 'Brookhurst Wood & Gill & Morris's Wood' Site of Nature Conservation Importance (SNCI). This is located in the north-west of the study area (as shown on Appendix 12.2) and the summary in the citation states:

"Most of this woodland is situated on or adjacent to stream valley sides. It is dominated by Hornbeam, which has grown from coppice forming a dense canopy in many areas. The shrub layer is generally sparse but the ground

flora is species-rich in places, particularly alongside the stream banks which also support a number of mosses and liverworts."

- 12.4.7 A review of the revised ancient woodland inventory for the locality⁴³ identifies a number of woodlands within the study area that are assessed by the authors to be ancient (i.e. present since at least 1600AD). Appendix 12.2 identifies these ancient woodlands. The ancient woodlands comprise the following: a strip of woodland along Langhurstwood Road (to the south of Graylands Lodge), an unnamed copse to the south of Graylands Copse (hereafter informally known as 'Three Acre Copse' in order to avoid ambiguity with other woodlands), a part of Holbrook Plantation, a strip of wood to the west and north of Morris Farm and encompassing Holbrook Gill, a tree belt to the south of Furze field Copse encompassing pond P4, Castle Copse, and Bush Copse. In total, designated ancient woodland covers around 23.7 hectares representing some 9% of the study area, and in terms of the application site ancient woodland covers approximately 6.2ha representing some 2.47% of the application site. The woodlands outside of the study area to the north are largely noted in the inventory to also be ancient woodland.
- 12.4.8 The northern part of the study area is encompassed within the Rusper Ridge Biodiversity Opportunity Area (BOA), with The St. Leonards Watershed BOA located approximately 90m to south-east of the study area. BOAs and their regional equivalents around the country are a large-scale, strategic approach to identifying where changes in land management, whether connected to development or otherwise, would be able to deliver the greatest biodiversity benefits; they are not statutory or non-statutory nature conservation designations and do not represent a constraint on development. Appendix 12.2 shows the location of these BOAs.
- 12.4.9 The search of the Environment Agency's (EA) Water Framework Directive (WFD) spreadsheet identified two watercourses within or in close proximity to the application site. These two watercourses, comprising Boldings Brook⁴⁴ and Chennells Brook⁴⁵ (named 'Arun' on the EA's spreadsheet), are within the South East River Basin District and fall within the Arun and Western Streams catchment. The former watercourse is just outside the application site to the west, with the latter watercourse flowing in a broadly north-east to south-west alignment in the eastern part of the application site. These two watercourses join at Warnham Mill Pond (within Warnham Local Nature Reserve) before becoming the River Arun. According to the 2012 spreadsheet Boldings Brook is assessed to be of 'Moderate' Ecological Status, with Chennells Brook assessed to be of 'Good' Ecological Status.

⁴³ Hume, V. & Grose, M. (2010) A Revision of the Ancient Woodland Inventory for West Sussex. Weald and Downs Ancient Woodland Survey

⁴⁴ Waterbody ID GB107041018020

⁴⁵ Waterbody ID GB107041018010

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- 12.4.10 Sussex Biodiversity Record Centre identified six records of specially protected or notable species records where the grid reference and the site name provided appear to relate to the study area specifically. These were two records of pipistrelle species *Pipistrellus* sp., small heath *Coenonympha pamphilus*, barn owl *Tyto alba* and brown hairstreak *Thecla betulae*. In addition, there were a number of records at a tetrad⁴⁶ level where the grid reference stated encompasses some of the study area. These records included the plants lady's mantle *Alchemilla filicaulis* subsp. *vestita*, broad-fruited cornsalad *Valerianella ramosa*, and the hawkweed *Hieracium exotericum*.
- 12.4.11 Eight protected or notable species have been recorded close to the study area (within c.100m and particularly to the west in the vicinity of the Brookhurst Wood Landfill site), these are: great crested newt, slow-worm *Anguis fragilis*, common toad *Bufo bufo*, pillwort *Pilularia globulifera*, grass snake *Natrix natrix*, noctule *Nyctalus noctula* and brown hairstreak, with a record of a long-eared bat *Plecotus* sp. from around Benson's Farm (located along Wimland Road to the east of the study area). The desk survey also provided a list of 167 bird species that had been recorded within the search area. Other than barn owl, willow tit, tree sparrow and red kite *Milvus milvus*, no other bird records originate from the study area. The species listed include the Schedule 1 species⁴⁷ hobby *Falco subbuteo*, merlin *Falco columbarius*, kingfisher *Alcedo atthis*, fieldfare *Turdus pilaris* and redwing *Turdus iliacus*.
- 12.4.12 A search of Bioscan's in-house archive revealed a number of protected species records from around the village of Faygate (located approximately 1.3km to the east of the eastern study area boundary). These records include; slow worm, common lizard *Zootoca vivipara*, grass snake, great crested newt, common pipistrelle *P. pipistrellus*, noctule, Daubenton's bat *Myotis daubentonii*, brown long-eared bat *Plecotus auritus* and badger.
- 12.4.13 An internet trawl for EIAs in support of schemes within the vicinity of the study area revealed two assessments. One was submitted by Biffa for the construction and operation of a mechanical and biological treatment facility (planning application reference WSCC/055/09/NH) at Brookhurst Wood Landfill site approximately 50m to the west of the study area. The other application was submitted by Crest Nicholson and Bovis Homes for a mixed-use development known as Kilnwood Vale approximately 3km to the north-east. The EIA for the former site noted the presence of small populations of great crested newt, slow-worm and grass snake with other species noted including foraging common pipistrelle, kingfisher, smooth newt *Lissotriton vulgaris*, palmate newt *Lissotriton helveticus* and common toad. The EIA for the latter site noted the presence of 13 badger setts, flight records of noctule, common pipistrelle, soprano pipistrelle *Pipistrellus pygmaeus* and

⁴⁶ A tetrad is a 2km by 2km square

⁴⁷ In accordance with the Wildlife and Countryside Act 1981 (as amended).

brown long-eared bat. Targeted species-specific surveys for dormouse, great crested newt and water vole did not yield any sightings/records. A reptile survey of the application site revealed the presence of a low population of slow-worm and common lizard. Bird species of note included little ringed plover *Charadrius dubis*, dunnoek *Prunella modularis*, marsh tit *Poecile palustris*, linnet *Carduelis cannabina*, reed bunting *Emberiza schoeniculus*, skylark *Alauda arvensis*, yellowhammer *Emberiza citrinella* and lapwing *Vanellus vanellus*. Other species noted include common frog, common toad and smooth newt.

Habitat Survey

- 12.4.14 Appendix 12.16 provides the results of the habitat surveys carried out between 2010 and 2016, with Appendix 12.3 providing the distribution and extent of each habitat.

- 12.4.15 *Protected and notable fauna species*

Great Crested Newts

- 12.4.16 Appendix 12.17 provides the results of the 2014 survey and the 2015 and 2016 eDNA sampling and analysis.

Reptiles

- 12.4.17 Appendix 12.18 provides the results of the 2014 and 2015 reptile surveys.

Bats

- 12.4.18 Appendix 12.19a provides the results of the bat tree assessment, the building inspections, the bat activity surveys and automated bat detector surveys conducted in 2014 and 2015. Appendix 12.19b provides the results of the bat tree emergence and re-entry surveys conducted in 2016.

Hazel Dormouse

- 12.4.19 Appendix 12.20 provides the results of dormouse nest tube carried out in 2014.

Water vole and otter

- 12.4.20 Appendix 12.21 provides the results of the water vole and otter survey conducted on the application site in 2014.

Birds

- 12.4.21 Appendix 12.22 provides the results of the breeding bird survey carried out in 2014.

Badger

- 12.4.22 Confidential Appendix 12.24 provides the results of the badger survey conducted in 2014.

Other Species

- 12.4.23 A number of other species have been recorded within the study area whilst undertaking the other ecological surveys. Although these records add to the information base they should not be regarded as comparable to that which might be obtained from a specialist survey.
- 12.4.24 Table 12.8 below provides a list of butterflies that were noted incidentally on the study area in 2014 and 2015 whilst carrying out the other ecological surveys.

Table 12.8. Incidental butterflies recorded on the application site

Common Name	Scientific Name	Conservation status*	Notes
Brimstone	<i>Gonepteryx rhamni</i>		
Brown Hairstreak	<i>Thecla betulae</i>	SPI	Noted in central north of study area
Clouded yellow	<i>Colias croceus</i>		Noted on two occasions
Comma	<i>Polygonia c-album</i>		
Dingy skipper	<i>Erynnis tages</i>	SPI	In the small meadow in the south-west of the study area
Green-veined white	<i>Pieris napi</i>		
Holly blue	<i>Celastrina argiolus</i>		
Large skipper	<i>Ochlodes venata</i>		
Large white	<i>Pieris brassicae</i>		
Meadow brown	<i>Maniola jurtina</i>		
Orange tip	<i>Anthocharis cardamines</i>		
Peacock	<i>Inachis io</i>		
Red admiral	<i>Vanessa atalanta</i>		
Ringlet	<i>Aphantopus hyperantus</i>		
Silver-washed fritillary	<i>Argynnis paphia</i>		In Bakehouse Copse
Small copper	<i>Lycaena phlaeas</i>		
Small heath	<i>Coenonympha pamphilus</i>	SPI	In the small meadow in the south-west of the study area
Small tortoiseshell	<i>Aglais urticae</i>		
Small/Essex Skipper	<i>Ochlodes sp.</i>		
Speckled wood	<i>Pararge aegeria</i>		
White Admiral	<i>Limenitis camilla</i>	SPI	In Bush Copse near to Owlscastle Barn

*SPI- Species of Principal Importance

12.4.25 Table 12.9 below provides a list of Odonata (dragonflies and damselflies) that have been noted on the study area in 2014.

Table 12.9. Incidental odonata recorded on the application site

Common Name	Scientific Name
Azure damselfly	<i>Coenagrion puella</i>
Black-tailed skimmer	<i>Orthetrum cancellatum</i>
Broad-bodied chaser	<i>Libellula depressa</i>
Common blue damselfly	<i>Enallagma cyathigerum</i>
Emperor dragonfly	<i>Anax imperator</i>
Golden-ringed dragonfly	<i>Cordulegaster boltonii</i>

12.4.26 Other species noted included the cinnabar *Tyria jacobaeae* moth (in caterpillar form), grey squirrel *Sciurus carolinensis*, roe deer *Capreolus capreolus* and evidence of mole *Talpa europaea*. Two distinctive species of fungi were noted incidentally within the study area; yellow brain fungus *Tremella mesenterica* and Judas's ear fungus *Auricularia auricula-judae*. Also

confirmed as present was stag beetle *Lucanus cervus* (a male located at Target note 2) in Appendix 12.3. This species is protected from sale due to its listing on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). It is also listed under Annex II of the EC Habitats Directive and Appendix III of the Bern Convention.

12.5 Key Impacts and Likely Significant Effects

12.5.1 In terms of assessing the significance of ecological impacts arising from the proposed development, and on the basis of the baseline survey work completed, the following key receptors on the application site have been identified:

Table 12.10. Key receptors

Scale	Key Receptor
International and European	<p>The application site is not subject to any international designation and there are no internationally designated sites within 15km of the application site. Nevertheless, some of these sites (The Mens SAC, Mole Gap to Reigate Escarpment SAC), are assessed as within the range or scope of certain potential effects and they are therefore included in the assessment.</p> <p>No habitats are present within the application site that are considered to be important at international or European level.</p> <p>No species are present on the application site at populations adjudged to be of international or European importance</p>
National	<p>The application site is not subject to any national designation, and no habitats are present on-site that are considered to be important at national level. Buchan Hill Ponds SSSI is within range of certain potential effects from air pollution and is therefore included in the assessment.</p> <p>No species are present on the application site at populations adjudged to be of national importance</p>
Regional	<ol style="list-style-type: none"> 1. Bats. Certain parts of the application site could fall within the regional category due to the presence of barbastelle and their level of activity. 2. No protected sites are present within the application site that are considered to be important at the regional level.
Metropolitan, County, vice-county, district	<ol style="list-style-type: none"> 1. The application site encompasses part of 'Brookhurst Wood & Gill & Morris's Wood' Site of Nature Conservation Importance (SNCI). The SNCI is located in the north of the application site, with approximately 1.8% (5194m²) of the SNCI present within the application site boundary. 2. Bats. Due to the levels of pipistrelle (common, soprano and Nathusius') and noctule activity these receptors could be adjudged to be important at the county level. 3. Warnham Local Nature Reserve (LNR) is within range (0.4km) of certain potential effects and is therefore included in the assessment. 4. Ancient woodland. The application site contains woodland which has been assessed as ancient; however ancient woodland is a relatively common resource within the county, and the quantum within the application site is not adjudged to

Scale	Key Receptor
	<p>be important at anything above this level. These ancient woodlands comprise Three Acre Copse, parts of Holbrook Plantation, a strip of wood to the north of Morris Farm and encompassing Holbrook Gill, a tree belt to the south of Furze field Copse encompassing pond P4, Castle Copse and Bush Copse. Smaller additional areas of woodland contain ancient woodland indicators and can be considered to also be ancient in nature. In total, designated ancient woodland covers around 6.18 hectares representing some 2.4% of the application site.</p> <ol style="list-style-type: none"> Hazel dormouse. This species is restricted to the south-eastern part of the application site (within the vicinity of the lower stretch of Chennells Brook) but is likely to be relatively common within the wider local landscape. Great crested newts. Seven waterbodies within the application site were found to support low populations of great crested newt, with breeding confirmed or attempted in four waterbodies. The population levels are modest and not adjudged to be significant at anything above the District level. Waterbodies. Due to the relatively large number of waterbodies within the application site and the presence of great crested newt in some of these, this resource has been valued at the District level. Nevertheless, the waterbodies are generally of low quality, largely lacking significant aquatic vegetation. Invertebrates. The presence of species such as stag beetle, white admiral, dingy skipper, brown hairstreak and other species of elevated conservation importance (SPI) elevates this resource to district level. Due to the presence of similar habitats these species are likely to be present within the wider area.
Local	<ol style="list-style-type: none"> Reptiles. Common lizard, slow-worm and grass snake are restricted to a small number of areas of the application site. This restriction is largely due to the majority of the application site comprising unsuitable habitat in the form of intensively farmed fields as well as woodland. Small to medium sized populations of these common reptiles are assessed to be present. These three species can be considered to be common and widespread in a national and local context. Hedgerows. Some of the hedgerows are species-rich and robust examples, and are likely to be ancient in origin. Nevertheless, the hedgerow resource is relatively common in the wider area, and is therefore adjudged to be no more than of local importance. This resource provides connectivity through the application site and into the wider surrounding area. The gills (including Chennells Brook) are assessed to have intrinsic value at the local level due to their function as wildlife corridors. Woodland (not assessed as ancient). This resource is common in the wider area. Although, some areas of the woodlands support ancient woodland indicator species, the small size of the woodlands and the presence of species such as cherry-laurel, reduces their value. This receptor is assessed to have intrinsic value at the local level.

Scale	Key Receptor
	5.
Site (i.e. application site)	<ol style="list-style-type: none"> 1. Birds. The bird surveys indicate that the assemblage is fairly typical and unremarkable in view of the habitats present, and the number of individuals of each species commonly associated with farmland and woodland was relatively low. 2. Badgers. Badger activity is largely confined to the north of the application site. However, there are two subsidiary setts and two outlier setts in the southern section. This species is common in a local and national context. 3. Semi-improved grassland. The majority of this habitat lacks species of elevated interest. Nevertheless, a small number of mesotrophic indicator species were encountered. Although a small number of mesotrophic indicator species were encountered the application site is of intrinsic low value and is therefore scoped out as a key receptor. 4. Arable land. The intensive arable habitat that dominates the application site is of intrinsic low value and is therefore scoped out as a key receptor.

Construction Phase

- 12.5.2 The predicted impacts have been assessed against the latest (2153A-150Q) drawing and with reference to the Concept Masterplan as a likely configuration of the detailed development. In summary, the development includes provision for up to 2,750 houses, a business park, schools, community facilities, retail provision, and a railway station.
- 12.5.3 The principal sources of potential direct impacts on the ecological receptors during the construction phase of the proposed development are assessed to be as follows:
- Loss and/or changes to habitats through preparation of land for development (with associated loss of foraging habitat for *inter alia* bats, great crested newt, hazel dormouse, badger, reptiles and birds)
 - Removal of circa 3,100m of hedgerow (of which 1,600m is considered to be species-rich, and the remainder considered to be species-poor) to allow access into the application site and for internal circulation
 - Changes to the gills and streams due to bridging to allow access into and around the application site.
 - Changes to tree belts, to one small section of ancient semi-natural woodland (ASNW), and to one area of plantation on ancient woodland site (PAWS) to allow access into and around the application site.
 - Removal of approximately 44 mature trees to allow access into and around the application site
 - Removal of one building that is known to support roosting bats

12.5.4 The principal sources of potential indirect impacts on the ecological resources during the construction phase of the development are assessed to be as follows:

- Impacts to on-site surface water systems including Chennells Brook, Boldings Brook and un-named gills and streams from pollution/siltation
- Temporary disturbance from noise, dust and lighting to adjoining and/or retained habitats (including ancient woodland)
- Potential temporary effects from dust and emissions to Buchan Hills Ponds SSSI
- See also Table 12.11 for details of the assessments

Operational Phase

12.5.5 The principal sources of potential impact on ecological resources that could arise during the post-completion phase of the development are believed to be as follows:

- Increased light levels from street lighting onto retained habitats, which is likely to affect the behaviour of sensitive nocturnal fauna such as bats
- Changes in hydrological regime and/or water quality in Chennells Brook, Boldings Brook and/or other on-site surface water systems, arising from drainage of built-up areas, gardens etc.
- Management neglect and related or unrelated habitat changes affecting the future value of retained or adjoining habitats
- Fragmentation of habitat which could impact on dispersal of great crested newts, hazel dormouse, badger, reptiles, potentially resulting in isolation of populations.
- Potential for permanent effects on fauna such as reptiles and dormouse from increased predation pressure, particularly from domestic cats
- Potential indirect impacts on adjoining and more distant designated sites for nature conservation arising from increased recreational pressure generated by the development and associated disturbance effects
- Potential minor effects on Buchan Hill Ponds SSSI due to increase in car use and the resulting increase in air pollution which could affect the SSSI's habitats and associated species

Table 12.11 overleaf provides a detailed assessment of these potential impacts on each of the key ecological receptors, including assessment of impact magnitude and significance in the absence of any further mitigation.

Table 12.11 – Assessment of Likely Significant Effects from construction activities on Key Ecological Receptors in the Absence of Further Mitigation

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified potential impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Detailed mitigation proposed
	I	N	R	M/C/D	L	S						
Buchan Hill Pools SSSI		*					1) Potential temporary impact to habitats and key taxa (Odonata) underpinning the integrity of the SSSI from emissions and dust from construction traffic.	1) Moderate	1) Effect unlikely to be more than very minor in magnitude due to existing traffic, localised nature of emissions from road into SSSI, and distance from application site to the SSSI in respect of dust.	1) None proposed over those provided in Chapter 15.	1) Significance restricted to immediate confines of boundary with designated area in worst case.	1) None proposed
'Brookhurst Wood & Gill & Morris's Wood' Site of Nature Conservation Importance (SNCI)				*			1) Permanent direct loss of small part of SNCI due to road construction. 2) Potential temporary impact on SNCI from (e.g.) noise and dust due to construction activities	1) High 2) Moderate	1) Minor magnitude loss of 0.51ha (1.82%) of overall designation. 2) Effect unlikely to be more than minor magnitude due to localised nature of road construction activities.	1) The proposed road will largely follow the route of an existing metalled farm track through the SNCI, although some removal of habitat either side of this track will be required. 2) None proposed	1) Significance limited to local level due to careful masterplanning which routes road along existing metalled farm track which is of limited botanic interest in context of its interest features. 2) Effect not likely to reach significance thresholds at anything above the immediate local level.	1) Any laydown areas for the road construction would be located outside the SNCI. 2) The construction of the road will adhere to a Construction and Environmental Management Plan (CEMP) to ensure that noise and dust are kept to a minimum in any event.
Warnham Local Nature Reserve (LNR)			*	*			1) Potential impact vector between proposed application site and this receptor (e.g. for contamination) via the watercourses, a tributary of Boldings Brook and Chennells Brook, both of which flow through the LNR.	1) Moderate	1) Only minor magnitude effects deemed possible due to distance of receptor and subsequent dilution effect as it passes downstream before reaching LNR. Magnitude also limited by overall size of LNR compared to area that could be affected in worst case.	1) None assessed to be required	1) Significance restricted to immediate confines of designated area in worst case.	1) Construction activities will adhere to a Construction and Environmental Management Plan (CEMP) to ensure that risk of contaminants reaching watercourse is negligible.
Bats			*	*			1) Potential impacts on bats as a result of landtake causing habitat fragmentation and/or changes in foraging areas.	1) Moderate	1) Total landtake is c.210 ha of which the majority is poor quality arable habitats.	1) Retention of the key ecological features within masterplan (e.g. hedgerow network and ancient woodland) secures the majority of the existing highest quality foraging habitat and key commuting routes.	1) Not significant with scope for (up to) Local level enhancement for bats	1) None required

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified potential impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Detailed mitigation proposed
	I	N	R	M/C/D	L	S						
							<p>2) Potential impacts on foraging and commuting bats from severance of woodlands from road construction.</p> <p>3) Loss of identified roost sites due to building removal or refurbishment</p> <p>4) Loss of potential roost sites within trees to be felled or subject to surgery for construction of road network and built development.</p>	<p>2) Moderate</p> <p>3) High at the individual roost level</p> <p>4) High at the individual roost level in the absence of careful routing of roads. However, surveys have indicated no roosts within trees anticipated to be affected.</p>	<p>2) Not more than minor magnitude due to only four roads breaching through narrow stretches of woodland proposed.</p> <p>3) Minor magnitude due to only one building to be removed that supports roosting bats (long-eared bat, and possibly low numbers of common pipistrelle).</p> <p>4) None/negligible. No roosts identified during targeted surveys.</p>	<p>The extensive GI provision increases foraging and commuting opportunities and aids in dispersal, especially in light of potential climate change effects.</p> <p>2) The routing of the four roads to breach woodlands will utilise an existing track through woodland with only minor widening proposed, through a relatively young plantation on an ancient woodland site, and through two woodland belts. The siting of these roads through these areas is not likely to significantly affect commuting bats due to the restricted landtake.</p> <p>3) The masterplan avoids affecting all but one building which supports roosting bats. The erection of bat boxes on retained trees and selected buildings will provide compensatory roosting opportunities.</p> <p>4) Proposed roads into and around application site avoid, where possible, trees identified as having moderate or higher bat roosting potential.</p>	<p>2) No significant effect</p> <p>3) Significance limited to local level due to careful masterplanning avoiding majority of bat roosts.</p> <p>4) No significant effects anticipated due to careful masterplanning which avoids affecting bat tree roosts.</p>	<p>2) One of the aims of the management plan for the woodlands will be to ensure that the canopy of the trees on either side of the roads can be linked together (to provide a homogenous canopy), subject to highways requirements.</p> <p>3) Yes - required due to legal protection in any event and anticipated to secure no detriment to favourable conservation status.</p> <p>4) None proposed- no roosts encountered.</p>

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified potential impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Detailed mitigation proposed
	I	N	R	M/C/D	L	S						
Ancient Woodland				*			<p>1) Permanent direct loss of habitat due to road construction (also see above SNCI point).</p> <p>2) Potential for indirect, temporary impacts through construction activities such as noise and dust.</p>	<p>1) High</p> <p>2) Moderate</p>	<p>1) Minor magnitude loss of 135m² (0.22%) of ancient woodland, and 462m² (7.12%) of Plantation on Ancient Woodland Site (PAWS). Minor magnitude for remainder of other ancient woodland parcels.</p> <p>2) Effect not assessed as likely to be more than minor magnitude in worst case even in absence of mitigation.</p>	<p>1) The proposed road will largely follow the route of an existing metalled farm track through the ancient woodland, although some removal of habitat either side of this track will likely be required. The routing of an access road through Bush Copse will avoid the ancient woodland areas (the non-PAWS area). The habitat surveys of the PAWS indicates that it generally lacks ancient woodland indicator species.</p> <p>2) Design incorporates retention/creation of 15m habitat buffer between all areas of ancient woodland and the proposed built development</p>	<p>1) Significance limited to local level due to careful masterplanning which routes road along existing metalled farm track which is of least value within the ancient woodland as a whole. The routing of an internal access road through the PAWS avoids effects on the ancient semi-natural woodland (ASNW) component.</p> <p>2) Inclusion of buffer reduces effect to sub-significant level.</p>	<p>1) No specific mitigation for retained ancient woodland. However, wider ecological gains from enhancement of other retained ancient woodlands located within the application site considered sufficient to mitigate for an impact of this nature in any event.</p> <p>2) None assessed to be required; however, the construction of the roads will adhere to a Construction and Environmental Management Plan (CEMP) to ensure that noise and dust are kept to a minimum in any event. The buffers will be subject to ecological management plans to ensure the maximum biodiversity gain can be achieved.</p>
Hazel Dormouse				*			<p>1) Potential impacts to the European Protected hazel dormouse from habitat loss and fragmentation.</p> <p>2) Noise, vibrations from construction activities.</p>	<p>1) High</p> <p>2) Moderate</p>	<p>1) Potentially up to high magnitude effect if all suitable dormouse habitat removed, in absolute worst case scenario.</p> <p>2) Not more than minor magnitude in absolute worst case due to absence of built development in area where</p>	<p>1) All areas in which species was found to be retained within area that will form part of the proposed green infrastructure. The green infrastructure will also continue to provide routes for dormouse to reach woodland to the north. In addition, the provision of Green Infrastructure allows for dispersal of this species more widely within overall application site.</p> <p>2) All areas in which species was found to be retained within green infrastructure.</p>	<p>1) No significant effect</p> <p>2) No significant effect</p>	<p>1) No targeted mitigation assessed to be required, however, provision of aerial rope bridges where the gap between tree canopies will be too wide for dormouse to cross and/or the planting of trees either side of roads to create/reinstate habitat links and aid resilience to climate changes effects.</p> <p>2) None assessed to be required.</p>

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified potential impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Detailed mitigation proposed
	I	N	R	M/C/D	L	S						
									species was found.			
Great crested newt				*			<p>1) Potential impacts from loss of waterbodies, habitat fragmentation and changes in terrestrial habitat.</p> <p>2) Accidental killing/ or injuring of great crested newts due to construction activities e.g. vehicles</p> <p>3) Risk of localised accidental contamination of breeding sites due to construction activities e.g. spillage of vehicle oils and fuels</p>	<p>1) High</p> <p>2) Moderate</p> <p>3) Moderate</p>	<p>1) Potentially up to high magnitude if all breeding ponds lost and large areas of key foraging habitat removed</p> <p>2) Up to a very high magnitude effect if numbers killed mean the population is no longer self-sustaining.</p> <p>3) Effect likely to be limited to minor magnitude as phased nature of construction limits number that could be affected at any one time</p>	<p>1) All existing breeding sites and some areas of terrestrial habitat retained within masterplan. In addition, the extensive GI provides options for creation of additional terrestrial habitat and commuting/dispersal corridors.</p> <p>2) None required</p> <p>3) None proposed</p>	<p>1) Not significant above site level due to extent of design mitigation</p> <p>2) Significant effect at up to Local level in worst case, but no significant effect on maintenance of favourable conservation status.</p> <p>3) Phased nature of construction means effect unlikely to reach above Local level.</p>	<p>1) Provision of wildlife underpasses will assist in retaining existing commuting routes through application site. Detailed studies can be undertaken at detailed design stage.</p> <p>2) Yes - required due to legal protection in any event.</p> <p>3) Yes - details of measures to reduce risk of spillages occurring and measures to follow in the event of a spillage will be included in a CEMP.</p>
Waterbodies				*			<p>1) Direct loss due to landtake for construction.</p> <p>2) Impacts to waterbodies due to contamination e.g. siltation and pollution.</p>	<p>1) High</p> <p>2) Moderate</p>	<p>1) Potentially high magnitude effect if large number of waterbodies removed.</p> <p>2) Up to moderate magnitude effect due to phased construction removing scope for all waterbodies to be affected at any one time.</p>	<p>1) All waterbodies retained as part of the masterplan.</p> <p>2) None proposed</p>	<p>1) Not significant.</p> <p>2) Up to site level of effect sufficient to remove status of a waterbody as functional part of ecosystem.</p>	<p>1) None required.</p> <p>2) Implementation of a CEMP to reduce risk of contamination reaching this receptor.</p>
Reptiles					*		<p>1) Permanent loss of habitat found to support reptiles due to landtake for construction.</p> <p>2) Potential impacts on reptiles from habitat fragmentation.</p> <p>3) Accidental killing and/or injuring due to</p>	<p>1) High</p> <p>2) Low</p> <p>3) High</p>	<p>1) Potentially up to high magnitude loss, with c.5.4ha of existing reptile habitat, representing 74% of overall resource identified.</p> <p>2) Potentially moderate magnitude effect if isolation sufficient to compromise the long term integrity of a meta-population within application site.</p> <p>3) Up to a very high magnitude effect if numbers</p>	<p>1 + 2) The extensive GI areas, buffers around the woodlands and the ecological network will provide habitat suitable for reptiles at all times of year. In addition, the provision of GI will aid in dispersal of these species to ensure the application site is robust to the predicted effects of climate change.</p> <p>3) None proposed</p>	<p>1 + 2) No significant effect anticipated due to adoption of industry standard technique used to address habitat loss (such as a translocation strategy) and subsequent high confidence in deliverability and success of design mitigation</p> <p>3) Not significant above Local level as total loss of</p>	<p>1 + 2) None required, however areas of GI and ecological network to be managed for benefit of reptiles</p> <p>3) Yes- Required due to legal protection in any</p>

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified potential impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Detailed mitigation proposed
	I	N	R	M/C/D	L	S						
							construction operations.		killed mean the population is no longer self-sustaining.		population from the application site unlikely even in the absence of detailed mitigation.	event.
Hedgerow/Trees					*		<p>1) Small scale, isolated direct loss due to construction of access roads and other infrastructure.</p> <p>2) Indirect impact (e.g. incidental damage) due to construction activities</p>	<p>1) High</p> <p>2) Low</p>	<p>1) Not more than minor magnitude effects due to majority of existing hedgerow and mature tree resource being retained.</p> <p>2) Not more than minor magnitude due to very small scale and isolated nature of effects if they occur.</p>	<p>1) Route through hedgerows for the road network will utilise existing weakened areas/breaches where present.</p> <p>2) None proposed, however habitat buffers either side of retained hedgerow should minimise scope for effects in any event.</p>	<p>1) No significant effect above the site level</p> <p>2) Not significant</p>	<p>1) None required - however as part of the detailed design, infrastructure will exploit existing weaknesses e.g. existing access gaps, in preference for removal of new sections and/or will be routed through less ecological valuable hedgerows e.g. species-poor, in preference for removal of species-rich ancient hedgerows.</p> <p>2) None proposed, however, adherence to a CEMP will further reduce likelihood of effects occurring</p>
Gills (including Chennells Brook) and other watercourses					*		<p>1) Localised permanent habitat losses arising from construction of watercourse crossings.</p> <p>2) Potential for indirect impacts from siltation and other forms of pollution</p>	<p>1) High</p> <p>2) Moderate</p>	<p>1) Minor magnitude</p> <p>2) Moderate magnitude effects downstream of the watercourses.</p>	<p>1) None proposed</p> <p>2) A CEMP will be followed when working adjacent to watercourses.</p>	<p>1) Significant effects on short sections of watercourses, measurable at the site level.</p> <p>2) Effects potentially significant at immediate site level in the absence of mitigation.</p>	<p>1) Proposed roads will have to cross some watercourses, and these will aim to be located at areas of low ecological interest.</p> <p>2) None proposed.</p>
Woodland (non-ancient)					*		<p>1) Permanent loss of woodland as a result of road construction.</p> <p>2) Potential for indirect impacts due to (e.g.) dust during construction.</p>	<p>1) High</p> <p>2) Low</p>	<p>1) Minor moderate loss of five small sections of tree belts equating to c.0.97ha due to construction of roads.</p> <p>2) Unlikely to have more than minor magnitude even in worst case.</p>	<p>1) Infrastructure routed to avoid the principal woodland blocks, retaining these in their entirety.</p> <p>2) Design incorporates retention/creation of an appropriate habitat buffer between most sections of the</p>	<p>1) Retention of majority of woodland resource limits significance of effects to site level only.</p> <p>2) Unlikely to reach significant thresholds at anything above the site level.</p>	<p>1) None required, however significant area of woodland creation ample to compensate for small amount lost.</p> <p>2) None required, however Implementation of CEMP will further reduce scope for effects.</p>

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified potential impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Detailed mitigation proposed
	I	N	R	M/C/D	L	S						
										woodland and the proposed development which reduces the scope for effects from construction activity generally.		
Invertebrates				*			<p>1) Habitat loss resulting in fragmentation and reduction of suitable foraging and nesting habitat due to landtake for construction.</p> <p>2) Potential for vibrations, lighting and noise to affect behaviour of invertebrates.</p>	<p>1) High</p> <p>2) Low</p>	<p>1) Moderate magnitude due to loss of some small areas of moderate quality habitat and c. 120 ha primarily poor quality habitat. Minor effects on high quality habitats (woodland and hedgerows) due to retention of the majority of these features.</p> <p>2) Effect not assessed as likely to be more than minor magnitude in worst case even in absence of mitigation.</p>	<p>1) The illustrative masterplan retains the vast majority of the high quality habitats (e.g. woodland). In addition, provision of extensive GI and ecological network creates habitat for key species e.g. small heath, dingy skipper and brown hairstreak.</p> <p>2) Design incorporates retention/creation of habitat buffer adjacent to key habitat features.</p>	<p>1) Effects limited to immediate local level due to extent of habitat retained and similar habitat outside the site.</p> <p>2) Inclusion of buffer reduces effect to sub-significant level.</p>	<p>1) Yes - GI provision will be the subject of detailed management plans that will enhance suitability for invertebrates over long-term</p> <p>2) None assessed to be required; however, the construction of the roads will adhere to a Construction and Environmental Management Plan (CEMP) to ensure that noise and dust are kept to a minimum in any event. The buffers will be subject to ecological management plans to ensure the maximum biodiversity gain can be achieved.</p>
Birds (assemblage)						*	<p>1) Permanent displacement of bird species associated with open arable (e.g. yellowhammer) land due to landtake for construction</p> <p>2) Potential for localised permanent loss of breeding habitats associated with hedgerows and associated mature trees</p>	<p>1) High</p> <p>2) High</p>	<p>1) Limited to moderate magnitude effect due to the application site being contiguous with adjoining areas offering similar habitat.</p> <p>2) Very minor magnitude due to extent of overall resource.</p>	<p>1) None possible for displacement effects. The GI provision, particularly the landscape buffers, is likely to provide habitat for birds (including some farmland birds).</p> <p>2) Route through hedgerows for the road network will utilise existing weakened areas/breaches</p>	<p>1) Effects significant at the immediate site level as many displaced species (e.g. yellowhammer, skylark) are not likely to return. Effect unlikely to be significant at Local level or above. Species associated with sub-urban environment (e.g. house sparrow) likely to increase.</p> <p>2) Not significant</p>	<p>1) None proposed</p> <p>2) Not required.</p>

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified potential impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Detailed mitigation proposed
	I	N	R	M/C/D	L	S						
							3) Potential temporary disturbance to bird species using retained/adjoining habitats from construction activities.	3) Low	3) Up to minor magnitude effect.	3) None proposed	3) Unlikely to have a significant effect above the site level.	3) None proposed
Badger						*	1) Potential impacts on badgers due to loss of foraging habitat. 2) Direct impacts on setts from construction activities.	1) Moderate 2) High	1) Moderate magnitude loss of c. 120 ha of primarily poor quality foraging (arable) habitat. 2) Up to a very high magnitude effect if removal/disturbance of setts mean the badger population is no longer self-sustaining.	1) Masterplan retains vast majority of highest quality habitat. 2) All main setts to be retained within the masterplan, with these protected from construction activity by 30m + buffer/exclusion zone.	1) Not significant at anything above the site level. 2) Not significant at anything above the site level.	1) Not proposed. However, the landscape plan would incorporate fruit/berry bushes to provide additional foraging resource. 2) Yes- An update survey will be undertaken prior to works commencing to ensure the most up-to-date information is gathered in order inform if a licence from Natural England to disturb or close a sett is required.

Table 12.12 – Assessment of Likely Significant Effects from operation activities on Key Ecological Receptors in the Absence of Further Mitigation

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Further mitigation proposed
	I	N	R	M/C/D	L	S						
International Statutory Sites (The Mens SAC, Ebernoe Common SAC, Ashdown Forest SAC & SPA, Mole Gap to Reigate Escarpment	*						1) Potential indirect impacts on habitats and key interests from increased recreational pressure on these sites.	1) Moderate	1) Low magnitude due to distance to nearest site (a 40km round trip), and the likely low numbers of visitors traveling to these sites.	1) The application site's masterplan incorporates generous greenspace provision without any reliance on the statutory sites, including on-site formal and informal recreational facilities which are expected to absorb the majority of recreational pressure. 2) As for 1 above.	1) Any uplift in recreational pressure assessed to be de minimis and not significant. 2) Significant up to District	1) None proposed

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Further mitigation proposed
	I	N	R	M/C/D	L	S						
SAC, and Arun Valley SAC).							<p>2) Potential indirect impacts from vehicle emissions arising from increased car journeys to and from these sites.</p> <p>3) Potential impacts on barbastelle (citation and qualifying species for some of the sites) from severance of foraging/commuting routes.</p>	<p>2) Low</p> <p>3) Low – barbastelle use of the site likely to be unrelated to SAC population</p>	<p>2) As for 1 above</p> <p>3) Negligible</p>	<p>3) Buffers to commuting corridors and key foraging habitats (e.g. woodland) will ensure these features are retained for <i>inter alia</i> barbastelle. Incorporation of landscape planting across the application site will create additional potential flight routes and potential foraging areas.</p>	<p>level in absolute worst case.</p> <p>3) Not significant. Low levels of barbastelle use adjudged to be highly unlikely to be related to SAC population, and even if significant effects on this species were manifested at the site level, there is no likely significant impact vector for the SAC.</p>	<p>2) None proposed</p> <p>3) Yes- Management plans for each of the woodland parcels (with an overall plan to ensure a holistic approach across the application site) will ensure habitat suitable for barbastelle is retained/ managed suitably.</p>
Buchan Hill Pools SSSI		*					<p>1) Potential impacts on habitats and key species (Odonata) of the SSSI from increased vehicle emissions.</p>	<p>1) Moderate</p>	<p>1) Effect unlikely to be more than minor magnitude due to localised nature of emissions from road into SSSI.</p>	<p>1) None proposed over those provided in Chapter 15.</p>	<p>1) Significance restricted to immediate vicinity of SSSI boundary near to the road in worst case.</p>	<p>1) None proposed</p>
'Brookhurst Wood & Gill & Morris's Wood' Site of Nature Conservation Importance (SNCI)			*				<p>1) Potential indirect impacts arising from increased recreational pressure and associated disturbance effects.</p> <p>2) Potential contamination from pollutants e.g. first flush hydrocarbons and inappropriate disposal of sump oils.</p>	<p>1) High</p> <p>2) Low</p>	<p>1) Up to high magnitude on retained parts of SNCI possible over the long-term if pressure from disturbance, misuse and damage reaches very high levels.</p> <p>2) Low magnitude effect due to a pollution event only likely to affect small part of SNCI.</p>	<p>1) The application site's masterplan incorporates generous greenspace provision without any reliance on the SNCI, including on-site formal and informal recreational facilities which are expected to absorb the majority of recreational pressure.</p> <p>2) None proposed.</p>	<p>1) Significant at up to Local level</p> <p>2) Not significant above the site level.</p>	<p>1) The landscape and planting scheme will incorporate prickly planting and fencing to limit uncontrolled recreational and pet access into the SNCI.</p> <p>2) Yes - Chapter 16 outlines extent of control measures for pollution events at the detailed design stage</p>

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Further mitigation proposed
	I	N	R	M/C/D	L	S						
Warnham Local Nature Reserve (LNR)			*	*			<p>1) Potential indirect impacts arising from increased disturbance effects from recreational pressure.</p> <p>2) Potential impact vector between proposed application site and this receptor for contamination e.g. vehicle oils, via the watercourses, a tributary of Boldings Brook and Chennells Brook, both of which flow through the LNR.</p>	<p>1) Low</p> <p>2) Low</p>	<p>1) Effect limited to minor magnitude due to nature of habitats (principally aquatic) which limits extent of areas that could be affected.</p> <p>2) Only minor magnitude effects deemed possible due to distance of receptor and subsequent dilution effect as it passes downstream before reaching LNR. Magnitude also limited by overall size of LNR compared to area that could be affected in worst case.</p>	<p>1) The application site's masterplan incorporates generous greenspace provision, including on-site formal and informal recreational facilities which will absorb a large part of the recreational pressure generated</p> <p>2) None proposed.</p>	<p>1) Extent of on-site provision for recreation reduces likely effect on off-site receptors to a sub-significant level.</p> <p>2) Not significant above the site level.</p>	<p>1) None proposed.</p> <p>2) Yes- The quality of surface water discharge to the watercourses will be upheld by SUDS measures as detailed in Chapter 16.</p>
Bats			*	*			<p>1) Impact from increased artificial light levels due to houses and external lighting (e.g. street lighting).</p>	<p>1) Moderate</p>	<p>1) Up to high magnitude for least tolerant species, but moderate magnitude for overall assemblage due to broad tolerances of some of the species affected.</p>	<p>1) Buffers to commuting corridors and key foraging habitats (e.g. woodland) reduces scope for high intensity illumination of these features.</p>	<p>1) Significant up to District level in absolute worst case</p>	<p>1) Yes- The lighting design for the development will employ measures to minimise light spill onto adjoining habitats.</p>
Ancient Woodland				*			<p>1) Potential indirect impacts arising from increased recreational pressure and associated disturbance effects.</p>	<p>1) High</p> <p>2) Low</p>	<p>1) Up to high magnitude on retained parts of ancient woodland possible over the long-term if pressure from disturbance, misuse and damage reaches very high levels.</p> <p>2) Low magnitude effect due</p>	<p>1) The application site's masterplan incorporates generous greenspace provision without any reliance on the Ancient woodland, including on-site formal and informal recreational facilities which are expected to absorb a large part of recreational pressure.</p> <p>2) None proposed.</p>	<p>1) Significant at up to District level if large number of ancient woodlands degraded in worst case.</p> <p>2) Not significant above the site level.</p>	<p>1) Yes- Management plans for each of the woodland parcels (with an overall plan to ensure a holistic approach across the application site). Footpaths will be created through some parts of the ancient woodland in order to allow, but control access and restrict effects to defined areas. Prickly hedgerow planting will also be used to limit uncontrolled recreational access to areas of highest ecological value/sensitivity.</p>

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Further mitigation proposed
	I	N	R	M/C/D	L	S						
							2) Potential contamination from pollutants e.g. first flush hydrocarbons and inappropriate disposal of sump oils.		to a pollution event only likely to affect a small part of ancient woodland.			2) Yes - Chapter 16 outlines extent of control measures for pollution events at the detailed design stage.
Hazel Dormouse				*			1) Potential impact from domestic pets (particularly cats). 2) Potential indirect impacts arising from increased disturbance effects from recreational pressure.	1) High 2) Low	1) Up to high magnitude if large numbers killed 2) Up to minor magnitude effect	1) Spatial separation of proposed housing and location of confirmed dormouse population reduces extent to which predation is likely to occur. 2) None proposed	1) Not significant at anything above the site level 2) Effect unlikely to reach significance thresholds	1) None proposed 2) None proposed
Great crested newt				*			1) Potential contamination of breeding ponds from pollutants e.g. first flush hydrocarbons and inappropriate disposal of sump oils.	1) Moderate	1) Effect limited to minor magnitude due to very low risk of multiple ponds being affected simultaneously	1) None proposed	1) Not significant above the site level	1) Yes- The quality of surface water discharge to the watercourses will be upheld by SUDS measures as detailed in Chapter 16.
Waterbodies					*		1) Potential contamination of waterbodies from pollutants e.g. first flush hydrocarbons and inappropriate disposal of sump oils.	1) Moderate	1) Effect limited to minor magnitude due to very low risk of multiple ponds being affected simultaneously.	1) None proposed.	1) Not significant above the site level	1) Yes-The quality of surface water discharge to the watercourses will be upheld by SUDS measures as detailed in Chapter 16.
Reptiles					*		1) Increased disturbance and/or killing of individual/ small numbers from increased human activity and domestic pets.	1) High	1) Up to minor magnitude	1) None proposed	1) Not significant above site level.	1) None proposed.
Hedgerow/Trees					*		1) Impacts from close proximity of domestic gardens to hedgerows and trees (e.g. littering, dumping, inappropriate management).	1) Low	1) Up to moderate magnitude if effect results in large part of hedgerow resource and/or large number of trees are degraded.	1) Inclusion of buffers to hedgerow means no garden is adjoin a retained hedgerow	1) Not significant above local level.	1) Implementation of a management plan for retained hedgerows will both identify and remedy incidences of misuse, and also enhance hedgerow habitat making these more

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Further mitigation proposed
	I	N	R	M/C/D	L	S						
												resilient to such effect.
Gills (including Chennells Brook) and other watercourses					*		1) Potential contamination of waterbodies from pollutants e.g. first flush hydrocarbons and inappropriate disposal of sump oils.	1) Moderate	1) Effect limited to minor magnitude due to very low risk of multiple ponds being affected simultaneously	1) None proposed.	1) Not significant above the site level	1) Yes-The quality of surface water discharge to the watercourses will be upheld by SUDS measures as detailed in Chapter 16.
Woodland (non-ancient)					*		<p>1) Potential indirect impacts arising from increased recreational pressure and associated disturbance effects.</p> <p>2) Impacts from close proximity of domestic gardens to woodlands (e.g. littering, dumping, inappropriate management).</p> <p>3) Potential contamination of waterbodies from pollutants e.g. first flush hydrocarbons and inappropriate disposal of sump oils.</p>	<p>1) Low</p> <p>2) Low</p> <p>3) Low</p>	<p>1) Up to moderate magnitude effect in worst case</p> <p>2) Minor magnitude effect in light of design of residential properties</p> <p>3) Low magnitude effect due to a pollution event only to affect a small part of ancient woodland.</p>	<p>1) The application site's masterplan incorporates generous greenspace provision without any reliance on the woodlands, including on-site formal and informal recreational facilities which are expected to absorb a large part of recreational pressure</p> <p>2) The design of the master plan will ensure that domestic gardens do not abut hedgerows and other boundary features.</p> <p>3) None proposed.</p>	<p>1) Significant at up to local level if large proportion of woodland resource degraded in worst case</p> <p>2) No significant effect above the local level.</p> <p>3) Not significant above the site level.</p>	<p>1) Yes - Management plans for each of the woodland parcels (with an overall plan to ensure a holistic approach across the application site) will enhance woodland habitat making these more resilient to such effects.</p> <p>2) Yes - Management plans for each of the woodland parcels (with an overall plan to ensure a holistic approach across the application site) will both identify and remedy incidences of misuse, and also enhance woodland habitat making these more resilient to such effects.</p> <p>3) Yes - Chapter 16 outlines extent of control measures for pollution events at the detailed design stage.</p>
Invertebrates				*			1) Impact from increased artificial light levels due to houses and external lighting (e.g. street lighting).	1) Moderate for some species	1) Up to minor magnitude effect	1) Buffers to key habitats (e.g. woodland and hedgerows) reduces scope for high intensity illumination of these features.	1) Significant up to local level in worst case in absence of suitably designed lighting scheme.	1) Yes- The lighting design for the development will employ measures to minimise light spill onto adjoining key habitats.
Birds						*	1) Potential indirect impacts	1) Low	1) Up to minor magnitude	1) None proposed	1) Not significant	1) None proposed

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Further mitigation proposed
	I	N	R	M/C/D	L	S						
							arising from increased disturbance effects from recreational pressure.		effect			
Badger						*	1) Potential indirect impacts arising from increased disturbance effects from recreational pressure. 2) Potential impacts on badgers from increased risk of traffic collisions.	1) Low 2) High	1) Up to minor magnitude effect 2) Potentially moderate magnitude effect if large numbers killed	1) None proposed 2) None proposed	1) Not significant 2) No significant effect above the site level	1) None proposed 2) Possible traffic calming measures, located where green infrastructure crosses internal road network to reduce traffic speed at key locations and reduce risk of collisions occurring

12.6 Cumulative Effects

- 12.6.1 As outlined in Chapter 18 fourteen developments (consisting of mixed use, residential and commercial developments, and allocated sites) have been identified within the locality of the application site by Horsham District Council that could potentially result in cumulative effects. The majority of these sites are located at least 3km from the application site boundary and are largely separated from the application site by physical barriers such as dual-carriageways, railway lines, and Horsham town. Therefore, the possibility of meta-population effects on certain largely sedentary taxa (such as newts, reptiles, badgers, hazel dormouse) is reduced by a combination of the relative distance of the majority of these other sites, and the availability of alternative habitat in the locality even when effects are considered in-combination. However, whilst cumulative impacts on certain more mobile taxa such as bats and birds are possible they are unlikely to raise the level of significance above that already assessed for North Horsham in isolation.
- 12.6.2 As detailed in Chapter 15 (Air Quality) the likely increase in traffic along the A264 and A2220 in combination with nearby developments, in particular Kilnwood Vale/ Holmbush Farm development (DC/10/1612), could result in adverse impacts on the woodland habitats within Buchan Hill Ponds SSSI due to changes in oxides of nitrogen concentrations and nitrogen deposition. Nevertheless, due to the presence of dense scrub and woodland alongside the A264 and due to the carriageway set into a cutting, the extent of vehicular emissions penetration into the SSSI is likely to be limited and impacts are likely to be localised to non-SSSI areas immediately adjacent to the road.
- 12.6.3 Another possible in-combination impact source could arise from an increase in recreational effects on protected nature conservation sites due to a growing local population. This has been militated against by the incorporation of significant green infrastructure within the North Horsham development which should readily meet the need of new residents for recreational open space. In order to assess whether the greenspace provision within the application site is sufficient to meet the recreational demands of the residents of the development the site quality checklist for Suitable Accessible Natural Greenspaces (SANGS) was used. The concept of SANGS was developed in relation to the Thames Basin Heaths Special Protection Area (SPA) and the need to avoid surrounding residential development generating significant recreational impacts on the integrity of that European site. In essence, SANGS is the provision of green spaces that can absorb or divert recreational pressure that might otherwise use internationally designated areas. Although the nearest internationally

designated site is approximately 16km from the application site (and therefore is of a distance that is unlikely to receive significant recreational pressure), the SANGS criteria are a useful metric to assess whether the greenspace provision is likely to be sufficient to absorb/ divert visitor pressure away from non-international designated areas sufficient to avoid impacts on sensitive ecological sites (e.g. SSSIs) within the vicinity. SANGS criteria can be considered to be the highest tier in terms of greenspace provision, and therefore matching these criteria would indicate that the provision is more than adequate.

- 12.6.4 The SANGS criteria comprises a number of points including that the site/s should have a circular walk of 2.3- 2.5km, there should be safe routes of access from the nearest footpath/s, they must be semi-natural spaces, and should provide space where it is possible for dogs to exercise freely and safely off a lead.
- 12.6.5 While green spaces are proposed throughout the application site, there is one large area in particular where the SANGS criteria could be met. This is located in the central northern part of the application site and currently comprises two agricultural fields totalling approximately 6.3ha in size. The fields are on the southern escarpment and afford views over Horsham town, and it should be possible to link up with an existing pond (features that should be appealing to future residents). On the masterplan these fields are proposed to be natural greenspaces. The final scheme for these fields is still to be fixed; nevertheless, it should be possible for these two fields to meet all the SANGS criteria with the exception of the provision of a car park, which is of questionable necessity in this case. The other smaller greenspaces throughout the remainder of the application site will provide further recreational opportunities, and could be used by residents who live on the far side of the application site.
- 12.6.6 In summary it is considered that if the stringent SANGS criteria are applied, the majority are met for the application site, and therefore the on-site greenspaces can be expected to absorb the majority of recreational pressure generated by the residents of the new development. This will reduce the magnitude of any residual impact from recreation to other greenspaces within the vicinity of the application site, up to and including designated sites within visitor catchment range, to a negligible or minor level, the effect of which is anticipated to be not significant either in isolation or considered cumulatively with other developments in the wider District.
- 12.6.7 Consequently, the main potential cumulative effect identified is the impact on Buchan Hill Ponds SSSI from increases in nitrogen concentration and nitrogen deposition. The effects on this site are

likely to be limited and localised to the immediate A264 corridor due to the presence of dense vegetation and the siting of the carriageway within a cutting. The on-site ecological mitigation strategies and green infrastructure provision within the application site means that there are not expected to be any other significant negative cumulative effects arising from the proposed development in combination with the other identified developments.

Summary of Effects

12.6.8 The application site is currently dominated by intensively managed arable and pasture farmland. The farmland is intersected by mature hedgerows, trees and watercourses. Also present within the application site are small waterbodies, farm complexes and woodlands, in respect of the latter some are assessed to be ancient. The fauna interest identified on the application site includes confirmed use by great crested newt, hazel dormouse, reptiles, badger and bats, and some declining bird and invertebrate species. The presence of this assemblage of species is considered consistent with what would be expected within any equivalent land area in this part of Sussex and therefore the application site is not considered to have a biodiversity value that is significantly different from the surrounding geographical area.

12.6.9 The majority of the built development will be confined to the open farmland; therefore due to the retention of the bulk of the woodlands, mature hedgerows and ponds it is assessed that there will be no direct impact on some of the key ecological receptors (e.g. great crested newt, hazel dormouse, badger) from the development. The proposed scheme incorporates green infrastructure and ecological network provision; this will not only buffer the key habitats of interest such as the ancient woodland and hedgerows from the development, but could consequently also provide enhanced opportunities for biodiversity and increase ecological connectivity within the application site and outward to the wider area beyond. The connectivity would also provide resilience for species present on the application site in light of predicted climate change effects. In conjunction with improved conservation-led management of retained habitat features and the replacement of some of the species-poor open farmland with the green infrastructure, it is assessed that the proposed scheme will result in no net loss of biodiversity resources with possibly net gain for certain receptors.

12.7 Mitigation Measures

12.7.1 Ecological input throughout the design process has informed the development of the proposals and assisted with producing the final design and layout of the proposed development. In particular, there

has been a need to ensure that the development respects and wherever possible protects the ancient woodland, wooded gills, the SNCI, and waterbodies, by means of buffers and also through careful design of access and circulation routes. The incorporation and retention of these features will aid in minimising the potential for significant negative effects to arise from fragmentation and/or the effects of increased recreational pressure, and to ensure that provision is made to buffer the retained habitats from the effects of climate change. These features and the majority of the existing field boundary features are incorporated into a substantial multifunctional Green Infrastructure (GI) and ecological network. This is in order to ensure wildlife including protected species such as great crested newt, bats, dormouse and reptiles can continue to use these features and permeate the application site. This GI includes the provision of a nature park in the east of the application site, corridors and 'ecological stepping stones' through the built areas, and areas for mitigation where it has not been possible to entirely 'design out' impacts on certain receptors. The masterplan, and in particular the GI, has also been designed to be compliant with Policy 31 of Horsham District Council's planning framework, and in cognisance of the need to ensure accessibility to suitable green space for future residents.

Additional Mitigation - Overview

- 12.7.2 The following paragraphs provide a summary of the additional mitigation proposed for certain receptors, as indicated in Table 12.12 above. Appendix 12.25 (Outline Ecological Mitigation and Management Plan) provides further information.

Green Infrastructure (GI) and ecological network

- 12.7.3 The masterplan for the application site includes substantial GI provision, securing a network of interconnected retained and created habitats permeating through the application site. The GI network is based upon the retention of existing features such as hedgerows and watercourses; however, additional features will also be created as part of the development to provide a coherent network. The network is designed to provide north-south and west-east corridors with the aim that this will aid in the dispersal of species both within and outside the application site. The alignment of the corridors within this network should ensure that it caters for predicted climate change effects and its impacts on biodiversity through providing a means for more sedentary species, such as woodland flora and invertebrates, to shift their range in line with their particular climatic preference.
- 12.7.4 In order to ensure the maximum biodiversity gain for the GI can be achieved and to ensure that there is provision for additional habitat

for key species (e.g. great crested newt, reptiles, dormouse) a detailed plan of the GI proposals will be produced at the detailed stage. Proposals would include the creation of new ponds, scrapes, identification of areas for reptiles, proposed locations for dormouse linkages (including any artificial linkages such as rope bridges), and the species mix of the landscape planting. Details of this plan will be worked up as a reserved matter.

Ecological management plans

- 12.7.5 The majority of the key ecological habitats on the application site, such as the ancient woodland, waterbody, hedgerows, will be retained as part of the development. In order to ensure the maximum biodiversity gain can be achieved for these features, as well as the species that are supported by them, an overarching ecological management plan will be produced and implemented. The management plan would also encompass management prescriptions for the proposed GI and ecological network across the application site. The plan would include mowing regimes for areas of semi-natural grassland for the benefit of reptiles, hedgerow cutting regimes, management of the woodlands, including to improve structural diversity and increase resilience to urban fringe pressures and waterbody maintenance. Details of this plan, in line with the proposals outlined above, will be worked up as a reserved matter.

Chennells Brook and other watercourses

- 12.7.6 Adequate avoidance and mitigation measures in respect of potential pollution and siltation impacts from the construction phase will be delivered through standard pollution prevention procedures, secured through the production of a bespoke Construction Environmental Management Plan (CEMP).
- 12.7.7 The sustainable drainage systems proposed on the application site are intended to ensure replication of existing discharge rates from the completed development by means of attenuation and filtration features, including open vegetated swales that will serve to uphold water quality whilst providing habitat benefits on application site. Such measures are assessed as adequate to prevent any pollution incident leading to impacts on the on-site watercourses and the LNR downstream. The surface water drainage design is detailed further in Chapter 16.
- 12.7.8 The standard pollution prevention and sustainable drainage measures described above, and as detailed further in Chapter 16 are assessed to be adequate to protect the watercourses from any significant impacts related to changes in flow dynamics and water quality that might otherwise occur with the proposed changes to catchment

related to the development. Further to this it is expected that with these features in place the water quality will be higher than that draining from the intensively managed arable fields currently present. A watercourse management plan will however be produced as part of the detailed stage to ensure appropriate management of watercourses is in place sufficient to uphold and/or enhance current interest once the development is completed.

Great crested newt

- 12.7.9 Great crested newts are fully protected under the Conservation of Habitats and Species Regulations 2010 (as amended) and the Wildlife and Countryside Act 1981 (as amended). As such in order to minimise the scope for any animals to be killed or injured during the construction phase a trapping and translocation exercise is likely to be required in certain areas of the application site, carried out under a derogation licence from Natural England. The full details of the methods and timings of the translocation would be agreed as part of the licence process. That process can only be entered into once all relevant consents are in place, and therefore at the outline stage, the requirement for determining authorities is to be satisfied that the grant of such a licence in due course is not 'unlikely'. In view of the relatively small population sizes on the application site, the large scale of the development, and the attendant flexibility in phasing and timing of works, and in consideration of the retention of breeding ponds and dispersal routes as part of the development masterplan, it is clear that no impediment to the delivery of continued favourable conservation status would be made by the granting of outline consent, and there can be no dispute that the requisite licences would not be forthcoming at the appropriate stage.

Bats

- 12.7.10 Prior to the removal of any building, a bat inspection by a licenced ecologist will be carried out to ensure that no roosts are present. The removal or modification of any building known to support roosting bats is likely to require additional survey work to inform the production of a derogation licence from Natural England. The licence would then only be issued if certain tests were satisfied, including whether the removal of the building was an overriding need without any satisfactory alternative. To ensure favourable conservation status was maintained, suitable mitigation and compensation, dependent on the numbers and species found, would need to be secured if those tests were satisfied and the building/s removed. This could extend to new bat roosting provision within retained buildings or the erection of purpose built 'bat house/s'. Again, in view of the relatively small population sizes on the application site, the large scale of the development, and the attendant flexibility in phasing and timing of

works, including delivery of advance compensation where required, it is clear that no impediment to the delivery of continued favourable conservation status would be put in place by the granting of outline consent.

- 12.7.11 The scheme will, where possible, retain mature trees which have been assessed as having a medium or higher potential to support bats. However, any proposed works (removal or modification) to any trees will be the subject of a detailed bat inspection. If a bat roost is identified within any tree that cannot be retained, it is likely that any related works would require a licence from Natural England. Mitigation for tree roosts typically relies upon the provision of bat boxes mounted on retained trees. On this basis, and given the assemblage of species encountered during the activity surveys, there is no reason to assume that the loss of a bat roost within a tree could not be adequately mitigated, and on that basis a licence would be likely to be granted.
- 12.7.12 Details of the lighting scheme for the application site will be worked up as a reserved matter. The opportunity to secure further avoidance or mitigation as part of that process will be taken. These opportunities will include the deployment of low ultra-violet (UV) street-lighting and cowled lights to allow directional control which would reduce the possibility of light spillage onto sensitive retained habitats or adjoining areas such as the ancient woodlands. Further measures that may be appropriate include bollard lighting and sensor controlled lighting, as further means to minimise light spill. The detailed design process would seek to avail itself of the latest research and technology in this fast moving sphere.

Badger

- 12.7.13 A further badger survey will be carried out prior to works commencing to ascertain their current status within the application site and inform the need for any licenced mitigation. In particular, if the currently inactive outlier setts become active, the provisions of the Protection of Badgers Act 1992 will then apply to any development-related activity in this area.

Reptiles

- 12.7.14 Reptiles are protected from killing and injury under the Wildlife and Countryside Act 1981 (as amended). In order to minimise the potential for infringement of this legislation, a trapping and translocation exercise most likely using artificial refugia will be required before work commences within any of the areas where reptiles have been encountered. Receptor sites will be identified prior to the translocation in order to ensure the application site is suitable

to receive reptiles. The process for this will be similar to that outlined above for great crested newts as the two species broadly occupy similar terrestrial range within the application site. This translocation process can be stipulated within a suitably worded planning condition. The relatively small population ranges on the application site, the large scale of the development, and the attendant flexibility in phasing and timing of works, including delivery of advance compensation where required, lends confidence that the detail of the required mitigation can be satisfactorily secured as a reserved matter.

- 12.7.15 Outside of the areas where reptiles were encountered during the reptile surveys the remaining habitats offer limited suitability to support reptiles, however, certain headlands and other marginal areas are likely to support a low resident or transient population of reptiles. To ensure compliance with the legislation, prior to the commencement of soil stripping or any other development-related activity in areas where reptiles might be present habitat manipulation (strimming) will be employed to displace any animals present and render the habitat unsuitable.

Birds

- 12.7.16 Mitigation is proposed in order to reduce the potential impact on nesting birds during the construction phase of the proposed development, in accordance with the protection afforded to nesting birds under Part 1 of the Wildlife and Countryside Act 1981 (as amended). The most effective way of minimising the scope for contravention of this legislation is to carry out any site preparation or construction works which could harm nesting birds outside the months of March to August inclusive. If suitable bird nesting habitat is required to be cleared during the nesting season then a suitably experienced ecologist will be required to check the area prior to its removal to ensure there no nesting birds are present. If an active nest is confirmed then it is likely that it would have to remain *in situ* and monitored until confirmed that it was no longer in active use.
- 12.7.17 The provision of features such as bird boxes on retained trees and new buildings is also proposed. In particular, boxes intended to attract declining species of urban and suburban habitats, such as swift, house martin, house sparrow and starling will be incorporated into appropriate elements of new build. This can be secured by way of condition, and provides a means to further offset the displacement effects on other declining species that are an inevitable consequence of the development of the application site.

Invasive non-native species

- 12.7.18 The application site supports the invasive species giant hogweed, Japanese knotweed and Himalayan balsam. In order to prevent these species from spreading further on the application site, a removal plan for these species will be instigated as soon as possible, with the ultimate aim of their eradication from the application site.

12.8 Residual Effects

- 12.8.1 Table 12.13 overleaf summarises the predicted residual impacts on the key ecological receptors identified once the further mitigation described in section 12.121 to 12.137 above has been applied.

12.9 Monitoring/Conclusions

Paragraph 12.7.1 – 12.7.18, and the related Tables 12.11, 12.12 and 12.13, provide details of the proposed monitoring of the Key Ecological Receptors, both for the construction and the operational stages of the scheme. This will ensure the minimising of any predicted residual effects, as identified in this Chapter.

Table 12.13 – Residual Impacts After Mitigation

Receptor	Value						Sensitivity of receptor	Residual impacts	Significance after mitigation
	I	N	R	M/C/D	L	S			
International Statutory Sites (The Mens SAC, Ebernoe Common SAC, Ashdown Forest SAC & SPA, Mole Gap to Reigate Escarpment SAC, and Arun Valley SAC).	*						Moderate	Any uplift in visitor numbers to these sites is <i>de minimis</i> in view of distance, alternative provision and generous on-site open space	Not significant
Buchan Hill Ponds SSSI		*					Moderate	Potential for localised deterioration in habitat and citation species through air pollution.	Not significant
'Brookhurst Wood & Gill & Morris's Wood' Site of Nature Conservation Importance (SNCI)				*			High	Small amount of upstanding vegetation to be removed either side of current farm track through SNCI to provide additional width for road as well as pavement and service strip. Possible minor residual increases in recreational use and associated undesirable effects but at a scale able to be addressed without requiring significant change to the application site. Some positive effects	Not significant

Receptor	Value						Sensitivity of receptor	Residual impacts	Significance after mitigation
	I	N	R	M/C/D	L	S			
								on associated species possible through an agreed ecological management plan.	
Ancient woodland				*			High	Small amount of upstanding vegetation to be removed either side of current farm track through ancient woodland (near to Morris Farm) to provide additional width for road as well as pavement and service strip. Some young plantation trees to be removed from PAWS to allow routing of internal access road. Minor residual increases in recreational use and associated undesirable effects but at a scale able to be addressed without requiring significant change woodland. Some positive effects on associated species possible through an agreed ecological management plan.	Not significant
Warnham Local Nature Reserve (LNR)				*			Moderate	1) Potential for localised temporary deterioration in water	1) Implementation of a

Receptor	Value						Sensitivity of receptor	Residual impacts	Significance after mitigation
	I	N	R	M/C/D	L	S			
								<p>quality through increased incidence of pollution events.</p> <p>2) Minor increases in recreational use and associated undesirable effects.</p>	<p>watercourse management plan and provision of SUDS should ensure no effects attain significant thresholds at the level the receptor is valued.</p> <p>2) Not significant</p>
Bats			*	*			Moderate	<p>Changes to nature of habitats on the application site unlikely to be significant in the context of the majority of the species recorded as they are common and adaptable.</p> <p>Interconnectivity for commuting/foraging bats across the application site will be retained and/or may improve. Only low conservation status roosts potentially affected on current evidence.</p>	Not significant
Hazel dormouse				*	*		Moderate	On-site population expected to be	Not significant

Receptor	Value						Sensitivity of receptor	Residual impacts	Significance after mitigation
	I	N	R	M/C/D	L	S			
								retained in green infrastructure and may even benefit from expansion of habitat opportunities and cross-site connectivity associated with green infrastructure.	
Great crested newt				*			Moderate	On-site population expected to be retained and may benefit from expansion of habitat opportunities associated with SuDS systems/blue infrastructure. This may counter-balance localised actual or <i>de facto</i> terrestrial habitat losses.	Negative effects not significant.
Waterbodies				*			Moderate	Potential for localised temporary deterioration in water quality through increased incidence of pollution events.	Not significant
Reptiles					*		Moderate	Potential loss of suitable reptile habitat. However, reptiles are likely to benefit from expansion of habitat opportunities and cross-site connectivity	Not significant

Receptor	Value						Sensitivity of receptor	Residual impacts	Significance after mitigation
	I	N	R	M/C/D	L	S			
								associated with green infrastructure.	
Hedgerow/Trees					*		Low	Minor impact on the application site's hedgerows due to the removal of short sections for road construction.	Not significant
Gills (including Chennells Brook and other watercourses)					*		Moderate	Minor localised habitat losses and potential for localised temporary deterioration in water quality through increased incidence of pollution events.	Negative effects not significant.
Woodland (non-ancient)					*		Moderate	Small amount of upstanding vegetation is likely to be removed to provide access routes through the application site. Minor residual increases in recreational use and associated undesirable effects but at a scale able to be addressed without requiring significant change to management regime. Some positive effects on associated species possible through an agreed ecological	Negative effects not significant.

Receptor	Value						Sensitivity of receptor	Residual impacts	Significance after mitigation
	I	N	R	M/C/D	L	S			
								management plan.	
Birds							Moderate	<p>Permanent and unavoidable displacement from the application site of certain declining bird species associated with open farmland. Expansion of habitat opportunities for other species typical of woodland, gardens and urban fringe.</p>	<p>Significant impact at the site level for certain declining farmland birds inevitably displaced species (e.g. yellowhammer, skylark). Although other declining bird species likely to benefit (e.g. dunnock, house sparrow, starling)</p> <p>No impacts predicted that are significant at the level the receptor is valued at.</p>
Invertebrates				*			Moderate	<p>Negative effects on some species associated with semi-improved grassland and with arable land likely to be significantly outweighed by positive effects arising from green infrastructure and the</p>	<p>Negative effects not significant. Positive effects could be significant at up to Local level if target species benefit.</p>

Receptor	Value						Sensitivity of receptor	Residual impacts	Significance after mitigation
	I	N	R	M/C/D	L	S			
								use of key species in landscape planting.	
Badger						*	Low	On-site population expected to be retained and may even benefit from expansion of habitat opportunities and cross-site connectivity associated with green infrastructure.	Not significant

Chapter 13

Archaeology and Heritage

Archaeology South East

13 Archaeology and Heritage

13.1 Introduction

- 13.1.1 This Chapter assesses the effect of the Proposed Development on archaeology and heritage. In particular it considers the potential effects of the Proposed Development on buried archaeological deposits, extant historic landscape features within the Site, historic landscape character and the fabric and setting of designated heritage assets within the surrounding area. The likely significant effects are assessed within this Chapter, together with the proposed mitigation measures and the subsequent anticipated residual effects.
- 13.1.2 This Chapter should be read together with the baseline Historic Environment Desk-Based Assessment (Heritage Statement) (Appendix 13.1) which contains the detail underpinning this assessment and the report detailing the results of selected pre-application fieldwalking and geophysical survey (Appendix 13.4).¹²

13.2 Policy Context

Legislative Framework

- 13.2.1 The applicable legislative framework is summarised as follows:
- Ancient Monuments and Archaeological Areas Act (AMAAA) 1979; and
 - Planning (Listed Buildings and Conservation Areas) Act, 1990.

National Planning Policy Framework

- 13.2.2 The following paragraphs of the National Planning Policy Framework (NPPF)³ are considered relevant to this assessment:
- Section 12: Conserving and enhancing the historic environment (paragraphs 126-141). Also paragraphs 169 and 170. The NPPF requires that LPAs 'should set out in their Local Plan a positive strategy for the conservation and enjoyment of the historic environment', recognising that 'heritage assets are an irreplaceable resource' and should be conserved 'in a manner appropriate to their significance'. The NPPF requires that planning applicants should 'describe the significance of any heritage assets affected' by their application, 'including any contribution made by setting'.

¹ James, R. & Pope, M., 2015. *Land North of Horsham, West Sussex: Historic Environment Desk-Based Assessment (Heritage Statement)*. Unpublished Archaeology South-East Report 2014213.

² Blinkhorn, E., Cook, J. & Stevens, S., 2015. *Integrated Magnetometry and Fieldwalking Survey: Land North of Horsham, West Sussex*. Unpublished Archaeology South-East Report 2015463.

³ DCLG, 2012. National Planning Policy Framework. London: Department for Communities & Local Government.

13.2.3 The Horsham District Planning Framework 2015 has a specific policy relating to the historic environment:

- Policy 34: Cultural and Heritage Assets. It states:-

"The Council recognises that heritage assets are an irreplaceable resource, and as such the Council will sustain and enhance its historic environment through positive management of development affecting heritage assets. Application for such development will be required to:

- 1. Make reference to the significance of the asset, including drawing from research and documentation such as the West Sussex Historic Environment Record;*
- 2. Reflect the current best practice guidance produced by English Heritage and Conservation Area Character Statements;*
- 3. Reinforce the special character of the district's historic environment through appropriate siting, scale, form and design; including the use of traditional materials and techniques;*
- 4. Make a positive contribution to the character and distinctiveness of the area, and ensuring that development in conservation areas is consistent with the special character of those areas;*
- 5. Preserve, and ensure clear legibility of, locally distinctive vernacular building forms and their settings, features, fabric and materials;*
- 6. Secure the viable and sustainable future of heritage assets through continued preservation by uses that are consistent with the significance of the heritage asset;*
- 7. Retain the improves the setting of heritage assets, including views, public rights of way, trees and landscape features, including historic public realm features; and*
- 8. Ensure appropriate archaeological research, investigation, recording and reporting of both above and below-ground archaeology, and retention where required, with any assessment provided as appropriate."*

13.2.4 In addition, the following policies also make reference to the historic environment:

- Policy 2: "Strategic Development", which supports development which protects, conserves and enhances the District's built heritage; (Policy 2(13);
- Policy 32: "The Quality of New Development", which requires new development to complement locally distinctive characters and heritage of the district;

- Policy 33: “Development Principles” which requires that new developments should conserve and enhance the natural and built environment.

13.3 Methodology

13.3.1 The scope of the assessment of potential significant effects on archaeology and heritage from the Proposed Development comprises the potential for disturbance to buried archaeological deposits and historic landscape features within the Site and effects on the settings of designated heritage assets around the Site.

13.3.2 The Study Area comprises a rectangular area around the Site measuring 5.5 kms east-west and 3.5 kms north-south (defined by National Grid Reference 516000 132000 at the south-west corner and 521500 135500 at the north-east corner). The Study Area was defined following consultation with Historic England and the West Sussex County Council Archaeological Officer.

Standards and Guidance

13.3.3 The assessment presented within this chapter has been carried out in accordance with the Standards and Guidance for archaeological desk-based assessment issued by the Chartered Institute for Archaeologists⁴.

13.3.4 The chapter was also prepared in accordance with the Planning Policy Guidance issued to support the NPPF. In specific relation to heritage issues, further guidance is provided by Historic Environment Good Practice Advice in Planning Notes 1 to 3, issued by Historic England and the Historic Environment Forum.

Method of Baseline Data Collation

13.3.5 The desk-based assessment was prepared in line with recognised professional standards and guidance. The following data sources were consulted:

- West Sussex Historic Environment Record;
- National Heritage List;
- Multi-Agency Geographic Information for the Countryside (MAGIC) online database (www.magic.gov.uk);
- West Sussex Record Office;
- A walkover survey carried out by ASE on 5th and 10th-12th September 2014; and

⁴ Chartered Institute for Archaeologists, 2014. Standards and Guidance for archaeological desk-based assessment. Reading: Chartered Institute for Archaeologists.

- A fieldwalking and magnetometry survey carried out by ASE in November and December 2015 (Appendix 13.4).

Significance Criteria

- 13.3.6 The assessment of likely significant effects as a result of the Proposed Development has taken into account both the construction and operational phases. The significance level attributed to each effect has been assessed based on the magnitude of impact due to the Proposed Development and the sensitivity of the affected receptor to change. Magnitude of impact and the sensitivity of the affected receptor are both assessed on a scale of high, medium, low and negligible.

Definition of Relative Sensitivity

- 13.3.7 The sensitivity of heritage assets is determined using the following criteria, derived from an original approach developed by the Highways Agency as presented in the Design Manual for Roads and Bridges Volume 11: Environmental Assessment (DMRB)⁵ with modifications by ASE. This approach is inherently subjective, and relies on the application of effective professional judgement:

- High: World Heritage Sites, Scheduled Monuments, Grade I/II* Listed Buildings, Grade I/II* Registered Historic Parks and Gardens, Conservation Areas containing very important buildings and non-designated assets that contribute to national research objectives;
- Medium: Grade II Listed Buildings, Grade II Registered Historic Parks and Gardens, Registered Historic Battlefields, Conservation Areas containing buildings that contribute significantly to its historic character and non-designated assets that contribute to regional research objectives;
- Low: Locally listed buildings, locally listed historic parks and gardens and other non-designated assets that contribute to local research objectives.

Definition of Magnitude of Impact

- 13.3.8 The magnitude of impact is determined using the following criteria:
- High: changes to most or all key archaeological elements or settings, such that the asset is completely altered;
 - Medium: changes to many key archaeological elements or settings, such that the asset is noticeably altered;
 - Low: changes to key archaeological elements or settings, such that the asset is slightly altered; and
 - Negligible: minor changes to archaeological elements or settings that hardly affect the asset.

⁵ Highways Agency, 2007. Design Manual for Roads and Bridges, Volume 11, Section 3, Part 2 (Cultural Heritage). London: Highways Agency.

Effect Significance

13.3.9 The following terms have been used to define the significance of the effects identified:

- Major: where the Proposed Development could be expected to have a substantial effect (either adverse or beneficial) on buried archaeological deposits or settings;
- Moderate: where the Proposed Development could be expected to have a noticeable effect (either adverse or beneficial) on buried archaeological deposits or settings;
- Minor: where the Proposed Development could be expected to have a small, barely noticeable effect (either adverse or beneficial) on buried archaeological deposits or settings; and
- Negligible: where no discernible effect is expected as a result of the Proposed Development on buried archaeological deposits or settings.

13.4 Baseline Conditions

13.4.1 The existing baseline conditions are discussed in detail in Appendix 13.1 and summarised here. This includes a Scheduled Monument and a Grade II Listed Building located within the Site and further designated heritage assets in the wider Study Area (two Scheduled Monuments, forty Listed Buildings and a Registered Historic Park and Garden). Non-designated heritage assets within the Site include ancient woodland, historic hedgerows and a generally moderate to high potential for buried archaeological deposits.

13.4.2 Selected site numbers given below relate to the plans in Appendix 13.2 and Appendix 13.3, with full details and site listings in Appendix 13.1.

Identified Heritage Assets

13.4.3 The Site contains two designated heritage assets: a Scheduled Monument (Homestead moat near Graylands Copse [17]) and a Grade II Listed Building (The Moated House [87]). It also contains the following non-designated heritage assets: three areas of Ancient Woodland [141-143], twelve historic hedgerows [144-155], two areas of former historic parkland [32 and 33], three Archaeological Notification Areas [17, 22 and 119] and a findspot of a Bronze Age dagger [14]. It also has a moderate to high potential for buried archaeological deposits across the site from all periods. This potential has been refined by pre-application fieldwork: the magnetometry survey identified a possible medieval or later building adjacent to The Castle moated site [21] and magnetic debris relating to Bush Cottage [119] together with former stream channels. The fieldwalking survey identified a general scatter of prehistoric, medieval and post-medieval artefactual material from the areas sampled, but no clear concentrations.

13.4.4 In addition, possible setting impacts have been assessed in relation to ten designated heritage assets in the wider Study Area: two Scheduled

Monuments [18 and 21], seven Grade II Listed Buildings [30, 82-84 and 87-90] and a Grade II Registered Historic Park and Garden [109]. A possible setting impact has also been assessed on a further non-designated heritage asset, an area of historic parkland [34].

Archaeological Baseline

Prehistoric (c. 750,000 BC – AD 43)

- 13.4.5 The Horsham landscape represents an important one for the study of human prehistory in north-west Europe. Specifically this importance relates to the development of a technological framework for understanding post-glacial, Mesolithic hunter gatherers within the region during the 20th century. The town of Horsham lends its name to a characteristic microlith form, the Horsham point, a relatively large and distinctive, basally retouched point. The importance of the Horsham point as a potential chronological and cultural marker on both sides of the English Channel was brought to wider attention by Grahame Clark. His work on Mesolithic assemblages from southern Britain identified 'Horsham points' within a chronological succession of microlith and assemblage types. Roger Jacobi was later to undertake a review of the region's Mesolithic, classifying assemblages into three main chronological groups suggesting that Horsham points were characteristic of a Middle Mesolithic Phase:
- Early Mesolithic 'Maglemosian' broad blade industries dominated by simple obliquely blunted points and less elaborate shapes, concentrated on Lower Greensand sites;
 - 'Middle' Mesolithic industry peculiar to the Weald, east of Horsham, not found elsewhere in Britain. Assemblages reflecting this technology include obliquely blunted points, isosceles triangles and large proportions of basally retouched "Horsham" points.
 - Late Mesolithic 'Sauveterrian' smaller narrow blade industries dominated by geometric shapes including narrow scalene micro-triangles, rod like backed bladelets. Assemblages such as these are much wider spread within the south east, including Wealden and coastal plain sites.
- 13.4.6 More recent work by Reynier on assemblages across England divided the Early Mesolithic into three stages: Star Carr, Deepcar and Horsham type assemblages. Assemblages with rod and geometric microlith types are characterised as 'late' Mesolithic. Consequently the Horsham point still plays a key role in identifying chronological depth within the early post-glacial hunter-gatherer cultures of northern Europe. Microlith typology remains very important for the region, as so many artefact collections lack proper provenance or contextual data; sometimes typology provides the only guide to age range. It is therefore important that these chronologies are tested through the isolation of datable assemblages and also compared with continental data, especially that of northern France.
- 13.4.7 Despite regular county and regional surveys of the Mesolithic period in the South-East during the last half century little or no systematic work has been

undertaken to more clearly define the spatial and temporal constraints of the Horsham industries around the area of Horsham itself. Indeed until recently the low Weald was considered an area of only marginal importance in terms of potential for Mesolithic archaeology, compared to the rock shelter sites of the central Weald. This assumption has recently been challenged by on-going work being undertaken at Coombe Haven, near Bexhill, West Sussex. This is a large, landscape-scale excavation of a landscape underlain by Hastings Beds and Wadhurst Clay, fringing an alluviated valley. The work has revealed multiple Mesolithic scatters, in apparent primary context on both the valley sides and the edges of the floodplain, with scatters sealed under later Holocene alluvium. The landscape is typical of many fringing the central Weald outcrops and should put us on notice that there is the potential for entire early Holocene landscapes to lie locally preserved in topographies yet to be subject to systematic survey and rarely impacted upon by modern development.

13.4.8 The proposed area of development lies within the similar landscape of the Horsham area and forms part of the core area in which early collectors such as Piffard, Attree and Thomas Honeywood worked and helped to define the region's Mesolithic. The immediate area within and around the proposed development contains 10 known Mesolithic sites but the potential for more should be considered very high and should be considered of regional importance. Specifically these sites, recorded on WSHER comprise:

- MWS690: The Plain [1];
- MWS694: Roffey Park [2];
- MWS696: Roffey Park [3];
- MWS4036: Roffey Hurst [4];
- MWS4404: Rookwood Farm Gold Course [5];
- MWS4468: Roffey [6];
- MWS5331: Rusper [7];
- MWS5332: Horsham [8];
- MWS5481: The Plain [9]; and
- MWS5482: Halt [10].

13.4.9 The potential, demonstrated by the findspot at Old Faygate (not on WSHER but possibly part of site MWS4545), of a shouldered point of clear Upper Palaeolithic age should act as a warning that older Palaeolithic archaeology may be present in the environs. This could be buried at depth on valley sides, survive within ploughsoil or lie within sub-surface capture points on the hillside and hill top, the potential for which was demonstrated locally at Beedings. Any surface find of Palaeolithic material must be considered to be indicative of local preservational contexts where this material has remained,

through the last stage of the last glacial and through early to mid-Holocene erosion. The additional presence within the development area of Terrace Gravels of the Arun Valley (of unknown age) also requires consideration and assessment for Palaeolithic potential.

13.4.10 To summarise, the site lies in an area of historical importance in the development of our understanding of British post-glacial hunter-gatherer cultures and which has not been subjected to modern systematic study. High potential exists for regionally important Mesolithic archaeology at the site with less, but untested, potential for Palaeolithic archaeology.

13.4.11 Later prehistoric material within the Weald tends to be sparse. The region was covered in dense forest throughout this period, and much of the known settlement pattern concentrates around the rim of the Weald, exploiting the better soils of the Chalk and Greensand, although recent work west of Horsham (Broadbridge Heath/Wickhurst Green) has produced considerable evidence for previously unsuspected prehistoric occupation on the claylands. The small amount of prehistoric material that is otherwise known from the area tends to be of Mesolithic date and reflects activities associated with resource exploitation, often on a seasonal basis, and mainly comprises evidence for hunter gathering activity. Some small-scale agricultural exploitation of the more tractable soils is suggested by pollen evidence from the Neolithic onwards, and the presence of Bronze Age barrows (burial mounds) within the High Weald (concentrating to the east and south-east of the Study Area in the St. Leonard's Forest area) points to some level of settlement at this period. The Iron Age saw the exploitation of iron ore deposits, and the presence of fortified hilltop enclosures suggesting some level of control of this industry.

13.4.12 Fourteen prehistoric sites are recorded within the Study Area. These all refer to Mesolithic activity sites around Roffey, in the eastern part of the Study Area, and a general scatter of individual artefacts:

- Ten sites representing artefact scatters or individual findspots of Mesolithic flint tools, mostly in the eastern part of the Study Area around Roffey, but including locations to the north and west of the Site [1 – 10]. Site 10, adjacent to the south-east corner of the Site, covered 1.5 acres and comprised up to 2000 flints;
- Three sites representing flint scatters or individual findspots of Neolithic flint tools, all around Roffey [11 – 13]; and
- A Bronze Age flint dagger of lanceolate form found within the Site (Bakehouse Field) in 1890 [14].

Romano-British (AD 43 – AD 410)

13.4.13 Evidence for Roman activity in the Weald is sparse, and is confined mainly to roads and ironworking sites. Few settlement sites have been found in the High Weald, although some sites such as villas at Chiddingfold in Surrey and Wiggonholt in West Sussex are known from the less bleak periphery and recent work west of Horsham has produced some evidence for occupation.

13.4.14 One Romano-British site is recorded within the Study Area:

- A single sherd of East Sussex Ware found during excavations in 1989 at the medieval castle south of the Site [15].

Early Medieval (410 – 1066)

13.4.15 During the early medieval period, the Weald was largely covered by the great forest of Andredeswald. The heavily forested nature of the region limited settlement at this period, and the iron-working industry seems to have shrunk in scale in comparison with the Roman period. The Weald was an important area for seasonal swine pastures established as extra-territorial parcels of land associated with parent manors situated on better soils elsewhere in the region; Hawkesbourne originated as a detached tithing of the manor of Applesham near Steyning. Many of the north-south aligned roads, tracks and footpaths in the region originated at this time as droveways.

13.4.16 Little is currently known of the nature of Saxon occupation in the surrounding rural area. Horsham itself is not mentioned in Domesday, although its appearance in a pre-Conquest charter suggests a settlement of some nature. By the 10th century, the multiple estates had begun a process of fragmentation into smaller units, and it is from this process that the separate parish of Horsham probably derives, although the date of this process is unclear – the Site lay within the northern part of Horsham parish, not far from the border with Ruspur. The settlement pattern, which largely developed from the Mid-Late Saxon period, tends to conform to the Ancient Countryside pattern, comprising an irregular landscape of fields carved out of the woodland, with settlement largely comprising a dispersed pattern of hamlets and isolated farmsteads. The area falls within the Weald Sub-Province within the South Eastern Province in Roberts & Wrathmell's rural settlement classification.

13.4.17 No Anglo-Saxon sites are recorded within the Study Area, although many of the place-names originated in this period, indicating that many of the medieval settlement foci, represented by dispersed farmsteads, may have early origins.

Medieval (1066 – 1540)

13.4.18 During the medieval period, the Site lay within the lands of several different manors, primarily the manors of Horsham and Hawkesbourne, the latter an outlier of the manor of Applesham. Holbrook originated as a copyhold tenement of the manor of Marlpot, while the manor of Roffey (a sub-manor of Chesworth) lay to the east. The boundaries between the various and complex manorial holdings are difficult to reconstruct, although key landscape features such as lanes and trackways, watercourses and prominent linear hedgerows are likely to be relevant.

13.4.19 The central part of the Site lay within the manor of Hawkesbourne, which was first recorded in 1073 when William de Braose, the manorial lord and a powerful Marcher baron, granted tithes from Ablesborna (derived from 'the

stream of Ealh') to the college he founded at Bramber, adjacent to his primary castle. The manor descended with Applesham into the 13th century, and thereafter as an under-tenancy of Broadwater until the 15th century. A park is mentioned within the manor in 1335, and the lord, Ralph de Camoys, had free warren (the sole right to grant small game, but not deer) there. A manor house is recorded in 1485 and again in 1572 – its location is unknown, but the earthwork site known as 'The Castle' [21] could be a candidate. The manor of Roffey lay south-east of the Site, and was first recorded (as a sub-manor of Chesworth) in the 15th century, with a park listed in 1439 and a manor house possibly located at the existing Roffey Place [76]. Holbrook is first recorded c.1285 as a tenement of the manor of Marlpot, although nothing is known of its medieval history. The Moated House [87], 17th century and later in its current form, occupies a possible earlier moated site – Hurst records in 1868 that it was occupied by R.H. Hurst, whose ancestors lived there in the 15th century.

- 13.4.20 The agricultural regime initiated in the Saxon period in the Weald, mainly scattered pastoral activity, continued on into the medieval period. The typical heavy clayey soils of the area rendered much of the land unsuitable for arable farming at this time, as the primitive ploughing technology was unable to cope with these heavier soils. Consequently, an open field agricultural system never developed to any great extent, and those few examples that did exist were enclosed at an early date and have left few traces in the documentary record. Many of the scattered landholdings in the region had developed into small settlement foci, many of which still survive as farms in the modern landscape. Warnham is mentioned as a tithing (a sub-division of a hundred, in this case the Hundred of Steyning) in 1166, with references to a church at the same period, but with no certain evidence for any sort of nucleated settlement – the high tax assessments recorded for 1334 suggest a relatively dense population for the locality, but do not indicate how that population was distributed. Roffey existed as a small hamlet by 1315. The rural landscape comprised a mainly pastoral landscape of irregular assarts with small patches of common demesne (land held in hand by the manorial lord) arable around scattered settlement foci with extensive common grazing to the south (Horsham Common, still surviving in 1800).
- 13.4.21 Other elements of the medieval landscape include a mill mentioned at Hawkesbourne in 1386 (probably a watermill within the manor, located perhaps along the stream valley south of the Site, although no earthworks relating to such a mill were identified during the walkover survey element of this project) and a 14th century iron bloomery at Roffey, recorded in 1338 producing 6000 crossbow bolts for the royal army.
- 13.4.22 Sixteen sites of medieval date are recorded within the Study Area:
- Four defensive sites, representing three moated sites [17], [21] and [22] and a Norman motte and bailey castle [18];
 - Two ironworking sites at Roffey [16 and 19];
 - Three Grade II Listed Buildings of medieval origin [29 – 31];

- The site of a former medieval house [23];
- Four farmsteads of medieval origin [24, 26 – 28];
- A pillow mound (artificial rabbit warren) [25]; and
- A quantity of medieval pottery found during excavations at the motte and bailey castle [20].

Post-Medieval (1540 – Present)

- 13.4.23 The agricultural landscape around Horsham is in part a fossilised late medieval landscape, comprising small irregular fields carved from the surrounding woodland, much of which has been left as shaws, often managed for woodland products through coppicing – woodland remained an important resource until modern times, with Langhurst Wood (west of the Site) producing 6000 loads of timber and 11,500 cords of underwood in 1598. The Sussex HLC indicates most of the Site comprises ‘modern field amalgamations’, indicating a modern post-war reorganisation of an earlier landscape – comparison with historic mapping suggests that this originally comprised an assarted landscape of medieval origin interspersed with early 19th century enclosures from the common, although most of the internal boundaries have been destroyed, leaving just a partial skeleton of the original field pattern. The farming regime was largely mixed, and many of the local tenants had grazing rights on Horsham Common until extinguished upon enclosure in 1812-13 – by the late 19th century most of the parish was pasture, poultry, market gardening and fruit. A number of landscape parks were established in the area, including the original Warnham Park, recorded between 1634 and 1751 and referenced in the landscape by Park Farm situated immediately south of the south-western corner of the Site. Roffey Park was disparked in the 19th century, and a new park laid out by 1896 around the new house, beyond the south-east boundary of the Site. Holbrook was established in the 19th century, associated with a house built c.1800 and enlarged in Italianate style in 1844.
- 13.4.24 Areas of open waste such as Horsham Common immediately south of the Site, were used as common pasture for manorial tenants and for other uses such as military musters, fairs and executions, until enclosed in 1812-13. A number of stone quarries and sand and clay pits provided alternative or additional employment for farming communities, with additional large-scale industrial development such as brickworks to the west of the Site. The general remoteness of the landscape around the Site prior to the 19th century is evidenced by Owlscastle, situated at the eastern end of the Site; this may be derived from owlers, a local term for wool and sheep smugglers, suggesting a little frequented smuggling route). Alternatively, it may refer to an isolated building ‘haunted’ by owls.
- 13.4.25 Scattered across the landscape are a number of large farms, often comprising buildings of early post-medieval date, but occupying much older sites, although many of the names are first recorded in the post-medieval period: Pondtail in 1626; Holbrook (‘hollow meadow’) in 1504; Rapeland Farm (now Hawkesbourne) (‘place where rape grows’) in 1537. Smaller

building plots along the roadsides often represent illegal encroachments (squatter settlements) onto former wasteland. Some modification of the field pattern, including the grubbing out of shaws and hedgerows, took place during the 19th century when advances in technology allowed arable farming to be carried out on a much greater scale than before, but particularly in the post-war period with the advent of large agricultural plant. Further landscape developments included the expansion of Horsham in the 19th and 20th centuries and the construction of the two railway lines in 1848 and 1867. During the Second World War, a number of temporary searchlight batteries were established around the Study Area, providing a defence line for London, and a Flame Warfare Establishment was built north of the Site in 1941 to test liquid fuel rocket engines. An RAF Hurricane fighter was shot down within the Study Area in August 1941, killing the pilot (Sgt Ernest Bloor, No. 1 Squadron) (not recorded on WSHER) – military crash sites are of archaeological significance, and are protected under the Protection of Military Remains Act 1986, with no ground disturbance permitted within a 100m radius without a licence from the Ministry of Defence – in this case, the crash site was recorded in a subsequent street name (Bloor Close), which lies 300m south of the Site and therefore has no implications for the proposed development.

13.4.26 85 post-medieval sites are recorded within the Study Area:

- Seven former or existing historic parkscapes and parkland features/structures including an icehouse [32 – 34, 37, 38, 65 and 109];
- Seven industrial sites, comprising a watermill, ironworking sites and brickworks [35, 36, 39 – 42 and 55];
- Nineteen historic farmsteads [44 – 54 and 56 – 63];
- Five military sites (searchlight batteries, and anti-tank obstacle and a research facility, all of Second World War date) [64 and 137 – 140];
- Forty-one Listed and two Locally Listed Buildings [66 – 108];
- Three Ancient Woodlands, of at least 17th century origin [141 – 143]; and
- One artefact findspot (an 18th century clay pipe) [43].

Undated

13.4.27 39 undated sites have been recorded within the Study Area. These comprise:

- A hearth found during archaeological work in 1992 [111];
- Ten minepits associated with iron-working, probably of 16th – 18th century date but feasibly earlier [110, 112 – 118, 125 and 133];

- An alleged moat at Bush Lane, probably a stream diversion of 18th century date [119] – the misidentification may derive from an antiquarian note;
- Four geophysical anomalies interpreted as representing agricultural activity [120 – 123];
- Hollow-ways and earthwork banks within woodland [124, 126 – 128, 130, 131 and 136];
- Two charcoal-burning platforms in woodland [129 and 132]; and
- A pond and viewing platform [134 and 135].

Future Baseline

- 13.4.28 The existing baseline archaeological and heritage conditions will not change significantly in the absence of the Proposed Development or as a result of changes in agricultural regime.

13.5 Key Impacts and Likely Significant Effects

Construction Phase

Buried Archaeological Deposits

- 13.5.1 A potential for buried archaeological deposits has been identified across the Site based on the results of desk-based assessment (see Appendices 13.1 and 13.4 for full discussion). These are likely to be of prehistoric, Romano-British, medieval and post-medieval date. As such, they have been assessed as being of medium sensitivity as they represent undesignated assets that may contribute to regional research objectives in relation to contemporary settlement patterns and land use. Potential effects are likely to arise from groundwork activities associated with the construction phase of the Proposed Development, and will comprise complete destruction or severe truncation within areas of the Proposed Development by ground levelling, the construction of access roads and the excavation of footings and service trenches. Areas of proposed public open space and play areas may experience less truncation from landscaping, although this is dependent on working methodologies. Consequently, the magnitude of impact across the entire Site has been assessed on a worst case scenario basis as high.
- 13.5.2 In conclusion, the sensitivity of buried archaeological deposits is medium and the magnitude of impact, prior to mitigation, is high. Therefore, there is likely to be a direct, permanent, long-term effect on buried archaeological deposits of **moderate** to **major adverse** significance prior to the implementation of mitigation measures.

Extant Historic Landscape Features: Ancient Woodland

- 13.5.3 Three areas of Ancient Woodland have been identified within the Site. As such, they have been assessed as being of medium sensitivity as they form integral parts of historic landscapes of regional significance. One area of

replanted Ancient Woodland (143) will have a road constructed through it, although no archaeological features have been identified in this area and generic buried archaeological deposits are likely to have been significantly disturbed by tree roots. The remaining areas of Ancient Woodland will not be impacted upon by the Proposed Development as they will be retained intact and reinforced with a landscape buffer. Consequently, the magnitude of impact has been assessed as negligible.

- 13.5.4 In conclusion, the sensitivity of the Ancient Woodland is medium and the magnitude of impact, prior to mitigation, is negligible. Therefore, there is likely to be a negligible effect on Ancient Woodland prior to the implementation of mitigation measures.

Extant Historic Landscape Features: Historic Hedgerows

- 13.5.5 Twelve historic hedgerows have been identified within the Site. As such, they have been assessed as being of medium sensitivity as they form integral parts of historic landscapes of regional significance. The hedgerows will be largely retained within the Proposed Development, although there may be localised breaches for roads and paths. Consequently, the magnitude of impact in relation to the hedgerows has been assessed as low.

- 13.5.6 In conclusion, the sensitivity of the historic hedgerows is medium and the magnitude of impact, prior to mitigation, is low. Therefore, there is likely to be a direct, permanent, long-term effect on historic hedgerows of **moderate to minor adverse** significance prior to the implementation of mitigation measures.

Historic Landscape Character

- 13.5.7 The historic landscape character of the site is predominantly modern fieldscape with only 12 historic hedgerows forming a fragmented survival of earlier historic field systems, based on descriptions of the landscape contained within Appendix 13.1 (paragraphs 4.4.1, 4.10.2, 8.8, 8.11, 8.12 and 8.4-8.28, and section 5.0) and the Horsham District Landscape Assessment (2003), referenced in Chapter 11. This includes the historic parkland, based on a non-statutory dataset compiled by West Sussex County Council from historic mapping providing a snap-shot of the landscape in the later 19th century rather than existing character, and which now has the character of modern farmland (arable and pasture). While the hedgerows and the woodland have their own separate significance and value (addressed in paragraphs 13.5.3-13.5.6), the historic landscape as a whole is degraded with only partial survival of its historic character. Consequently, its significance is derived from a combination of scattered surviving historic landscape features and a general context as open agricultural land surviving from earlier centuries but lacking significant surviving detail. As such, it has been assessed as being of low sensitivity. The proposed development will see much of the open farmland built over, although the key surviving landscape features of historic significance (ancient woodland and historic hedgerows) will be retained and other open areas will also be included within the design. Consequently, the magnitude of impact has been assessed as medium.

- 13.5.8 In conclusion, the sensitivity of the historic landscape character is low and the magnitude of impact, prior to mitigation, is medium. Therefore, there is likely to be a direct, permanent, long-term effect on historic landscape character of **moderate** to **minor** adverse significance prior to the implementation of mitigation measures.

Fabric of Designated Heritage Assets: Listed Buildings

- 13.5.9 Potential effects on the fabric of four Listed Buildings have been identified based on the preliminary results of the noise and vibration assessment (which identified a possible effect on receptors within 100m of construction activities). This relates to Holbrook [82], Holbrook Park House [83], Hollywick Farmhouse [84] and The Moated House [87]. The Listed Buildings are Grade II and have been assessed as being of medium sensitivity. The magnitude of impact (which would relate to the installation of noise mitigation features) has been assessed as medium.
- 13.5.10 In conclusion, the sensitivity of the Listed Buildings is medium and the magnitude of impact, prior to mitigation, is medium. Therefore, there is likely to be a possible direct, temporary, short-term effect on the fabric of Listed Buildings of moderate adverse significance prior to the implementation of mitigation measures.

Setting of Designated Heritage Assets: Scheduled Monuments

- 13.5.11 Three Scheduled Monuments are located within or immediately adjacent to the Site [17, 18 and 21]. The sensitivity of these assets is assessed as high. In all three cases the magnitude of impact of the Proposed Development on the setting of these assets, insofar as it contributes to their overall significance, has been assessed as negligible as the existing settings contribute little to their significance and those settings will be protected by landscape buffers (see Appendix 13.1 for full discussion).
- 13.5.12 In conclusion, the sensitivity of the Scheduled Monuments is high and the magnitude of impact, prior to mitigation, is negligible. Therefore, there is likely to be a negligible effect on Scheduled Monuments prior to the implementation of mitigation measures.

Setting of Designated Heritage Assets: Registered Historic Park and Garden

- 13.5.13 One Grade II Registered Historic Park and Garden is located within the Study Area [109]. The sensitivity of this asset is assessed as medium. The Site does not lie within the setting of this asset. Consequently, there will be no impact on this asset from the Proposed Development (see Appendix 13.1 for full discussion).

Setting of Designated Heritage Assets: Listed Buildings [30, 84, 87, 88, 89 and 90]

- 13.5.14 A potential effect has been identified on six Grade II Listed Buildings of agricultural origin within and adjacent to the Site. The sensitivity of these assets has been assessed as medium. The effect is derived from the partial

loss of the rural context of these assets and its resulting impact on the significance of the assets as former agricultural settlements, although this is reduced to some extent by the fact that the original historic landscape context has been degraded to some extent by extensive modern field boundary removal and the most affected of the assets [84, 87 and 88] no longer have an agricultural character (see Appendix 13.1 for full discussion). The Proposed Development will result in the partial loss of the open setting of the assets which allows their history as agricultural settlements to be reduced. Consequently, the magnitude of impact has been assessed as medium.

- 13.5.15 In conclusion, the sensitivity of the Listed Buildings is medium and the magnitude of impact, prior to mitigation, is medium. Therefore, there is likely to be a direct, permanent, long-term effect on the settings of the Listed Buildings of moderate adverse significance prior to the implementation of mitigation measures.

Setting of Designated Heritage Assets: Listed Buildings [82 and 83]

- 13.5.16 A potential effect has been identified on two Grade II Listed Buildings of designed origin adjacent to the Site. The sensitivity of these assets has been assessed as medium. The setting of these assets has been identified as the inward-focussed designed landscape within which they located, with little or no reference to the wider landscape. However, the designed landscape formerly extended out into the surrounding farmland, and there will be some impact from the general loss of open landscape around the assets (see Appendix 13.1 for full discussion). The magnitude of impact has been assessed as low.
- 13.5.17 In conclusion, the sensitivity of the Listed Buildings is medium and the magnitude of impact, prior to mitigation, is low. Therefore, there will be a direct, permanent, long-term effect on the setting of these assets of moderate/minor adverse significance prior to the implementation of mitigation measures.

13.6 Cumulative Effects

- 13.6.1 The cumulative assessment is based on two aspects, in-combination effects (i.e. the combined effects of the proposed development and other committed developments) and effect interactions (how the various effects within the site combine with each other). The assessment was carried out in relation to fourteen committed developments identified in discussion with HDC and listed in chapter 18.

In-combination Effects

- 13.6.2 No in-combination effects were identified in relation to buried archaeological deposits, extant historic landscape features or historic landscape character as all of these assets are contained within the site and will be dealt with by mitigation. Heritage assets on other committed developments would be dealt with by their own mitigation measures, and, as none of the committed developments are located next to the proposed development, there is no

cross-over in relation to heritage assets (e.g. archaeological sites or hedgerows that extend into another development site). In relation to setting issues, there is no intervisibility between any heritage assets affected by the proposed development and any of the committed developments, so no in-combination cumulative effects have been identified.

Effect Interaction

- 13.6.3 No interactive cumulative effects have been identified in relation to buried archaeological deposits, extant historic landscape features or historic landscape character, as all potential ground disturbance, from whatever source, that may impact upon them has been allowed for within the assessment. Similarly, effects on setting have also been addressed from all sources. A temporary adverse effect on the fabric of four listed buildings from construction noise will be addressed by mitigation measures as per paragraph 13.7.5 of the ES chapter.

13.7 Mitigation Measures

Buried Archaeological Deposits

- 13.7.1 Mitigation measures have been approved by WYG Environment, Planning, Transport Ltd, archaeological advisors to Horsham District Council. A first phase of evaluation fieldwork has taken place pre-application to confirm the presence or absence of archaeological deposits and identify areas of particular interest or sensitivity. This work involved conducting a geophysical survey across a representative sample of the developable areas of the Site together with a fieldwalking (surface artefact collection) survey of a representative sample of developable areas of arable land, the results of which are reported in Appendix 13.4. This preliminary work has identified areas to be investigated post-determination by conditioned archaeological work, incorporating geoarchaeological test-pitting within suitable geological areas of the Site and archaeological trial trenching across the Site, together with additional non-intrusive and intrusive surveys of areas of the site not yet investigated. Further mitigation works may be required based on the evaluation results, comprising preservation in situ (if unexpected remains of national significance are encountered) or preservation by record through excavation. The exact scope of further archaeological mitigation works will be agreed with WYG in the form of a Written Scheme of Investigation (WSI).

Ancient Woodland

- 13.7.2 The proposed road constructed through the Ancient Woodland will not have an impact on any archaeological or historic landscape features as none have been identified in this area. However, due to the sensitivity of the location and the wider generic possibility of buried archaeological deposits, it is proposed that any clearance and groundworks are carried out under archaeological supervision (watching brief). This will be secured through a condition attached to the planning consent. The exact scope of archaeological mitigation works will be agreed with WYG in the form of a Written Scheme of Investigation (WSI).

Historic Hedgerows

- 13.7.3 It is proposed that all breaches to historic hedgerows are kept to a minimum, with existing breaches used where possible. All new breaches are to be excavated under archaeological supervision with adequate provision for recording of archaeological deposits. This will be secured through a condition attached to the planning consent. The exact scope of archaeological mitigation works will be agreed with WYG in the form of a Written Scheme of Investigation (WSI).

Historic Landscape Character

- 13.7.4 The mitigation comprises the retention of all surviving historic landscape features, minimising any unavoidable disturbance to them (which will be offset by archaeological recording and associated increases in knowledge), and the provision of open space to preserve the settings of designated heritage assets.

Fabric of Designated Heritage Assets: Listed Buildings

- 13.7.5 According to the noise and vibration assessment, there may be a possible effect on sensitive receptors within 100m of construction activity (subject to further assessment). This may affect Listed Buildings [82, 83, 84 and 87]. It is proposed, therefore, that the detailed design is modified to ensure that these assets are surrounded by sufficient open space and/or landscape buffers to negate the requirement for noise mitigation measures affecting the fabric of the assets.

Setting of Designated Heritage Assets: Listed Buildings

- 13.7.6 A potential effect has been identified with regard to the setting of eight Listed Buildings. This is due to the reduction of open rural space reducing their ability to be appreciated as scattered settlements of agricultural origin. It is proposed that this effect can be mitigated by preserving the immediate setting of the assets during the detailed design phase of the Proposed Development by extending the areas of open space around each asset as far as possible to form a clear break between them and the new development. This approach may be augmented by additional landscaping and the scale, height, density, design and treatment of built frontages and accesses adjoining these open spaces.
- 13.7.7 No specific mitigation measures are required for the Scheduled Monuments or Registered Historic Park and Garden. However, consideration will be given to preparing a conservation management plan for Scheduled Monument [17] and preparing interpretative materials for all three scheduled monuments.

13.8 Residual Effects

Buried Archaeological Deposits

- 13.8.1 The proposed mitigation works will themselves destroy archaeological deposits which are described in the NPPF as an 'irreplaceable resource'. This

is partly offset by the advance in archaeological knowledge gained and the opportunity to disseminate this knowledge to the local and wider community, reinforcing local identity.

- 13.8.2 The sensitivity of buried archaeological deposits is medium and the magnitude of impact, following mitigation, is low. Therefore, there is likely to be a direct, permanent, long-term residual effect on buried archaeological deposits of moderate/minor adverse significance following the implementation of mitigation measures.

Ancient Woodland

- 13.8.3 The proposed mitigation works will themselves destroy archaeological deposits. This is partly offset by the advance in archaeological knowledge gained and the opportunity to disseminate this knowledge to the local and wider community.
- 13.8.4 The sensitivity of the Ancient Woodland is medium and the magnitude of impact, following mitigation, is negligible. Therefore, there is likely to be a residual effect on Ancient Woodland of negligible significance following the implementation of mitigation measures

Historic Hedgerows

- 13.8.5 The proposed mitigation works will themselves destroy archaeological deposits. This is partly offset by the advance in archaeological knowledge gained and the opportunity to disseminate this knowledge to the local and wider community.
- 13.8.6 The sensitivity of the historic hedgerows is medium and the magnitude of impact, following mitigation, is low. Therefore, there is likely to be a direct, permanent, long-term residual effect on historic hedgerows of moderate/minor adverse significance following the implementation of mitigation measures.

Historic Landscape Character

- 13.8.7 The proposed mitigation will preserve the key surviving elements of historic landscape character.
- 13.8.8 The sensitivity of the historic landscape character is low and the magnitude of impact, following mitigation, is low. Therefore, there is likely to be a direct, permanent long-term residual effect on historic landscape character of minor adverse significance following the implementation of mitigation measures.

Fabric of Designated Heritage Assets: Listed Buildings

- 13.8.9 The proposed mitigation will negate the potential identified effect.
- 13.8.10 The sensitivity of the Listed Buildings is medium and the magnitude of impact, following mitigation, is negligible. Therefore, there will be a residual effect on the fabric of Listed Buildings of negligible significance following the implementation of mitigation measures.

Setting of Designated Heritage Assets: Listed Buildings

- 13.8.11 The proposed mitigation will reduce the significance of the effect by retaining open space around the assets and allowing their historical landscape origin to be read.
- 13.8.12 The sensitivity of the Listed Buildings is medium and the magnitude of impact, following mitigation, is assessed as low. Therefore, there will be a direct, permanent, long-term residual effect of moderate/minor adverse significance following the implementation of mitigation measures.

Operational Phase

- 13.8.13 No significant effects on archaeology and heritage are predicted during the operational phase of the Proposed Development, as all effects on heritage assets will have been dealt with by construction phase mitigation and the operational phase will not involve disturbance to heritage assets.

13.9 Monitoring/Conclusions

- 13.9.1 The implementation of the archaeological fieldwork, (a written Scheme of Evaluation), the scope of which will be agreed with Horsham District Council and their technical advisors, will ensure that there will be no significant adverse effects.
- 13.9.2 The monitoring of the masterplanning, through the detailed planning applications for the phased development of the scheme will ensure the protection/enhancement of the setting of the listed buildings, as well as the Scheduled Monuments, ancient woodland and ancient hedgerows. This confirms the level of impacts as set out in the following table.

Table 13.1

Significant Effects	Receptor	Significance of Effects					Mitigation	Significance of Effects				
		Major, Moderate, Minor, Negligible	Beneficial / Adverse	P / T	D / I	ST / MT / LT		Major, Moderate, Minor, Negligible	Beneficial / Adverse	P / T	D / I	ST / MT / LT
Construction Phase												
Disturbance to Buried Archaeological Deposits	Buried Archaeological deposits	Moderate/Major	Adverse	P	D	LT	■ Implementation of archaeological fieldwork to be agreed with WYG	Moderate/Minor	Adverse	P	D	LT
Disturbance to Extant Historic Landscape Features	Ancient Woodland	Negligible	-	-	-	-	■ Implementation of archaeological fieldwork to be agreed with WYG	Negligible	-	-	-	-
Disturbance to Extant Historic Landscape Features	Historic Hedgerows	Moderate/Minor	Adverse	P	D	LT	■ Implementation of archaeological fieldwork to be agreed with WYG	Moderate/Minor	Adverse	P	D	LT
Disturbance to Historic Landscape Character	Historic Landscape Character	Moderate/Minor	Adverse	P	D	LT	■ Retaining historic landscape features and preserving the open setting of designated heritage assets	Minor	Adverse	P	D	LT
Disturbance to Fabric of Designated Heritage Assets	Listed Buildings	Moderate	Adverse	T	D	ST	■ Sensitive design	Negligible	-	-	-	-
Disturbance to Setting of Designated Heritage Assets	Scheduled Monuments	Negligible	-	-	-	-	■ Sensitive design/landscape buffers (refer to para. 13.5.9)	Negligible	-	-	-	-
Disturbance to Setting of Designated Heritage Assets	Registered Historic Parks and Gardens	Negligible	-	-	-	-	■ N/A	Negligible	-	-	-	-

Significant Effects	Receptor	Significance of Effects					Mitigation	Significance of Effects				
		Major, Moderate, Minor, Negligible	Beneficial / Adverse	P / T	D / I	ST MT / LT		Major, Moderate, Minor, Negligible	Beneficial / Adverse	P / T	D / I	ST MT / LT
Disturbance to Setting of Designated Heritage Assets	Listed Buildings	Moderate (x6) Moderate/Minor (x2)	Adverse	P	D	LT	■ Sensitive design	Moderate/Minor	Adverse	P	D	LT
Operational Phase												
No predicted effects												

Key to table:

P / T = Permanent or Temporary, D / I = Direct or Indirect, ST / MT / LT = Short Term, Medium Term or Long Term

N/A = Not Applicable

Chapter 18

Cumulative Development

DMH Stallard

18. Cumulative Development

18.1 Introduction

18.1.1 Schedule 4 Part 1 (4) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 requires that information included in environmental statements should include the likely significant 'cumulative' effects of the proposed development.

18.1.2 The Government, in its paper "Environmental Impact Assessment : A guide to good practice and procedures," states in paragraph 121:-

"The EIA Regulations (in Schedule 4) require that cumulative effects of development be considered within an Environmental Statement. 'Cumulative' is not defined in the EIA Directive or regulations – the dictionary definition is "increasing by one addition after another".

18.1.3 Paragraph 122 of this Guidance states:-

"in the context of EIA, cumulative effects could refer to the combined effects of different development activities within the vicinity or those of different aspects of a single development on a particular receptor".

Cumulative effects can be broadly divided into two categories:-

- Cumulative effects from different developments.
- Cumulative effects from environmental features.

18.1.4 The Guidance advises that the effects to be considered cumulatively should be agreed with the Local Planning Authority at the Scoping Stage (paragraph 124). In the DMS Scoping Report for this planning application, cumulative development was addressed, and a request was made to all consultees to make the applicant aware of any developments that may be relevant to the EIA process. Also, that the consultees should confirm any relevant committed developments that require consideration in terms of cumulative impact.

18.2 Methodology

18.2.1 Horsham District Council, in its formal Scoping Opinion on the proposed development, it stated, in relation to cumulative and in-combination effects:-

"A full consideration of the implications of the whole scheme should be included in the ES. All supporting infrastructure should be included within the assessment. The ES should include an impact assessment to identify,

describe and evaluate the effects that are likely to result from the project in combination with other projects and activities that are being, have been or will be carried out. The following types of projects should be included in such an assessment, (subject to available information):

- a) existing completed projects;
- b) approved but uncompleted projects;
- c) ongoing activities;
- d) plans or projects for which an application has been made and which are under consideration by the consenting authorities; and
- e) plans and projects which are reasonably foreseeable, ie projects for which an application has not yet been submitted, but which are likely to progress before completion of the development and for which sufficient information is available to assess the likelihood of cumulative and in-combination effects”.

It also included specific comments on cumulative impacts in relation to certain environmental features, such as landscape, where it states:

“the assessment should also include the cumulative effect of the development with other relevant existing or proposed developments in the area”.

18.2.2 This Environmental Statement addresses the cumulative effects in relation to each of the aspects of the environment which could be significantly affected by the proposed development, as considered in Technical Chapters 8 to 17 of this Environmental Statement.

18.2.3 The assessment of the potential cumulative effects are therefore considered in two aspects, in accordance with Government Guidance. These are:-

- assessment of In-Combination Effects (the Proposed Development together with Committed Developments);
- assessment of Effect Interactions of the Proposed Development.

18.3 **Baseline Conditions**

Committed Development Considered

18.3.1 In making these assessments, each of the Technical Chapters (8 – 17) consider the cumulative effect of the proposed development and other projects in the locality, as advised by Horsham District Council in October

2015, and updated to March 2017. These are set out in Section 3 of this Environmental Statement, and are set out below for ease of reference:-

Table 18-1 Developments considered in the Assessment of Cumulative Effects

Application No.	Location	Description	Status
Mixed Use Developments			
DC/09/2138	Land East of A24 Worthing Road, Horsham	Development primarily of up to 1044 dwellings including provision of employment floor space, fire station, community centre and expanded school facilities.	Permitted 18 th March 2010.
DC/09/2101	Land South of Broadbridge Heath, Old Wickhurst Lane, Broadbridge Heath	Erection of 963 residential units, community facility including land for a primary school, neighbourhood centre, youth and recreational facilities, other formal and informal open space, landscaping, environmental works, transport and access arrangements.	Permitted 12 th April 2010.
DC/10/1612	Holmbush Farm Landfill Site, Crawley Road, Faygate	Development of approximately 2500 dwellings, new access from A264 and a secondary access from A264, neighbourhood centre, comprising retail, community building with library facility, public house, primary care centre and care home, main pumping station, land for primary school and nursery, land for employment uses, new rail station, energy centre and associated amenity space.	Permitted 29 th October 2010
DC/13/0735	Land East of Billingshurst to North and South of A272, East Street, Billingshurst	Demolition of existing buildings and structures and redevelopment to provide up to 475 residential dwellings, land to accommodate a new primary school and land to accommodate an extension to existing doctors' surgery, land for new dentist's surgery and creche (falling within Class D1), with associated access and	Permitted 24 th July 2013

		play space.	
DC/14/0590	Land West of Worthing Road, Southwater	Residential development of up to 540 dwellings and 54 retirement living apartments, associated vehicular, cycle and pedestrian access, drainage and landscape works	Permitted 21 st July 2014
DC/10/0088	Faygate Sawmills, Faygate Lane, Faygate	Demolition of existing buildings, construction of 148 retirement units, 1 warden's unit, 50 bed care home, visitor accommodation, central facilities building, shop, medical centre, provision of open space, balancing pond, landscaping and access	Permitted 5 th August 2010
Primarily Residential Developments			
DC/14/1624	Novartis Pharmaceuticals UK Limited, Parsonage Road, Horsham	Demolition of existing social club and redevelopment of site so as to accommodate 160 dwellings together with new access arrangements and landscaping works	Permitted 12 th December 2014
DC/10/0939	Land South of Groomsland Drive and Gillmans Industrial Estate, Marringdean Road, Billingshurst	Erection of 150 dwellings (comprising 47 x 2-bed, 49 x 3-bed, 38 x 4-bed and 16 x 5-bed) with associated works and landscaping	Permitted 20 th November 2011
13/02994/OUT	Land at Pease Pottage Golf Driving Range	Redevelopment to provide up to 95 residential dwellings along with associated parking, access	Permitted 5 th December 2013
DC/14/2582	Land to the west of Mill Straight, Worthing Road, Southwater	Residential development of up to 193 No. dwellings (including affordable housing) and associated works (Outline)	Permitted 18 th September 2015
DC/13/2408	Land North of Old Guildford Road, Broadbridge Heath	Outline application for the erection of up to 165 residential dwellings (use class C3) including affordable housing, a 60-bed care home (use class C2) with separate	Permitted 18 th May 2015

		staff accommodation, two new vehicular accesses, associated infrastructure, groundworks, open space and landscaping	
DM/15/4711	Land East of Brighton Road, Pease Pottage, West Sussex	Approximately 600 dwellings (C3), 48 bed-care facilities (C2), Community building (D1), Café (A3) and retail (A1). Up to 1 form entry primary school (D1), landscaping, infrastructure, accesses and car parking.	Permitted 28 November 2016
Commercial Developments			
DC/14/0476	Wealdon, Langhurst Wood Road, Horsham	Erection of units for Class B2 (6695 sqm) and Class B8 (8185 sqm) Uses from outline application DC/09/2355 (Approval of Reserved Matters)	Permitted 27 th June 2014
Site Allocations			
Policy Ref	Location	Description	Status
Policy 13	South of Billingshurst	Around 150 homes and associated infrastructure	In pre-application stage.
Waste Developments			
WSCC/062/16/NH	Former Wealden Brickworks, Landhurstwood Road, Horsham, West Sussex, RH12 4QD	Recycling, Recovery and Renewable Energy Facility and Ancillary Infrastructure	Under Consideration

18.3.2 Section 3 of this Environmental Statement also states in paragraph 3.4.17:

“An assessment of cumulative effects will be set out within each technical chapter. In this Chapter, a review is undertaken of cumulative effects identified by each of the technical chapters. This is order to provide a discussion and identify circumstances where effects that are not significant on their own may in combination with other developments, or other effects, lead to a significant impact”.

18.3.3 The Government guidance advises that the key in assessing cumulative effects is to focus on the receptor and consider capacity cumulatively to accommodate the changes that are likely to occur. Each Technical Chapter of this ES contains a specific section on cumulative effects, which will set

out the approach taken, identify the predicted changes in baseline conditions. These are summarised in the following paragraphs.

18.4 Baseline and Assessment of In-Combination Effects (the Proposed Development together with Committed Developments)

- 18.4.1 This is the first of the two potential cumulative effects, as described in paragraph 18.1.3 of this Chapter, and considers each of the findings of the Technical Chapters, in turn.

Socio Economic

- 18.4.2 The cumulative socio-economic impacts of the proposed scheme are addressed in Chapter 8 of the ES. It states in paragraph 7.184 that the scheme will generate major beneficial impacts in terms of provision of homes that will meet market demand and housing need, and in terms of job creation at North Horsham. The construction programme will also create around 375 jobs in the construction programme over the period 2016 to 2031.
- 18.4.3 The combined impacts of development of Land at North Horsham and the developments listed at 18.2.2 are collectively required in order to fulfil the objectives of the approved Development Plan. The Development Plan itself has been subject to assessment in terms of the need for new homes to accommodate anticipated population growth and for new business floorspace to accommodate employment growth and allow for replacement of redundant business floorspace.
- 18.4.4 The Development Plan has now been found to be sound with regards to planned housing and employment floorspace provision by the Planning Inspectorate and has now been adopted by the Council. The combined socio-economic impacts of the Land at North Horsham and other sites can be regarded as having a major beneficial impact, since they are required to meet the objectives of the Development Plan.

Ground Conditions

- 18.4.5 The potential cumulative effects are addressed in Chapter 9 of the ES. It states that the potential cumulative impacts resulting from construction of the development are largely contained within the site. Nearby permitted development will not change the magnitude or significance of effects associated with the identified activities. On this basis, cumulative impacts are not considered to be significant.

Agricultural Land

- 18.4.6 Chapter 10 of the ES considers agricultural land, and paragraphs 10.5.18 to 10.5.20 address the potential cumulative effects. The substantive agricultural issue to be considered in terms of cumulative effects is the loss of agricultural land resource. Most of the relevant committed developments considered as part of the cumulative assessment comprise moderate quality land in Subgrade 3b. Land east of the A24, Horsham (DC/09/2138) extends to approximately 48ha of Subgrade 3b land; land south of Broadbridge Heath (DC/09/2101) to 57ha of Subgrade 3b and Grade 4 land; Holmbush Farm, Faygate (DC/10/1612) includes 90ha of low quality agricultural land; land east of Billingshurst (DC/13/0735) comprises 35ha of low quality agricultural land; land west of Worthing Road, Southwater (DC/14/0590) comprises 32ha of Subgrade 3b land; land to the west of Mill Straight, Southwater (DC/14/2582) comprises 10ha of low quality agricultural land; and land north of Old Guildford Road, Broadbridge Heath (DC/13/2408) includes 9ha of low quality land.
- 18.4.7 With the Proposed Development, these developments will cumulatively lead to the loss or change of use of approximately 470ha of mostly Subgrade 3b land which would remain a high magnitude of change of a resource of low sensitivity, and lead to a moderate adverse effect.

Landscape and Visual

- 18.4.8 Chapter 11 of the ES considers landscape and visual, and paragraph 1.206 refers to cumulative impacts which result from the combined impacts of multiple developments. The effects from a single development may not be significant on their own but when combined with other developments and their impacts may become significant. Paragraph 18.2.2 of this Chapter identifies the committed developments to be assessed as part of this Environmental Statement. However, of the listed committed development proposals in the area surrounding the application site none would result in additional cumulative landscape and visual impacts arising from the proposed development.

Ecology

- 18.4.9 Chapter 12 of the ES considers ecology, and paragraphs 12.135 to 12.141 refers to cumulative impacts. Overall, the main potential cumulative effect identified is the impact on Buchan Hill Ponds SSSI from increases in nitrogen concentration and nitrogen deposition; nevertheless the effects are likely to be limited and localised to the A264 corridor due to the presence of dense vegetation and the siting of the carriageway within a cutting. The on-site ecological mitigation strategies and green infrastructure provision within the application site means that there are not expected to be any other significant

negative cumulative effects arising from the proposed development in combination with the other identified developments.

Archaeology and Heritage

- 18.4.10 Chapter 13 of the ES considers archaeology and heritage, and paragraph 13.7.12 refers to cumulative impacts. Such impacts have been assessed in relation to the identified committed developments, and no cumulative effects are predicted in relation to archaeology and heritage.

Transport

- 18.4.11 Chapter 14 of the ES considers Transport, and paragraph 14.5.44 to 14.5.53 refer to cumulative effects. Two committed developments necessary for consideration in terms of cumulative effects have been identified:

- West of Bewbush (Kilnwood Vale)
- West of Horsham

Impacts on driver delay are *“only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system”* (IEA, 1993). In this case, this only tends to occur for short periods during the day (namely the morning and evening peak hours). Each of the committed developments above have identified and agreed a transport strategy in order to mitigate the impacts of development. These include highway improvements to mitigate increases in driver delay in the peak hours, as agreed with WSCC. Therefore, the cumulative effects on driver delay are considered to be negligible.

- 18.4.12 The proposals for all three developments include improvements to existing pedestrian and cycle routes and provision of new routes, including new crossing points of the A264. It is therefore considered that these measures outweigh the combined increases in traffic flow, and that the cumulative effects of the development on both severance and pedestrian and cyclist delay and amenity will be negligible.
- 18.4.13 None of the developments are expected to generate significant HGV movements. Furthermore, safer crossing points of the A264 are proposed and therefore it is considered that the cumulative impacts on fear and intimidation will be negligible.
- 18.4.14 As previously discussed, the recorded five-year road safety data identifies two specific locations where there may be risks of accidents: Great Daux Roundabout and the M23 Junction 11. The proposed highway improvement scheme for the proposed development addresses the possible safety issue at

Great Daux Roundabout, and investigations will be made to realign the traffic signal head for the A23 off-slip at the M23 J11, in order to address the potential safety issue at the junction. Consequently, no cumulative effects are identified for accidents and safety.

18.4.15 Furthermore, the traffic generation of the committed developments has been accounted for in the 2031 Baseline against which the potential effect of the proposed development has been judged in the previous sections. This has been achieved by using TEMPRO growth factors for increases in housing and jobs expected in the Horsham District, as discussed and agreed in the TA.

18.4.16 It is therefore concluded that inherently the assessment reported here represents an assessment of the Cumulative Effects. This assessment further concludes that it is unlikely to result in or contribute to any likely significant cumulative effects with other developments in the vicinity of the application site.

Air Quality

18.4.17 Chapter 15 of the ES considers air quality, and in paragraphs 15.7.3 and 15.7.4 refers to cumulative impacts.

18.4.18 In relation to the other developments listed in paragraph 18.2.2 of this Chapter, where they are constructed simultaneously there is the potential for construction phase dust effects to occur. However, these schemes will also be required to employ construction phase mitigation measures, with the result effects not being significant, individually or in combination.

18.4.19 In relation to cumulative air quality effects once the development is completed, the traffic data used within the assessment includes the traffic flows due to committed developments in the vicinity of the site. Therefore, the cumulative effects are included in the results and no monitoring is required.

Noise and Vibration

18.4.20 Chapter 16 of the ES considers noise and vibration, and in paragraph 16.8.1 to 16.8.9 refers to cumulative impacts.

18.4.21 In relation to traffic flows the traffic data used within the noise model include the traffic flows due to committed developments in the vicinity of the site. Therefore, the cumulative effects are included in the modelling results. Furthermore, the mitigation proposed for the proposed dwellings accounts for future traffic flows including committed developments.

18.4.22 The increase in road traffic has been assessed in the close vicinity of the site. The impact has been demonstrated to be negligible. With the other

committed and proposed developments in the area, the impact of cumulative construction related noise on sensitive receptors around the site should therefore be temporary 'moderate adverse'.

- 18.4.23 In relation to the possible second runway at Gatwick, the Airports Commission Interim Report published in December 2013, included Gatwick in its shortlist of potential locations for the next runway in the UK.
- 18.4.24 Gatwick considered all realistic possibilities for a second runway. The three runway options which remain under consideration would have the second runway to the south of the existing one.
- 18.4.25 The noise contours of the three options showing the predicted aircraft noise contours due to aircraft usage of Gatwick airport show that for Option 1, the 54 dB LAeq, 16hour contour would be located approximately 1.2 km away from the north boundary of the site. For Option 3, the 54 dB LAeq, 16hour contour would be located approximately 400 m away from the north boundary of the site. For Options 2, the 54 dB LAeq, 16hour contour would be inside the boundary of the site. However, it would only affect the very north part of the site where green open amenity space and open farm land is proposed to be retained.
- 18.4.26 Therefore all proposed residential dwellings would be outside of the threshold for the onset of significant community noise annoyance from aircraft noise and no further mitigations measures would be deemed necessary.
- 18.4.27 An assessment of the likely noise impact at the proposed schools due to the proposed Gatwick airport expansion plans cannot be undertaken and Gatwick airport does not provide the noise parameters which are used to assess the suitability for school sites.

Hydrology and Flooding

- 18.4.28 No cumulative impacts are anticipated with regards to flooding. All of the developments listed in this Section are required to ensure that they mitigate their own impacts, in order to avoid flood risk on any other location, such as this site. Also, in accordance with planning policy, the proposed drainage features for this development will ensure that there is no increase in flood risk to existing buildings, either within or in the proximity, of the site.

18.5 Baseline and Assessment of Effect Interactions

- 18.5.1 This is the Second of the potential cumulative effects being the consideration of interactions between the relevant environmental topics on this Environmental Statement on sensitive receptors during construction and operation. Effect interactions are considered and addressed in the relevant technical chapters. They contain technical assessments which take account

of the baseline conditions at the site and in the surrounding area, as well as from the detailed technical studies.

18.5.2 When considering 'effect interactions', the following sensitive receptors have been identified:-

- Existing residential properties within and near to the site;
- New residential properties within the development which are occupied during the early phases, and may be affected by construction works;
- Users of the local highway network in and around the site, including the A264, Rusper Road and Longhurstwood Road;
- Heritage assets within and close to the site;
- Protected species and habitats within the site;
- Users of the public rights of way within the site;

These sensitive receptors are all identified in the respective Chapters of the Environmental statement.

18.5.3 The significance of any 'effect interactions' on these sensitive receptors are not only addressed in detail in the separate chapters of the Environmental Statement, but also in 'Summary Table of Proposed Mitigation and Residual Effects' in the following chapter (chapter 19). The proposed inherent mitigation, as well as any additional mitigation, is set out, together with the residual effects. One example is the potential in-combination effects of transport, ecology and air quality, which are considered in the respect chapters (eg Ecology Chapter 12 para. 12.6.2 and 12.6.3).

18.5.4 As set out in this table in chapter 19, many of the residual effects relating to the construction phase will be short term, temporary, intermittent, and in varying locations within the site. The proposed Construction Environment Management Plan will minimise any potential adverse impacts.

18.5.5 In the operational phase these will be significant beneficial effects, due to the sensitive masterplanning taking account of the relationship between land uses, and in particular the sensitive receptors as identified in paragraph 18.5.2. This includes the incorporation of new infrastructure; sensitive landscaping and bunding; the creation of new green infrastructure; the protection of the setting of heritage assets; and ensuring that development avoids areas of flood risk, areas of ecological importance, and areas in the landscape. These measures will ensure that the 'effect interactions' will be negligible/not significant.

18.6 **Monitoring and Conclusions**

- 18.6.1 This assessment of In-combination Effects (this proposed development together with committed developments), demonstrates that there are no significant adverse cumulative impacts expected as a result of this scheme, in combination with any of the other schemes as listed in paragraph 18.2.2 of this Chapter.
- 18.6.2 There will be monitoring at both the construction and operation stages of the scheme, which will focus on all of the potential cumulative effects identified in the technical chapters of this Environmental Statement, and as summarised in this Chapter. The methodology for the monitoring is explained in these Chapters, and summarised in the Summary of Mitigation Measures and Residual Effects (Chapter 19).

Chapter 19

Summary of Mitigation Measures and Residual Effects

DMH Stallard

19. Summary of Mitigation Measures and Residual Effects

19.1 Introduction

19.1.1 This chapter of the ES summarises all of the potential impacts of this scheme which have been identified in the preceding technical chapters (8 to 18). Each of these technical chapters have identified the potential environmental effects before mitigation, and the significance of these potential effects. These have been considered both for the construction and operational stages of the scheme.

19.1.2 In considering proposed mitigation, this has been addressed both in relation to inherent mitigation, through the scheme design, and also through proposed additional mitigation. The latter includes such mechanisms as the preparation and implementation of a Quality, Safety, Health and Environmental Plan (QSHE); Construction Environmental Plan (CEMP); DEFRA Construction Code of Practice.

19.1.3 Following the implementation of these mitigation measures, each technical chapter concludes with the recognition of any significant residual environmental effects, and the level of this significance.

19.1.4 The summary of these mitigation measures, and any likely significant residual effects, are set out in the table in this chapter (Table 19.1 – 19.4). These are also summarised in the following paragraphs, firstly, through the identification of key benefits, and secondly the likely significant environmental impacts of the proposed development.

19.2 Key Benefits of the Proposed Development

19.2.1 The proposed development of up to 2,750 new homes, being almost 17% of the planned level of housing provision in Horsham District in the period up to 2031 is a **major beneficial** residual effect on meeting the housing requirement, as well as meeting local housing need.

19.2.2 The provision of a new high quality business park; new shops and restaurants and related local services directly related to the development. In addition, there will be home-based businesses, and expenditure in the local economy by new residents. The scheme also includes a new sports hub. All of these will be a **major beneficial** residual effect on job creation.

-
- 19.2.3 The provision of new education facilities, including two primary schools, a secondary school, early years and special needs accommodation, will result in a **major beneficial** impact on education provision.
- 19.2.4 The incorporation of new health facilities in the local centre will result in a **major beneficial** impact on health provision.
- 19.2.5 The creation of substantial new areas of natural green space and open space, including new tree, shrub and hedgerow planting will result in a **moderate beneficial** effect on the landscape during the operational stage of the scheme.
- 19.2.6 The incorporation of significant new transport infrastructure being delivered in conjunction with the development, and at the appropriate phase. These include improved pedestrian and cycle crossings across the A264, and the reduction of severance, and realignment of Langhurstwood Road will result in a **major beneficial** effect. A further **minor beneficial** effect will result for pedestrians and cyclists from improvements to the public rights of way, both through the site, and also safer crossings of the A264.
- 19.2.7 Ecological input throughout the design process has informed the development of the proposals. This has resulted in the protection of ancient woodland; wooded gills, the SNCI and waterbodies, by means of buffers and careful design of access and circulation routes. The scheme incorporates multi-functional Green Infrastructure, including a nature park, and ensuring an ecological network throughout the site. This will ensure that wildlife can continue to use these features and permeate the application site. These combine to result in varying levels of **beneficial** effects, especially through ecological and woodland management plans.

19.3 **Likely Significant Residual Effects of the Proposed Development**

Socio Economic

- 19.3.1 This is a comprehensive mixed use strategic development, incorporating all of the requirements of the Horsham District Planning Framework. This mix of housing, business park, schools, shops, local centre, as well as land safeguarded for a parkway railway station and associated uses, combine to result in **major beneficial** effects. These relate to significant job creation, both in construction (5,600 FTE); offices (2,900 FTE); new shops and other services (548 FTE), and schools (220 FTE).

Contamination and Remediation

- 19.3.2 The implementation of Quality, Safety, Health and Environment Plan (QSHE), together with the proposed remediation design, management and

supervision, will result in there **not being a significant effect**, either on soil contamination, from construction works, or from the development itself. In addition, there will be **moderate beneficial** effects from the remediation works, in relation to any contaminated soil and also to groundwater.

Agricultural Land

- 19.3.3 The proposed development will result in the loss of primarily Grade 3b Agricultural Land, which is moderate to poor quality. It will result in the loss of 9.1 hectares of Grade 3a Agricultural Land, which is only 5% of the total. There will be re-use of much of the surplus soil on-site, in the detailed design and gardens and green spaces, and there will also be compliance with DEFRA's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites. There will therefore only be a **moderate adverse effect** of the loss of this agricultural land.

Landscape

- 19.3.4 Although there will be a notable change to the current rural landscape character of the application site, the proposed development, with its sensitive layout and design of development parcels, will retain the majority of the landscape elements, including the hedgerows, trees and wooded areas. In addition, the scheme will create substantial new areas of natural greenspace and open space, including new tree and hedgerow planting resulting in habitat diversity. In relation to views, the longer term residual effect will result in beneficial or not significant effects in the majority of viewpoints. Therefore, apart from adverse impacts on a small area of ancient woodland, this will result in overall **minor beneficial effects**, and in some parts of the site **moderate beneficial effects**.

Ecology

- 19.3.5 There are a number of ecological benefits which result from this scheme, as summarised in paragraph 19.27 of this chapter. The scheme design ensures that any loss or changes or fragmentation of habitats are minimised. As a result, the comprehensive assessment of likely significant effects, both during the construction stage and operational stage of the development, is predominantly **not significant**. The details of the impact on each of the ecological receptors is comprehensively set out in the Ecology Chapter of this ES. There are **major beneficial** effects which will result from the creation of a Nature Park and Green Infrastructure and the resultant cross-site connectivity within the development. Where there is identified **adverse** effects, details of the proposed mitigation is set out.
- 19.3.6 Appendix 12.25 (Outline Ecological Mitigation and Management Plan) provides further information regarding proposed ecological mitigation.

Archaeology

- 19.3.7 Sensitive masterplanning will ensure that the Grade 2 listed buildings and areas of archaeological importance within the site will be retained, as well as the historic hedgerows. The design of the scheme also ensures that any partial loss of the rural setting of the listed buildings is mitigated, including taking advantage of retaining and enlarging existing green areas, as well as creating new green areas around these buildings. The result is that the impacts are **not significant**.

Transport

- 19.3.8 This scheme will be providing significant new transport infrastructure, as explained in paragraph 19.2.6 of this chapter, and in chapters 5 and 14 of the ES. The Transport Assessment and Framework Travel Plan are also appended to chapter 14. These combine to demonstrate that these proposed improvements will result in impacts which are **not significant**, and there will be a number of links in the transport network which will result in a significant decrease in driver delay in the peak hours. Certain infrastructure improvements will result in **major beneficial** effects, such as the closure of the southern part of Langhurstwood Road to through traffic. With regards to pedestrians and cyclists, the proposed new foot/cycle bridge over the A264, together with improvements to the existing public rights of way, will significantly reduce 'severance', and allow people to cross the A264 more easily and safely. This will result in a direct, permanent and **major beneficial** effect.

Air Quality

- 19.3.9 During the construction works for this scheme, dust measure controls will be carried out in accordance with a Construction Environment Management Plan, in order to minimise dust and air quality effects. The site layout for construction works will be arranged to ensure that machinery and dust-causing activities are located as far away from sensitive receptors as possible, and the resultant effects would therefore be **not significant**. Similarly, the air quality effects of road traffic by the proposed development, due to the land use masterplanning, are considered to be **not significant** for human health receptors. There may be some **minor adverse** impacts on woodland habitat within the scheme, which will be minimised through sensitive masterplanning.

Noise and Vibration

- 19.3.10 During the construction phases of this scheme the noise and vibration created will be reduced in accordance with the Construction Environment Management Plan. This will focus particularly on site levelling and clearance, ground excavation, concreting, building construction and new internal road construction. The implementation of these mitigation measures will result in **moderate to minor adverse** effects, depending on receptor locations. In relation to the scheme itself, the masterplanning has taken account of this potential impact, and includes such elements as setting buildings back from the A264; the incorporation of earth bunds and acoustic barriers where required; together with specific measures for sensitive noise receptors such as housing, schools, and the business park. The result is that the impacts would be **not significant**.

Surface Water and Hydrology

- 19.3.11 The masterplanning of this scheme avoids any development in the flood plain. In addition, the proposed drainage scheme and attenuation systems limit surface run-off rates from development and volumes will be limited to the existing greenfield levels, or lower. During construction any potential effects to existing properties would be mitigated by measures set out within a Construction Environment Management Plan. These would include avoiding works in the floodplain wherever possible, and safe storage of plant or contaminants. The results of these measures and the masterplanning are that the effects will be **not significant**.

19.4 Conclusions

- 19.4.1 This application for a mixed use strategic development is compliant with the proposals in the adopted HDPF, the details of which are set out in Policies SD1 to SD9.
- 19.4.2 This Environmental Statement has been carried out in accordance with the procedures as set out in chapters 1 to 3, and in particular in accordance with the Scoping Report, sent to Horsham District Council on 22 July 2014, and the Scoping Opinion provided by the Council on 9 September 2014.
- 19.4.3 The preparation of this outline planning application, including the masterplanning, has been carried out in parallel with the environmental assessment work in order to assist in minimising any adverse environmental impacts. In addition, there has been on-going consultations between those involved in the technical work and their respective statutory committees, all of which are listed in paragraph 3.2.4 of this Environment Statement.

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- 19.4.4 As each of these technical chapters have been completed in draft, they have been sent to Horsham District Council, who have provided valuable comments, as well as obtaining inputs from other statutory consultees, as considered appropriate. The applicant, together with its representative specialists have considered all comments received, and have taken them into account in the finalising of this Environmental Statement.
- 19.4.5 As a result of this process, we consider that this Environmental Statement accurately identifies the potential significant environmental effects which could occur with this scheme, and demonstrates how these can be addressed, both through proposed inherent mitigation, and also through proposed additional mitigation measures. Each chapter identified these effects, and they are also summarised in this chapter, which shows any residual effects.
- 19.4.6 The design of this proposed development, as well as the proposed construction phasing programme, and the incorporation of the mitigation measures, has resulted in a scheme which has successfully minimised any significant environmental effects. As can be seen in the table in this chapter, the Residual Effects are almost exclusively beneficial or not significant, with very few adverse effects. It is therefore policy compliant with the HDPF, by being in accordance with the Land North of Horsham Concept Masterplan (HDPF Appendix 2), and also the site specific policies SD1 to SD9 and all other relevant policies in the HDPF, as set out in chapter 7 of this ES. It will result in the full compliance with Horsham District Council's Spatial Development Principles by ensuring that this development is based on sustainable development principles that strike the correct balance between economic, social and environmental priorities, and delivers a living, working and balanced community which overall provides significant beneficial environmental effects.

Table 19.1 Summary of Proposed Mitigation and Residual Effects

Environmental Topic	Significance of Potential Effect		Proposed Inherent Mitigation	Proposed Additional Mitigation	Significance of Residual Effect	
Potential Effect Before Mitigation	Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant			Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant
Socio-Economic (Chapter 8) Construction Effects						
Creation of employment	Major	Beneficial	Construction of 2,750 homes; 46,450 square metres (GIA) of B1 business space; a secondary school; two primary schools; accommodation for special education needs; 'early years' accommodation; local centres; community facilities; retail; healthcare; multi-use community centre; parkway railway station and associated uses including car parking; infrastructure provision; In addition, wider spin-off benefits on the local economy through the spending of those involved in construction work. Construction employment for around 5,600 FTE, or an average of 400 jobs per annum.	Not required.	Major	Beneficial
Socio-Economic (Chapter 8) Operation Effects						
Contribution to meeting housing requirement	Major	Beneficial	The proposed development of up to 2,750 new homes, being almost 17% of the planned level of housing provision in Horsham District in the period 2011 to 2031.	Not required.	Major	Beneficial
Contribution to meeting local housing need	Major	Beneficial	The proposed development of up to 2,750 new homes will make a substantial contribution to meeting local housing need.	Not required.	Major	Beneficial
Impact on job creation	Major	Beneficial	Provision of the following:- <ul style="list-style-type: none">New B1 offices (B1a); R & D (B1b) and light industrial (B1c) (around 2,900 FTE jobs)New shops and restaurants/cafes, and related private sector services in the local centre (around 490 FTE jobs)Local services, directly related to the development, such as school and health provision, and other public sector services (around 220 FTE jobs)Home-based businessesExpenditure in the local economy by new residentsNew sports hub	Not required.	Major	Beneficial
Impact on education	Major	Beneficial	Provision of the following:-	Not required.	Major	Beneficial

Environmental Topic	Significance of Potential Effect		Proposed Inherent Mitigation	Proposed Additional Mitigation	Significance of Residual Effect	
Potential Effect Before Mitigation	Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant			Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant
provision			<ul style="list-style-type: none"> 2 x 2 FE Primary Schools 6 FE Secondary Schools Early years accommodation Special needs accommodation 			
Impact on health provision	Major	Beneficial	Provision of new health facilities in the local centre.	Not required.	Major	Beneficial
Contamination and Remediation (Chapter 9) - Construction Effects						
Localised cross contamination of soil.	Minor	Adverse	Not Applicable	Implementation of Quality, Safety, Health, and Environment Plan (QSHE) Competent remediation design, management and supervision.	Negligible	Not significant
Creation of pathways to underlying groundwater via deep excavation or borehole	Minor	Adverse	Not Applicable	Implementation of Quality, Safety, Health, and Environment Plan (QSHE) Competent remediation design, management and supervision.	Negligible	Not significant
Localised soil contamination through Asbestos removal and demolition including processing of arisings (eg redundant farm buildings).	Moderate	Adverse	Not Applicable	Implementation of QSHE Plan, and adherence to the Control of Asbestos Regulations 2012.	Negligible	Not significant
Localised soil contamination through storage and handling of waste.	Moderate	Adverse	Not Applicable	Waste management plan, and effective site waste management practices.	Negligible	Not significant
Localised soil contamination from site compounds with static and mobile fuel bowers (oil and fuel for plant, tools and equipment), including maintenance activities.	Moderate	Adverse	Not Applicable	Implementation of QSHE Plan and activity to be undertaken in accordance with the Control of Pollution (Oil Storage) (England) Regulations 2001 and Environment Agency Pollution Prevention Guidelines.	Negligible	Not significant
Construction earthwork including stripping of topsoil/ subsoil, stockpiling, importation of materials, reprofiling potential deterioration of ground surface; soil contamination of ground	Substantial	Adverse	Not Applicable	Implementation of Construction Environmental Management Plan (CEMP); good practice construction techniques, Quality assurance of imported materials.	Negligible	Not significant

Environmental Topic	Significance of Potential Effect		Proposed Inherent Mitigation	Proposed Additional Mitigation	Significance of Residual Effect	
	Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant			Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant
water; increased silt run off; contamination of existing soil with inferior imported materials.						
Construction of foundations, buildings, hardstanding, roads, bridges – potential contamination of soil and groundwater and deterioration of ground surface due to compaction.	Moderate	Adverse	Not Applicable	Implementation of CEMP and good practice construction techniques.	Negligible	Not significant
Storage and handling of waste and also raw construction materials – potential contamination of surface and underlying soils.	Moderate	Adverse	Not Applicable	Implementation of CEMP; Waste management plan; effective site waste management practices.	Negligible	Not significant
Use and storage of oils and fuels for plant, tools and equipment; washing vehicles; maintenance. Potential contamination of underlying soils and groundwater	Moderate	Adverse	No Applicable	Implementation of CEMP, and activities to be undertaken in accordance with the Control of Pollution Regulations and Environment Agency Pollution Prevention Guidelines.	Negligible	Not significant
Contamination and Remediation (Chapter 9) - Operational Effects						
Remediation of contaminated soil and groundwater	Moderate	Beneficial	Reduce potential localised contamination of soil and groundwater around contamination sources, through remediation works.	Not required.	Moderate	Beneficial
Effect of residential end use	Moderate	Beneficial	Reduce potential localised contamination of soil and groundwater around contamination sources, through remediation works.	Not required.	Moderate	Beneficial
Risk of ground contamination from commercial end users.	Moderate	Adverse	Not Applicable	Management of hazardous substances in accordance with legislation and regulatory guidance.	Negligible	Not significant
Agricultural Land (Chapter 10) - Construction Effects						
Direct loss of agricultural land comprising approximately 9.1 ha of subgrade 3a land and 155.4 ha of subgrade 3b	Moderate	Adverse	Not Applicable	No mitigation measures available.	Moderate	Adverse

Environmental Topic	Significance of Potential Effect		Proposed Inherent Mitigation	Proposed Additional Mitigation	Significance of Residual Effect	
Potential Effect Before Mitigation	Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant			Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant
land.						
Loss of soil resources due to inappropriate, storage, transportation or handling.	Moderate	Adverse	Not Applicable	Re-use as much of the surplus soil resources on-site in the detailed design of gardens and green spaces. Re-use surplus soils in a sustainable manner, as close to the application site as possible, and to an after use in accordance with DEFRA's Construction Code of Practice for the Sustainable use of Soils on Construction Sites. Prepare a Soil Resources Plan, to ensure that the quality of soils retained on-site and exported off-site is maintained (e.g. soil handling and storage – avoidance of compaction and bio degradation).	Moderate/Minor	Adverse
Agricultural Land (Chapter 10) - Operation Effects						
All significant effects will over at time of construction.	N/A	N/A	N/A	N/A	N/A	N/A
Landscape (Chapter 11) - Construction and Operation (Overall Landscape Effects)						
Landscape elements – introduction and use of new development (the scheme)	Moderate	Adverse	Sensitive layout and design of development parcels including the architectural treatment of new dwellings/buildings, and creation of substantial new areas of natural green space and open space, including new tree, shrub and hedgerow planting to compensate for loss of sections of hedgerows, individual/group of trees and woodland.	Some landscape and visual effects would be caused during the construction period. However, whilst the construction period extends over 15 years, each area of construction is likely to be relatively short, so the effects will be temporary and localised. Mitigation measures during construction will further reduce these impacts. They include:- – Locating contractor's compound and material stockpiles away from sensitive receptors – Minimise length of construction time required, and use of designated routes for construction vehicles within and around the site – Long term landscape management of the existing and new landscape areas by management companies (for the commercial and the residential areas)	Minor (Year 1) Moderate (Year 15)	Adverse (Year 1) Beneficial (Year 15)

Environmental Topic	Significance of Potential Effect		Proposed Inherent Mitigation	Proposed Additional Mitigation	Significance of Residual Effect	
	Potential Effect Before Mitigation	Substantial, Major, Moderate, Minor, Negligible			Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant
				<ul style="list-style-type: none"> – Preparation of a landscape and biodiversity management strategy – Reduce lighting pollution on surrounding area through boundary planting 		
Landscape patterns/ character of application site – effect on defined and Landscape Character Areas	Moderate	Adverse	There will be a notable change to the current rural landscape character of the application site. However, the proposed development, with its sensitive layout, design of development parcels, will retain the majority of landscape elements (hedgerows, trees/wooded areas), with minor changes to the landform.	As above.	Minor (Year 1) Moderate (Year 15)	Adverse (Year 1) Beneficial (Year 15)
Effect on the relevant National Character Area Profiles of the Low Weald and High Weald	Negligible	Not significant	There will be no direct landscape effect on the High Weald, and only a negligible indirect effect. The Low Weald covers an extensive area, of which this site is only a small part. The proposed development will retain the landscape characteristics of this Character Area. There will only be limited direct and indirect visual effects.	As above.	Not significant (Low Weald) (Year 1) Minor (Low Weald) (Year 15) Not significant (High Weald) (Years 1 and 15)	Not significant (Low Weald) (Year 1) Beneficial (Low Weald) (Year 15) Not significant (High Weald) (Years 1 and 15)
Effect on the West Sussex County Landscape Character Areas of the Northern Vales and Lower Weald Hills	Moderate	Adverse	These Character Areas cover the northern parts of West Sussex. The proposed development will change the rural landscape character, including the open field pattern. However, the application site occupies only a small part of these Character Areas, and the scheme includes the creation of substantial new areas of natural green space and open space, together with new tree, shrub and hedgerow planting.	As above.	Minor (N Vales) (Year 1) Moderate (N Vales) (Year 15) Minor (L Weald) (Year 1) Moderate (L Weald) (Year 15)	Adverse (N Vales) (Year 1) Beneficial (N Vales) (Year 15) Adverse (L Weald) (Year 1) Beneficial (L Weald) (Year 15)
Separation of the settlements of Horsham and Crawley	Negligible	Not significant	The proposed development will have a limited direct effect on the extensive area of land between Horsham and Crawley, which includes substantial areas of open countryside. There will not be perception of either visual or physical co-alescence. In addition, the development includes the	As above.	Negligible (Year 1) Minor (Year 15)	Not significant (Year 1) Beneficial (Year 15)

Environmental Topic	Significance of Potential Effect		Proposed Inherent Mitigation	Proposed Additional Mitigation	Significance of Residual Effect	
	Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant			Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant
			introduction of landscape buffer along the eastern boundary of the application site.			
Effect on the High Weald Area of Outstanding Natural Beauty (AONB)	Negligible	Not significant	The High Weald AONB covers an extensive area to the east and south east of the application site. There are therefore no direct landscape effects on the AONB, but there may be limited indirect visual effects on that part of the AONB closest to the application site.	As above.	Negligible (Years 1 and 15)	Not significant (Years 1 and 15)
Effects on views (75 receptor view points – see Section 11 Tables 11.6 – 11.8)	Moderate	Adverse	Of the 75 receptor view points, about half of the visual effects are predicted to be moderate adverse during construction and Year 1. However, the longer term residual effects (15 years) are predicted to be significantly reduced, resulting in beneficial effects in the majority of viewpoints. This is primarily due to the establishment and maturing of landscape planting which will increase tree cover and habitat diversity within and throughout the development. The planning will also screen some parts of the development.	As above.	Moderate (Year 1) Minor (Year 15)	Adverse (Year 1) Adverse/Beneficial (Year 15) Refer to assessments of 75 receptor view points)
Archaeology and Heritage (Chapter 13) - Construction Effects						
Disturbance to buried archaeological deposits	Moderate/Major	Adverse	Implementation of archaeological fieldwork to be agreed.	Archaeological watching brief required during groundwork including geotechnical investigations. Matters to be subject of this brief to include excavation of foundation and service trenches; construction of access roads; terracing/ground reduction.	Minor	Adverse
Disturbance to ancient woodland (historic landscape features)	Negligible	Not significant	No archaeological features were identified in these areas during the walkover survey. Implementation of archaeological fieldwork to be agreed.	Archaeological watching brief will include proximity to ancient woodland.	Negligible	Not significant
Disturbance to historic hedgerows (historic landscape feature)	Minor/Moderate	Adverse	Sensitive masterplanning will preserve historic hedgerows where possible, to ‘anchor’ the proposed development within the historic landscape. Implementation of archaeological fieldwork to be agreed.	Archaeological watching brief will include historic hedgerows.	Minor/Moderate	Adverse
Disturbance to the fabric of listed buildings	Moderate	Adverse	The Grade 2 listed buildings within the site will be retained.	Sensitive design and construction techniques to be secured within CEMP.	Negligible	Not significant
Disturbance to settings	Negligible	Not significant	Sensitive design in the masterplanning,	Not required.	Negligible	Not significant

Environmental Topic	Significance of Potential Effect		Proposed Inherent Mitigation	Proposed Additional Mitigation	Significance of Residual Effect	
Potential Effect Before Mitigation	Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant			Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant
of Scheduled Monuments			including landscape buffers. They Comprise: – Motte and bailey castle at Chennells Broom Farm – Moated site west of Graylands Copse – ‘Caste’ moated site east of Hawkesbourne Farm.			
Disturbance to setting of listed buildings	Moderate	Adverse	Sensitive design in the masterplanning, to mitigate the partial loss of their rural context. To including taking opportunities to enlarge existing green areas or redesign to insert new green areas around these buildings, thus preserving the sense of being within an open landscape. They comprise: – Brook House and Barn – Holbrook Park – Holbrook Park House – Hollywick Farmhouse – The Moated House – Hawkesbourne Farmhouse – Kings Farmhouse	Sensitive detailed design and materials.	Moderate/ Minor	Adverse
Archaeology and Heritage (Chapter 13) - Operational Effects						
No likely significant effects.	N/A	N/A	N/A	N/A	N/A	N/A
Transport (Chapter 14) - Construction Effects						
Driver delay due to roadworks	Moderate	Adverse	Effects localised and temporary around the highways improvements. These will vary during the contamination period, both in scale and location. They would generally constitute up to a temporary minor adverse effect. The main effect would be on the A264 during construction of the new site accesses, and would constitute a temporary moderate adverse effect. Maximise opportunities to carry out the construction works off-line, to minimise the period of disruption.	Consideration of minimising driver delay in the programme of works for the highways improvements, especially south of the site.	Moderate	Adverse
Pedestrian and cyclist delay, due to roadworks	Moderate	Adverse	Effect localised and temporary around the highways improvements. The impacts will vary during the construction process.	Consideration of minimising pedestrian and cycle delay in the programme of works for the highways improvements.	Minor	Adverse

Environmental Topic	Significance of Potential Effect		Proposed Inherent Mitigation	Proposed Additional Mitigation	Significance of Residual Effect	
	Potential Effect Before Mitigation	Substantial, Major, Moderate, Minor, Negligible			Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant
			Whilst the proposed development seeks to maintain and enhance the pedestrian and cycle routes, an element of temporary disruption is likely as a result of temporary diversions and construction works. Off-site highway mitigation measures will seek to minimise delays.			
Accidents and safety	Minor	Adverse	The construction phase will generate limited traffic volumes, and HGV traffic will be routed via the A264 to avoid use of more sensitive roads.	CEMP to provide details of routing of construction traffic, including timing of heavy and abnormal load deliveries to avoid peak hours. Monitoring throughout the development of the site.	Negligible	Not significant
Fear and intimidation	Negligible	Not significant	The construction phase is expected to generate low levels of traffic, which, given the high baseline flows along the A264, will have a negligible effect on fear and intimidation.	Not required.	Negligible	Not significant
Severance	Negligible	Not significant	Construction traffic will be routed via the A264 to avoid the use of more sensitive roads. The maximum impact would be at peak hours (employees travelling to/from work). Given the high baseline flows along the A264, it is considered that this would have a negligible effect.	Not required.	Negligible	Not significant
Transport (Chapter 14) - Operational Effects						
Driver delay	Moderate	Adverse	A small number of links are predicted to be subject to increases in delay in the peak hours, but there are a large number of links where driver delay in the peak hours is expected to significantly decrease. It is therefore considered that overall the development will have a negligible effect on driver delay.	Not required.	Negligible	Not significant
Pedestrian and cyclist delay and amenity	Moderate	Adverse	There are a number of public rights of way which run through the site. These routes will be improved, including possible resurfacing, better delineation and landscaping. Safer routes will be provided to cross the A264, which will improve both pedestrian and cyclist amenity and delay. These include a foot/cycle bridge and improvements to the underpass	Not required.	Major	Beneficial

Environmental Topic	Significance of Potential Effect		Proposed Inherent Mitigation	Proposed Additional Mitigation	Significance of Residual Effect	
Potential Effect Before Mitigation	Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant			Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant
			adjacent to the railway. There will also be increased at-grade crossings of the A264.			
Severance of the A264 south of the site.	Major	Beneficial	The provision of improved pedestrian and cycle crossings across the A264.	Not required.	Major	Beneficial
Severance of Rusper Road	Minor	Adverse	Traffic measures along Rusper Road	Not required.	Minor	Adverse
Severance of Langhurstwood Road	Major	Beneficial	The southern part of Langhurstwood Road will be closed to through traffic and realigned.	Not required.	Major	Beneficial
Fear and Intimidation	Negligible	Not significant	Predicted increases in average hourly traffic flows are only predicted to have a negligible adverse impact in terms of fear and intimidation.	Not required.	Negligible	Not significant
Accidents and safety	Negligible	Not significant	The recorded five year road safety data identified two specific locations where there may be risks of accidents : Great Daux Roundabout and the M23 Junction 11. Based on the change in traffic flows in these locations, the impact is considered to be negligible.	Not required.	Negligible	Not significant
Air Quality (Chapter 15) - Construction Effects						
Demolition and construction dust effects	Minor	Adverse	Construction dust infrequently affecting receptor locations within the development site, as well as in the vicinity of the site, will be short term and not significant. Main cause is from demolition, and vehicles using unpaved haul roads, and off site from the suspension of dust from mud deposited on local roads by construction traffic. Dust control measures to be vigorously applied close to existing dwellings.	Dust control measures to be in accordance with a Construction Environment Management Plan (CEMP), which should set out detailed measures to manage construction works to minimise dust and air quality effects. Also to plan site layout so that machinery and dust-causing activities are located as far away from receptors as possible.	Negligible	Not significant
Air Quality (Chapter 15) - Operational Effects						
Effects on human health receptors	Negligible	Not significant	The air quality effects of road traffic by the proposed development are considered not to be significant for human health receptors. In particular, air quality for future residents is acceptable.	Not required.	Negligible	Not significant
Effects on woodland habitat within the Buchan Ponds SSSI	Minor	Adverse	Changes in oxides in nitrogen concentrations and nitrogen deposition are potentially significant, particularly in close proximity to the A264 and A2220.	None available.	Minor	Adverse

Environmental Topic	Significance of Potential Effect		Proposed Inherent Mitigation	Proposed Additional Mitigation	Significance of Residual Effect	
Potential Effect Before Mitigation	Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant			Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant
Noise and Vibration (Chapter 16) - Construction Effects						
Noise and vibration levels as a result of construction works	Major	Adverse	Minimise noise and vibration. The main construction phases are likely to include site levelling/clearance; ground excavation; concreting; building construction and new internal road construction.	Implement methods of noise and vibration reduction in accordance with the Construction Environment Management Plan (CEMP). This will include locating any noisy plant and equipment away from existing dwellings. Also, screening plant to reduce noise, and to agree appropriate operational hours. Regular noise monitoring to be carried out at sensitive receptors.	Moderate	Adverse
Noise and Vibration (Chapter 16) - Operational Effects						
Outdoor living space – effects of road traffic noise	Moderate	Adverse	Sensitive masterplanning. This includes setting buildings back from the A264; the incorporation of earth bunds/ acoustic barriers near to the A264. Also, shield outdoor amenity areas gardens (dwellings), and consider noise effects in detailed layouts.	Not required.	Negligible	Not significant
Proposed uses (eg. Effects on residential; schools; business park)	Minor	Adverse	Mitigation measures proposed for specific noise sensitive receptors will result in noise and vibration levels being negligible (earth bunds; acoustic barriers; buffer zones; sensitive masterplanning).	To meet the desirable internal and external noise levels at dwellings, specific glazing performance requirements will be achieved.	Negligible	Not significant
Existing receptors (e.g. existing residential properties)	Negligible	Not significant	For all operational potential effects at existing noise sensitive receptors the change in noise levels on the roads has been assessed. The results show that increased noise levels due to an increase in road traffic is negligible for all noise receptors so no mitigation measures are considered necessary. Existing dwellings along Langhurstwood Road would experience a negligible decrease in noise level due to the proposed new alignment of the road.	Not Required.	Negligible	Not significant
Surface Water and Hydrology (Chapter 17) - Construction Effects						
Effect to existing properties due to loss of floodplain storage	Minor	Adverse	Potential adverse effect to existing properties and the A264 downstream of the site due to potential loss of floodplain storage, due to temporary works on the floodplain.	These potential impacts can be mitigated by measures set out within the Construction Environment Management Plan CEMP. These would include avoiding works in the floodplain wherever	Negligible	Not significant

Environmental Topic	Significance of Potential Effect		Proposed Inherent Mitigation	Proposed Additional Mitigation	Significance of Residual Effect	
	Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant			Substantial, Major, Moderate, Minor, Negligible	Adverse, Beneficial, Not significant
				possible, and safe storage of plant or contaminants.		
Impact on the water quality of the receiving water bodies	Moderate	Adverse	Potential impact on the water quality of the receiving water bodies from increased sediments or pollutants during construction of the SUDS.	These potential impacts can be mitigated by measures set out within the Construction Environment Management Plan CEMP. These would include avoiding works in the floodplain wherever possible, and safe storage of plant or contaminants.	Negligible	Not significant
Effect to existing properties of changes to run-off rates	Moderate	Adverse	Potential adverse effect to existing properties and the development from changes to run-off rates during construction of SUDS.	These potential impacts can be mitigated by measures set out within the Construction Environment Management Plan CEMP. These would include avoiding works in the floodplain wherever possible, and safe storage of plant or contaminants.	Negligible	Not significant
Surface Water and Hydrology (Chapter 17) - Operation Effects						
Flood risk receptors in flood plain	Substantial	Adverse	Masterplanning avoids any development in the flood plain. Development to be in Flood Zone 1, the area as lowest probability of flooding.	Not required.	Negligible	Not significant
Surface water run-off	Moderate	Adverse	Drainage scheme and attenuation systems limit development run-off rates and volumes to existing greenfield levels or lower.	Implementation of planned drainage and attenuation schemes.	Negligible	Not significant
Water quality of the receiving water bodies	Moderate	Adverse	All rainwater falling on the site will pass through at least two treatment stages. Where the proposed land use could result in reduced water quality, such as roads or car parking areas, more treatment stages will be incorporated, such as oil separators.	Not required.	Negligible	Not significant

Table 19.2 Assessment of Likely Significant Effects from construction activities on Key Ecological Receptors in the Absence of Further Mitigation

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified potential impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Detailed mitigation proposed
	I	N	R	M/C/D	L	S						
Buchan Hill Pools SSSI		*					1) Potential temporary impact to habitats and key taxa (Odonata) underpinning the integrity of the SSSI from emissions and dust from construction traffic.	1) Moderate	1) Effect unlikely to be more than very minor in magnitude due to existing traffic, localised nature of emissions from road into SSSI, and distance from application site to the SSSI in respect of dust.	1) None proposed over those provided in Chapter 15.	1) Significance restricted to immediate confines of boundary with designated area in worst case.	1) None proposed
'Brookhurst Wood & Gill & Morris's Wood' Site of Nature Conservation Importance (SNCI)				*			1) Permanent direct loss of small part of SNCI due to road construction. 2) Potential temporary impact on SNCI from (e.g.) noise and dust due to construction activities	1) High 2) Moderate	1) Minor magnitude loss of 0.51ha (1.82%) of overall designation. 2) Effect unlikely to be more than minor magnitude due to localised nature of road construction activities.	1) The proposed road will largely follow the route of an existing metalled farm track through the SNCI, although some removal of habitat either side of this track will be required. 2) None proposed	1) Significance limited to local level due to careful masterplanning which routes road along existing metalled farm track which is of limited botanic interest in context of its interest features. 2) Effect not likely to reach significance thresholds at anything above the immediate local level.	1) Any laydown areas for the road construction would be located outside the SNCI. 2) The construction of the road will adhere to a Construction and Environmental Management Plan (CEMP) to ensure that noise and dust are kept to a minimum in any event.
Warnham Local Nature Reserve (LNR)			*	*			1) Potential impact vector between proposed application site and this receptor (e.g. for contamination) via the watercourses, a tributary of Boldings Brook and Chennells Brook, both of which flow through the LNR.	1) Moderate	1) Only minor magnitude effects deemed possible due to distance of receptor and subsequent dilution effect as it passes downstream before reaching LNR. Magnitude also limited by overall size of LNR compared to area that could be affected in worst case.	1) None assessed to be required	1) Significance restricted to immediate confines of designated area in worst case.	1) Construction activities will adhere to a Construction and Environmental Management Plan (CEMP) to ensure that risk of contaminants reaching watercourse is negligible.
Bats			*	*			1) Potential impacts on bats as a result of landtake causing habitat fragmentation and/or changes in foraging areas.	1) Moderate	1) Total landtake is c.210 ha of which the majority is poor quality arable habitats.	1) Retention of the key ecological features within masterplan (e.g. hedgerow network and ancient woodland) secures the majority of the existing highest quality foraging habitat and key commuting routes.	1) Not significant with scope for (up to) Local level enhancement for bats	1) None required

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified potential impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Detailed mitigation proposed
	I	N	R	M/C/D	L	S						
							<p>2) Potential impacts on foraging and commuting bats from severance of woodlands from road construction.</p> <p>3) Loss of identified roost sites due to building removal or refurbishment</p> <p>4) Loss of potential roost sites within trees to be felled or subject to surgery for construction of road network and built development.</p>	<p>2) Moderate</p> <p>3) High at the individual roost level</p> <p>4) High at the individual roost level in the absence of careful routing of roads. However, surveys have indicated no roosts within trees anticipated to be affected.</p>	<p>2) Not more than minor magnitude due to only four roads breaching through narrow stretches of woodland proposed.</p> <p>3) Minor magnitude due to only one building to be removed that supports roosting bats (long-eared bat, and possibly low numbers of common pipistrelle).</p> <p>4) None/negligible. No roosts identified during targeted surveys.</p>	<p>The extensive GI provision increases foraging and commuting opportunities and aids in dispersal, especially in light of potential climate change effects.</p> <p>2) The routing of the four roads to breach woodlands will utilise an existing track through woodland with only minor widening proposed, through a relatively young plantation on an ancient woodland site, and through two woodland belts. The siting of these roads through these areas is not likely to significantly affect commuting bats due to the restricted landtake.</p> <p>3) The masterplan avoids affecting all but one building which supports roosting bats. The erection of bat boxes on retained trees and selected buildings will provide compensatory roosting opportunities.</p> <p>4) Proposed roads into and around application site avoid, where possible, trees identified as having moderate or higher bat roosting potential.</p>	<p>2) No significant effect</p> <p>3) Significance limited to local level due to careful masterplanning avoiding majority of bat roosts.</p> <p>4) No significant effects anticipated due to careful masterplanning which avoids affecting bat tree roosts.</p>	<p>2) One of the aims of the management plan for the woodlands will be to ensure that the canopy of the trees on either side of the roads can be linked together (to provide a homogenous canopy), subject to highways requirements.</p> <p>3) Yes - required due to legal protection in any event and anticipated to secure no detriment to favourable conservation status.</p> <p>4) None proposed- no roosts encountered.</p>

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified potential impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Detailed mitigation proposed
	I	N	R	M/C/D	L	S						
Ancient Woodland				*			<p>1) Permanent direct loss of habitat due to road construction (also see above SNCI point).</p> <p>2) Potential for indirect, temporary impacts through construction activities such as noise and dust.</p>	<p>1) High</p> <p>2) Moderate</p>	<p>1) Minor magnitude loss of 135m² (0.22%) of ancient woodland, and 462m² (7.12%) of Plantation on Ancient Woodland Site (PAWS). Minor magnitude for remainder of other ancient woodland parcels.</p> <p>2) Effect not assessed as likely to be more than minor magnitude in worst case even in absence of mitigation.</p>	<p>1) The proposed road will largely follow the route of an existing metalled farm track through the ancient woodland, although some removal of habitat either side of this track will likely be required. The routing of an access road through Bush Copse will avoid the ancient woodland areas (the non-PAWS area). The habitat surveys of the PAWS indicates that it generally lacks ancient woodland indicator species.</p> <p>2) Design incorporates retention/creation of 15m habitat buffer between all areas of ancient woodland and the proposed built development</p>	<p>1) Significance limited to local level due to careful masterplanning which routes road along existing metalled farm track which is of least value within the ancient woodland as a whole. The routing of an internal access road through the PAWS avoids effects on the ancient semi-natural woodland (ASNW) component.</p> <p>2) Inclusion of buffer reduces effect to sub-significant level.</p>	<p>1) No specific mitigation for retained ancient woodland. However, wider ecological gains from enhancement of other retained ancient woodlands located within the application site considered sufficient to mitigate for an impact of this nature in any event.</p> <p>2) None assessed to be required; however, the construction of the roads will adhere to a Construction and Environmental Management Plan (CEMP) to ensure that noise and dust are kept to a minimum in any event. The buffers will be subject to ecological management plans to ensure the maximum biodiversity gain can be achieved.</p>
Hazel Dormouse				*			<p>1) Potential impacts to the European Protected hazel dormouse from habitat loss and fragmentation.</p> <p>2) Noise, vibrations from construction activities.</p>	<p>1) High</p> <p>2) Moderate</p>	<p>1) Potentially up to high magnitude effect if all suitable dormouse habitat removed, in absolute worst case scenario.</p> <p>2) Not more than minor magnitude in absolute worst case due to absence of built development in area where species was found.</p>	<p>1) All areas in which species was found to be retained within area that will form part of the proposed green infrastructure. The green infrastructure will also continue to provide routes for dormouse to reach woodland to the north. In addition, the provision of Green Infrastructure allows for dispersal of this species more widely within overall application site.</p> <p>2) All areas in which species was found to be retained within green infrastructure.</p>	<p>1) No significant effect</p> <p>2) No significant effect</p>	<p>1) No targeted mitigation assessed to be required, however, provision of aerial rope bridges where the gap between tree canopies will be too wide for dormouse to cross and/or the planting of trees either side of roads to create/reinstate habitat links and aid resilience to climate changes effects.</p> <p>2) None assessed to be required.</p>

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified potential impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Detailed mitigation proposed
	I	N	R	M/C/D	L	S						
Great crested newt				*			<p>1) Potential impacts from loss of waterbodies, habitat fragmentation and changes in terrestrial habitat.</p> <p>2) Accidental killing/ or injuring of great crested newts due to construction activities e.g. vehicles</p> <p>3) Risk of localised accidental contamination of breeding sites due to construction activities e.g. spillage of vehicle oils and fuels</p>	<p>1) High</p> <p>2) Moderate</p> <p>3) Moderate</p>	<p>1) Potentially up to high magnitude if all breeding ponds lost and large areas of key foraging habitat removed</p> <p>2) Up to a very high magnitude effect if numbers killed mean the population is no longer self-sustaining.</p> <p>3) Effect likely to be limited to minor magnitude as phased nature of construction limits number that could be affected at any one time</p>	<p>1) All existing breeding sites and some areas of terrestrial habitat retained within masterplan. In addition, the extensive GI provides options for creation of additional terrestrial habitat and commuting/dispersal corridors.</p> <p>2) None required</p> <p>3) None proposed</p>	<p>1) Not significant above site level due to extent of design mitigation</p> <p>2) Significant effect at up to Local level in worst case, but no significant effect on maintenance of favourable conservation status.</p> <p>3) Phased nature of construction means effect unlikely to reach above Local level.</p>	<p>1) Provision of wildlife underpasses will assist in retaining existing commuting routes through application site. Detailed studies can be undertaken at detailed design stage.</p> <p>2) Yes - required due to legal protection in any event.</p> <p>3) Yes - details of measures to reduce risk of spillages occurring and measures to follow in the event of a spillage will be included in a CEMP.</p>
Waterbodies				*			<p>1) Direct loss due to landtake for construction.</p> <p>2) Impacts to waterbodies due to contamination e.g. siltation and pollution.</p>	<p>1) High</p> <p>2) Moderate</p>	<p>1) Potentially high magnitude effect if large number of waterbodies removed.</p> <p>2) Up to moderate magnitude effect due to phased construction removing scope for all waterbodies to be affected at any one time.</p>	<p>1) All waterbodies retained as part of the masterplan.</p> <p>2) None proposed</p>	<p>1) Not significant.</p> <p>2) Up to site level of effect sufficient to remove status of a waterbody as functional part of ecosystem.</p>	<p>1) None required.</p> <p>2) Implementation of a CEMP to reduce risk of contamination reaching this receptor.</p>
Reptiles					*		<p>1) Permanent loss of habitat found to support reptiles due to landtake for construction.</p> <p>2) Potential impacts on reptiles from habitat fragmentation.</p> <p>3) Accidental killing and/or injuring due to construction operations.</p>	<p>1) High</p> <p>2) Low</p> <p>3) High</p>	<p>1) Potentially up to high magnitude loss, with c.5.4ha of existing reptile habitat, representing 74% of overall resource identified.</p> <p>2) Potentially moderate magnitude effect if isolation sufficient to compromise the long term integrity of a meta-population within application site.</p> <p>3) Up to a very high magnitude effect if numbers killed mean the population is no longer self-sustaining.</p>	<p>1 + 2) The extensive GI areas, buffers around the woodlands and the ecological network will provide habitat suitable for reptiles at all times of year. In addition, the provision of GI will aid in dispersal of these species to ensure the application site is robust to the predicted effects of climate change.</p> <p>3) None proposed</p>	<p>1 + 2) No significant effect anticipated due to adoption of industry standard technique used to address habitat loss (such as a translocation strategy) and subsequent high confidence in deliverability and success of design mitigation</p> <p>3) Not significant above Local level as total loss of population from the application site unlikely even in the absence of detailed</p>	<p>1 + 2) None required, however areas of GI and ecological network to be managed for benefit of reptiles</p> <p>3) Yes- Required due to legal protection in any event.</p>

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified potential impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Detailed mitigation proposed
	I	N	R	M/C/D	L	S						
											mitigation.	
Hedgerow/Trees					*		<p>1) Small scale, isolated direct loss due to construction of access roads and other infrastructure.</p> <p>2) Indirect impact (e.g. incidental damage) due to construction activities</p>	<p>1) High</p> <p>2) Low</p>	<p>1) Not more than minor magnitude effects due to majority of existing hedgerow and mature tree resource being retained.</p> <p>2) Not more than minor magnitude due to very small scale and isolated nature of effects if they occur.</p>	<p>1) Route through hedgerows for the road network will utilise existing weakened areas/breaches where present.</p> <p>2) None proposed, however habitat buffers either side of retained hedgerow should minimise scope for effects in any event.</p>	<p>1) No significant effect above the site level</p> <p>2) Not significant</p>	<p>1) None required - however as part of the detailed design, infrastructure will exploit existing weaknesses e.g. existing access gaps, in preference for removal of new sections and/or will be routed through less ecological valuable hedgerows e.g. species-poor, in preference for removal of species-rich ancient hedgerows.</p> <p>2) None proposed, however, adherence to a CEMP will further reduce likelihood of effects occurring</p>
Gills (including Chennells Brook) and other watercourses					*		<p>1) Localised permanent habitat losses arising from construction of watercourse crossings.</p> <p>2) Potential for indirect impacts from siltation and other forms of pollution</p>	<p>1) High</p> <p>2) Moderate</p>	<p>1) Minor magnitude</p> <p>2) Moderate magnitude effects downstream of the watercourses.</p>	<p>1) None proposed</p> <p>2) A CEMP will be followed when working adjacent to watercourses.</p>	<p>1) Significant effects on short sections of watercourses, measurable at the site level.</p> <p>2) Effects potentially significant at immediate site level in the absence of mitigation.</p>	<p>1) Proposed roads will have to cross some watercourses, and these will aim to be located at areas of low ecological interest.</p> <p>2) None proposed.</p>
Woodland (non-ancient)					*		<p>1) Permanent loss of woodland as a result of road construction.</p> <p>2) Potential for indirect impacts due to (e.g.) dust during construction.</p>	<p>1) High</p> <p>2) Low</p>	<p>1) Minor moderate loss of five small sections of tree belts equating to c.0.97ha due to construction of roads.</p> <p>2) Unlikely to have more than minor magnitude even in worst case.</p>	<p>1) Infrastructure routed to avoid the principal woodland blocks, retaining these in their entirety.</p> <p>2) Design incorporates retention/creation of an appropriate habitat buffer between most sections of the woodland and the proposed development which reduces the</p>	<p>1) Retention of majority of woodland resource limits significance of effects to site level only.</p> <p>2) Unlikely to reach significant thresholds at anything above the site level.</p>	<p>1) None required, however significant area of woodland creation ample to compensate for small amount lost.</p> <p>2) None required, however Implementation of CEMP will further reduce scope for effects.</p>

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified potential impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Detailed mitigation proposed
	I	N	R	M/C/D	L	S						
										scope for effects from construction activity generally.		
Invertebrates				*			<p>1) Habitat loss resulting in fragmentation and reduction of suitable foraging and nesting habitat due to landtake for construction.</p> <p>2) Potential for vibrations, lighting and noise to affect behaviour of invertebrates.</p>	<p>1) High</p> <p>2) Low</p>	<p>1) Moderate magnitude due to loss of some small areas of moderate quality habitat and c. 120 ha primarily poor quality habitat. Minor effects on high quality habitats (woodland and hedgerows) due to retention of the majority of these features.</p> <p>2) Effect not assessed as likely to be more than minor magnitude in worst case even in absence of mitigation.</p>	<p>1) The illustrative masterplan retains the vast majority of the high quality habitats (e.g. woodland). In addition, provision of extensive GI and ecological network creates habitat for key species e.g. small heath, dingy skipper and brown hairstreak.</p> <p>2) Design incorporates retention/creation of habitat buffer adjacent to key habitat features.</p>	<p>1) Effects limited to immediate local level due to extent of habitat retained and similar habitat outside the site.</p> <p>2) Inclusion of buffer reduces effect to sub-significant level.</p>	<p>1) Yes - GI provision will be the subject of detailed management plans that will enhance suitability for invertebrates over long-term</p> <p>2) None assessed to be required; however, the construction of the roads will adhere to a Construction and Environmental Management Plan (CEMP) to ensure that noise and dust are kept to a minimum in any event. The buffers will be subject to ecological management plans to ensure the maximum biodiversity gain can be achieved.</p>
Birds (assemblage)						*	<p>1) Permanent displacement of bird species associated with open arable (e.g. yellowhammer) land due to landtake for construction</p> <p>2) Potential for localised permanent loss of breeding habitats associated with hedgerows and associated mature trees</p> <p>3) Potential temporary disturbance to bird species using</p>	<p>1) High</p> <p>2) High</p> <p>3) Low</p>	<p>1) Limited to moderate magnitude effect due to the application site being contiguous with adjoining areas offering similar habitat.</p> <p>2) Very minor magnitude due to extent of overall resource.</p> <p>3) Up to minor magnitude effect.</p>	<p>1) None possible for displacement effects. The GI provision, particularly the landscape buffers, is likely to provide habitat for birds (including some farmland birds).</p> <p>2) Route through hedgerows for the road network will utilise existing weakened areas/breaches</p> <p>3) None proposed</p>	<p>1) Effects significant at the immediate site level as many displaced species (e.g. yellowhammer, skylark) are not likely to return. Effect unlikely to be significant at Local level or above. Species associated with sub-urban environment (e.g. house sparrow) likely to increase.</p> <p>2) Not significant</p> <p>3) Unlikely to have a significant effect above the</p>	<p>1) None proposed</p> <p>2) Not required.</p> <p>3) None proposed</p>

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified potential impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Detailed mitigation proposed
	I	N	R	M/C/D	L	S						
							retained/adjoining habitats from construction activities.				site level.	
Badger						*	<p>1) Potential impacts on badgers due to loss of foraging habitat.</p> <p>2) Direct impacts on setts from construction activities.</p>	<p>1) Moderate</p> <p>2) High</p>	<p>1) Moderate magnitude loss of c. 120 ha of primarily poor quality foraging (arable) habitat.</p> <p>2) Up to a very high magnitude effect if removal/disturbance of setts mean the badger population is no longer self-sustaining.</p>	<p>1) Masterplan retains vast majority of highest quality habitat.</p> <p>2) All main setts to be retained within the masterplan, with these protected from construction activity by 30m + buffer/exclusion zone.</p>	<p>1) Not significant at anything above the site level.</p> <p>2) Not significant at anything above the site level.</p>	<p>1) Not proposed. However, the landscape plan would incorporate fruit/berry bushes to provide additional foraging resource.</p> <p>2) Yes- An update survey will be undertaken prior to works commencing to ensure the most up-to-date information is gathered in order inform if a licence from Natural England to disturb or close a sett is required.</p>

Table 19.3 – Assessment of Likely Significant Effects from operation activities on Key Ecological Receptors in the Absence of Further Mitigation

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Further mitigation proposed
	I	N	R	M/C/D	L	S						
International Statutory Sites (The Mens SAC, Ebernoe Common SAC, Ashdown Forest SAC & SPA, Mole Gap to Reigate Escarpment SAC, and Arun Valley SAC).	*						<p>1) Potential indirect impacts on habitats and key interests from increased recreational pressure on these sites.</p> <p>2) Potential indirect impacts from vehicle emissions arising from increased car journeys to and from these sites.</p>	<p>1) Moderate</p> <p>2) Low</p>	<p>1) Low magnitude due to distance to nearest site (a 40km round trip), and the likely low numbers of visitors traveling to these sites.</p> <p>2) As for 1 above</p>	<p>1) The application site's masterplan incorporates generous greenspace provision without any reliance on the statutory sites, including on-site formal and informal recreational facilities which are expected to absorb the majority of recreational pressure.</p> <p>2) As for 1 above.</p> <p>3) Buffers to commuting corridors</p>	<p>1) Any uplift in recreational pressure assessed to be de minimis and not significant.</p> <p>2) Significant up to District level in absolute worst case.</p> <p>3) Not significant. Low levels of barbastelle use adjudged</p>	<p>1) None proposed</p> <p>2) None proposed</p>

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Further mitigation proposed
	I	N	R	M/C/D	L	S						
							3) Potential impacts on barbastelle (citation and qualifying species for some of the sites) from severance of foraging/commuting routes.	3) Low – barbastelle use of the site likely to be unrelated to SAC population	3) Negligible	and key foraging habitats (e.g. woodland) will ensure these features are retained for <i>inter alia</i> barbastelle. Incorporation of landscape planting across the application site will create additional potential flight routes and potential foraging areas.	to be highly unlikely to be related to SAC population, and even if significant effects on this species were manifested at the site level, there is no likely significant impact vector for the SAC.	3) Yes- Management plans for each of the woodland parcels (with an overall plan to ensure a holistic approach across the application site) will ensure habitat suitable for barbastelle is retained/ managed suitably.
Buchan Hill Pools SSSI		*					1) Potential impacts on habitats and key species (Odonata) of the SSSI from increased vehicle emissions.	1) Moderate	1) Effect unlikely to be more than minor magnitude due to localised nature of emissions from road into SSSI.	1) None proposed over those provided in Chapter 15.	1) Significance restricted to immediate vicinity of SSSI boundary near to the road in worst case.	1) None proposed
'Brookhurst Wood & Gill & Morris's Wood' Site of Nature Conservation Importance (SNCI)			*				1) Potential indirect impacts arising from increased recreational pressure and associated disturbance effects. 2) Potential contamination from pollutants e.g. first flush hydrocarbons and inappropriate disposal of sump oils.	1) High 2) Low	1) Up to high magnitude on retained parts of SNCI possible over the long-term if pressure from disturbance, misuse and damage reaches very high levels. 2) Low magnitude effect due to a pollution event only likely to affect small part of SNCI.	1) The application site's masterplan incorporates generous greenspace provision without any reliance on the SNCI, including on-site formal and informal recreational facilities which are expected to absorb the majority of recreational pressure. 2) None proposed.	1) Significant at up to Local level 2) Not significant above the site level.	1) The landscape and planting scheme will incorporate prickly planting and fencing to limit uncontrolled recreational and pet access into the SNCI. 2) Yes - Chapter 16 outlines extent of control measures for pollution events at the detailed design stage

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Further mitigation proposed
	I	N	R	M/C/D	L	S						
Warnham Local Nature Reserve (LNR)			*	*			<p>1) Potential indirect impacts arising from increased disturbance effects from recreational pressure.</p> <p>2) Potential impact vector between proposed application site and this receptor for contamination e.g. vehicle oils, via the watercourses, a tributary of Boldings Brook and Chennells Brook, both of which flow through the LNR.</p>	<p>1) Low</p> <p>2) Low</p>	<p>1) Effect limited to minor magnitude due to nature of habitats (principally aquatic) which limits extent of areas that could be affected.</p> <p>2) Only minor magnitude effects deemed possible due to distance of receptor and subsequent dilution effect as it passes downstream before reaching LNR. Magnitude also limited by overall size of LNR compared to area that could be affected in worst case.</p>	<p>1) The application site's masterplan incorporates generous greenspace provision, including on-site formal and informal recreational facilities which will absorb a large part of the recreational pressure generated</p> <p>2) None proposed.</p>	<p>1) Extent of on-site provision for recreation reduces likely effect on off-site receptors to a sub-significant level.</p> <p>2) Not significant above the site level.</p>	<p>1) None proposed.</p> <p>2) Yes- The quality of surface water discharge to the watercourses will be upheld by SUDS measures as detailed in Chapter 16.</p>
Bats			*	*			<p>1) Impact from increased artificial light levels due to houses and external lighting (e.g. street lighting).</p>	<p>1) Moderate</p>	<p>1) Up to high magnitude for least tolerant species, but moderate magnitude for overall assemblage due to broad tolerances of some of the species affected.</p>	<p>1) Buffers to commuting corridors and key foraging habitats (e.g. woodland) reduces scope for high intensity illumination of these features.</p>	<p>1) Significant up to District level in absolute worst case</p>	<p>1) Yes- The lighting design for the development will employ measures to minimise light spill onto adjoining habitats.</p>
Ancient Woodland				*			<p>1) Potential indirect impacts arising from increased recreational pressure and associated disturbance effects.</p> <p>2) Potential contamination</p>	<p>1) High</p> <p>2) Low</p>	<p>1) Up to high magnitude on retained parts of ancient woodland possible over the long-term if pressure from disturbance, misuse and damage reaches very high levels.</p> <p>2) Low magnitude effect due to a pollution event only</p>	<p>1) The application site's masterplan incorporates generous greenspace provision without any reliance on the Ancient woodland, including on-site formal and informal recreational facilities which are expected to absorb a large part of recreational pressure.</p> <p>2) None proposed.</p>	<p>1) Significant at up to District level if large number of ancient woodlands degraded in worst case.</p> <p>2) Not significant above the site level.</p>	<p>1) Yes- Management plans for each of the woodland parcels (with an overall plan to ensure a holistic approach across the application site). Footpaths will be created through some parts of the ancient woodland in order to allow, but control access and restrict effects to defined areas. Prickly hedgerow planting will also be used to limit uncontrolled recreational access to areas of highest ecological value/sensitivity.</p>

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Further mitigation proposed
	I	N	R	M/C/D	L	S						
							from pollutants e.g. first flush hydrocarbons and inappropriate disposal of sump oils.		likely to affect a small part of ancient woodland.			2) Yes - Chapter 16 outlines extent of control measures for pollution events at the detailed design stage.
Hazel Dormouse				*			1) Potential impact from domestic pets (particularly cats). 2) Potential indirect impacts arising from increased disturbance effects from recreational pressure.	1) High 2) Low	1) Up to high magnitude if large numbers killed 2) Up to minor magnitude effect	1) Spatial separation of proposed housing and location of confirmed dormouse population reduces extent to which predation is likely to occur. 2) None proposed	1) Not significant at anything above the site level 2) Effect unlikely to reach significance thresholds	1) None proposed 2) None proposed
Great crested newt				*			1) Potential contamination of breeding ponds from pollutants e.g. first flush hydrocarbons and inappropriate disposal of sump oils.	1) Moderate	1) Effect limited to minor magnitude due to very low risk of multiple ponds being affected simultaneously	1) None proposed	1) Not significant above the site level	1) Yes- The quality of surface water discharge to the watercourses will be upheld by SUDS measures as detailed in Chapter 16.
Waterbodies					*		1) Potential contamination of waterbodies from pollutants e.g. first flush hydrocarbons and inappropriate disposal of sump oils.	1) Moderate	1) Effect limited to minor magnitude due to very low risk of multiple ponds being affected simultaneously.	1) None proposed.	1) Not significant above the site level	1) Yes-The quality of surface water discharge to the watercourses will be upheld by SUDS measures as detailed in Chapter 16.
Reptiles					*		1) Increased disturbance and/or killing of individual/ small numbers from increased human activity and domestic pets.	1) High	1) Up to minor magnitude	1) None proposed	1) Not significant above site level.	1) None proposed.
Hedgerow/Trees					*		1) Impacts from close proximity of domestic gardens to hedgerows and trees (e.g. littering, dumping, inappropriate management).	1) Low	1) Up to moderate magnitude if effect results in large part of hedgerow resource and/or large number of trees are degraded.	1) Inclusion of buffers to hedgerow means no garden is adjoin a retained hedgerow	1) Not significant above local level.	1) Implementation of a management plan for retained hedgerows will both identify and remedy incidences of misuse, and also enhance hedgerow habitat making these more resilient to such effect.

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Further mitigation proposed
	I	N	R	M/C/D	L	S						
Gills (including Chennells Brook) and other watercourses					*		1) Potential contamination of waterbodies from pollutants e.g. first flush hydrocarbons and inappropriate disposal of sump oils.	1) Moderate	1) Effect limited to minor magnitude due to very low risk of multiple ponds being affected simultaneously	1) None proposed.	1) Not significant above the site level	1) Yes-The quality of surface water discharge to the watercourses will be upheld by SUDS measures as detailed in Chapter 16.
Woodland (non-ancient)					*		<p>1) Potential indirect impacts arising from increased recreational pressure and associated disturbance effects.</p> <p>2) Impacts from close proximity of domestic gardens to woodlands (e.g. littering, dumping, inappropriate management).</p> <p>3) Potential contamination of waterbodies from pollutants e.g. first flush hydrocarbons and inappropriate disposal of sump oils.</p>	<p>1) Low</p> <p>2) Low</p> <p>3) Low</p>	<p>1) Up to moderate magnitude effect in worst case</p> <p>2) Minor magnitude effect in light of design of residential properties</p> <p>3) Low magnitude effect due to a pollution event only to affect a small part of ancient woodland.</p>	<p>1) The application site's masterplan incorporates generous greenspace provision without any reliance on the woodlands, including on-site formal and informal recreational facilities which are expected to absorb a large part of recreational pressure</p> <p>2) The design of the master plan will ensure that domestic gardens do not abut hedgerows and other boundary features.</p> <p>3) None proposed.</p>	<p>1) Significant at up to local level if large proportion of woodland resource degraded in worst case</p> <p>2) No significant effect above the local level.</p> <p>3) Not significant above the site level.</p>	<p>1) Yes - Management plans for each of the woodland parcels (with an overall plan to ensure a holistic approach across the application site) will enhance woodland habitat making these more resilient to such effects.</p> <p>2) Yes - Management plans for each of the woodland parcels (with an overall plan to ensure a holistic approach across the application site) will both identify and remedy incidences of misuse, and also enhance woodland habitat making these more resilient to such effects.</p> <p>3) Yes - Chapter 16 outlines extent of control measures for pollution events at the detailed design stage.</p>
Invertebrates				*			1) Impact from increased artificial light levels due to houses and external lighting (e.g. street lighting).	1) Moderate for some species	1) Up to minor magnitude effect	1) Buffers to key habitats (e.g. woodland and hedgerows) reduces scope for high intensity illumination of these features.	1) Significant up to local level in worst case in absence of suitably designed lighting scheme.	1) Yes- The lighting design for the development will employ measures to minimise light spill onto adjoining key habitats.
Birds						*	1) Potential indirect impacts arising from increased disturbance effects from recreational pressure.	1) Low	1) Up to minor magnitude effect	1) None proposed	1) Not significant	1) None proposed
Badger						*	1) Potential indirect impacts	1) Low	1) Up to minor magnitude	1) None proposed	1) Not significant	1) None proposed

Receptor	Value						Potential effects in absence of mitigation	Sensitivity of receptor to identified impacts	Potential magnitude of Impact	Design Mitigation/ compensation	Significance in absence of detailed mitigation	Further mitigation proposed
	I	N	R	M/C/D	L	S						
							<p>arising from increased disturbance effects from recreational pressure.</p> <p>2) Potential impacts on badgers from increased risk of traffic collisions.</p>	2) High	<p>effect</p> <p>2) Potentially moderate magnitude effect if large numbers killed</p>	2) None proposed	2) No significant effect above the site level	2) Possible traffic calming measures, located where green infrastructure crosses internal road network to reduce traffic speed at key locations and reduce risk of collisions occurring

Table 19.4 – Residual Impacts After Mitigation

Receptor	Value						Sensitivity of receptor	Residual impacts	Significance after mitigation
	I	N	R	M/C/D	L	S			
International Statutory Sites (The Mens SAC, Ebernoe Common SAC, Ashdown Forest SAC & SPA, Mole Gap to Reigate Escarpment SAC, and Arun Valley SAC).	*						Moderate	Any uplift in visitor numbers to these sites is <i>de minimis</i> in view of distance, alternative provision and generous on-site open space	Not significant
Buchan Hill Ponds SSSI		*					Moderate	Potential for localised deterioration in habitat and citation species through air pollution.	Not significant
‘Brookhurst Wood & Gill & Morris’s Wood’ Site of Nature Conservation Importance (SNCI)				*			High	Small amount of upstanding vegetation to be removed either side of current farm track through SNCI to provide additional width for road as well as pavement and service strip. Possible minor residual increases in recreational use and associated undesirable effects but at a scale able to be addressed without requiring significant change to the	Not significant

Receptor	Value						Sensitivity of receptor	Residual impacts	Significance after mitigation
	I	N	R	M/C/D	L	S			
								application site. Some positive effects on associated species possible through an agreed ecological management plan.	
Ancient woodland				*			High	Small amount of upstanding vegetation to be removed either side of current farm track through ancient woodland (near to Morris Farm) to provide additional width for road as well as pavement and service strip. Some young plantation trees to be removed from PAWS to allow routing of internal access road. Minor residual increases in recreational use and associated undesirable effects but at a scale able to be addressed without requiring significant change woodland. Some positive effects on associated species possible through an agreed ecological management plan.	Not significant
Warnham Local Nature Reserve (LNR)				*			Moderate	<p>1) Potential for localised temporary deterioration in water quality through increased incidence of pollution events.</p> <p>2) Minor increases in recreational use and associated undesirable effects.</p>	<p>1) Implementation of a watercourse management plan and provision of SUDS should ensure no effects attain significant thresholds at the level the receptor is valued.</p> <p>2) Not significant</p>

Receptor	Value						Sensitivity of receptor	Residual impacts	Significance after mitigation
	I	N	R	M/C/D	L	S			
Bats			*	*			Moderate	Changes to nature of habitats on the application site unlikely to be significant in the context of the majority of the species recorded as they are common and adaptable. Interconnectivity for commuting/foraging bats across the application site will be retained and/or may improve. Only low conservation status roosts potentially affected on current evidence.	Not significant
Hazel dormouse				*	*		Moderate	On-site population expected to be retained in green infrastructure and may even benefit from expansion of habitat opportunities and cross-site connectivity associated with green infrastructure.	Not significant
Great crested newt				*			Moderate	On-site population expected to be retained and may benefit from expansion of habitat opportunities associated with SuDS systems/blue infrastructure. This may counter-balance localised actual or <i>de facto</i> terrestrial habitat losses.	Negative effects not significant.
Waterbodies				*			Moderate	Potential for localised temporary deterioration in water quality through increased incidence of pollution events.	Not significant
Reptiles					*		Moderate	Potential loss of suitable reptile habitat. However, reptiles are likely to benefit from expansion of habitat opportunities and cross-site connectivity associated with green infrastructure.	Not significant
Hedgerow/Trees					*		Low	Minor impact on the application site's hedgerows due to the removal of short	Not

Receptor	Value						Sensitivity of receptor	Residual impacts	Significance after mitigation
	I	N	R	M/C/D	L	S			
								sections for road construction.	significant
Gills (including Chennells Brook and other watercourses)					*		Moderate	Minor localised habitat losses and potential for localised temporary deterioration in water quality through increased incidence of pollution events.	Negative effects not significant.
Woodland (non-ancient)					*		Moderate	Small amount of upstanding vegetation is likely to be removed to provide access routes through the application site. Minor residual increases in recreational use and associated undesirable effects but at a scale able to be addressed without requiring significant change to management regime. Some positive effects on associated species possible through an agreed ecological management plan.	Negative effects not significant.
Birds							Moderate	Permanent and unavoidable displacement from the application site of certain declining bird species associated with open farmland. Expansion of habitat opportunities for other species typical of woodland, gardens and urban fringe.	Significant impact at the site level for certain declining farmland birds inevitably displaced species (e.g. yellowhammer, skylark). Although other declining bird species likely to benefit (e.g. dunnock, house

Receptor	Value						Sensitivity of receptor	Residual impacts	Significance after mitigation
	I	N	R	M/C/D	L	S			
									sparrow, starling) No impacts predicted that are significant at the level the receptor is valued at.
Invertebrates				*			Moderate	Negative effects on some species associated with semi-improved grassland and with arable land likely to be significantly outweighed by positive effects arising from green infrastructure and the use of key species in landscape planting.	Negative effects not significant. Positive effects could be significant at up to Local level if target species benefit.
Badger						*	Low	On-site population expected to be retained and may even benefit from expansion of habitat opportunities and cross-site connectivity associated with green infrastructure.	Not significant

