STRIDE TREGLOWN

Environmental Statement

Inglewood, Brixham Road, Paignton

Abacus Projects/Deeley Freed

Stride Treglown job no.	15230
Prepared by	MH
Checked by	JP
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Revision	B

Revisions

Revision	Description
Rev A	Draft for Client Approval
Rev B	Final

Contents

1. Introduction

1.1. The Environmental Statement

1.1.1 This Environmental Statement (ES) has been prepared in support of and submitted as part of the suite of documents forming the outline planning application for residential development on land adjacent to Brixham Road, Paignton.

1.1.2 The development proposals for which permission is sought are as follows:

- Up to 400 residential dwellings;
- A public house with restaurant and associated car parking(use class A3/A4);
- A 2 form entry primary school (with nursery) and associated outside space;
- The means of access to the site;
- Principles relating to strategic mitigation in respect of ecological and landscape/visual impacts; and,
- The principle of enhancing countryside access from the existing urban area.

1.1.3 This ES has been collated by qualified Town Planners who are Chartered Members of the Royal Town Planning Institute (RTPI) working for Stride Treglown Ltd, a firm or architects and town planners. Stride Treglown were responsible for the management and coordination of the assessment work undertaken by a team of specialist consultants, as set out below:

Specialism	Consultant
Ecology	Nicholas Pearson Associates
Landscape and Visual Impact Assessment (LVIA)	Nicholas Pearson Associates
Transport	Key Transport Consultants Ltd
Soils and Agriculture	Clarke Bond
Lighting	Hydrock

1.2. Structure of the Statement

1.2.1 In undertaking assessment work and preparing this ES, both the applicant and the appointed consultant team have had regard and taken account of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (as amended), hereafter referred to as 'the EIA regulations'.

1.2.2 It is notable that the regulations have changed during the course of preparation of this ES. However, on the basis of the transitional arrangements, specifically that a scoping opinion was requested and issued prior to the introduction of the new regulations, the 2011 (as amended) regulations have primacy.

1.2.3 Schedule 4 of the EIA regulations set outs out the level of information to be included within an ES. In order to aid understanding and navigation, this is set out in the table below together with the location of the relevant details:

Schedule 4 Requirement	Location within Environmental Statement
A Non-technical summary	Stand-alone document
Introduction	Chapter 1
Description of the Development	Chapter 2
Outline of the main alternatives examined and reasons for the preferred option	Chapter 3
Scoping Methodology	Chapter 4
A description of the likely significant effects of the development on the environment	Chapters 5 to 9
A description of the measures envisaged to avoid, reduce and, if possible, remedy significant adverse effects	Integral to Chapters 5 to 9

1.2.4 In support of the details contained within this ES, a site location plan is provided at Appendix 1.

1.3. Competent Expert

1.3.1 The Regulations governing the EIA process were amended in 2017. In order to ensure that the overall coverage and quality of Environmental Statements submitted for consideration is maintained at an appropriate level, Regulation 18 introduced the requirement for developers to confirm that their appointed consultant team are suitably qualified and can be considered to be 'competent experts'. Regulation 18(5) states:

In order to ensure the completeness and quality of the environmental statement—

(a) the developer must ensure that the environmental statement is prepared by competent experts; and

(b) the environmental statement must be accompanied by a statement from the developer outlining the relevant expertise or qualifications of such experts.

1.3.2 Whilst reference is made earlier to the change in Regulations, in accordance with this Regulation of the 2017 regulations, a standalone statement has been prepared and is submitted as part of the planning application in order to demonstrate the compentence of the consultant team.

2. Project Context

2.1. Introduction

2.1.1 This Environmental Statement (ES) accompanies an application for planning permission for:

Outline application for residential led development of up to 400 dwellings (C3) together with the means of vehicular and pedestrian/cycle access together with the principle of a public house (A3/A4 use), primary school with nursery (D1), internal access roads and the provision of public open space (formal and informal) and strategic mitigation. Details of access to be determined with all other matters reserved.

2.1.2 The application is made in outline, full details of which are set out in section 2.3 below. The applicant, Abacus Projects/Deeley Freed are owners of the red/blue land and are able to secure vacant possession via changes to existing farm tenancies.

2.2. Site Description

2.2.1 The site is located on the western edge of Paignton, within the administrative area of Torbay Council (a unitary authority). The majority of the western boundary of the site is the administrative border with South Hams District Council.

2.2.2 The site is formed of six fields in active agricultural use on a rotational arable and dairy cattle grazing basis. Further agricultural land is located to the south and west. A group of mature pines are situated on the southwestern edge of the site.

2.2.3 The A3022 / Brixham Road runs along the eastern edge of the site. Immediately north of the site is an area of newly planted woodland, provided as part of mitigation landscape works associated with a mixed use residential-led development at White Rock located a short distance further north.

2.2.4 The residential area of Galmpton is located immediately to the east of the A3022. White Rock Primary School is located north east of the site beyond Brixham Road.

2.2.5 A site location plan is included in Appendix 1 and further detailed analysis of the site is set out in the Planning, Design and Access Statement which accompanies the planning application.

2.3. Proposed Development

2.3.1 The proposed development which is the subject of the outline planning application and considered in this Environmental Statement is a residential-led mixed use masterplan. As the application is made in outline the exact form and quantum of development is subject to future reserved matters applications to be submitted if outline planning permission is granted.

2.3.2 Despite this, for the purposes of undertaking technical and environmental impact assessment, the proposals submitted are for the following quantum of development:

- Up to 400 residential dwellings with an indicative mix of 9 no. 1 bed and 18 no. 2 bed apartments and 80 no. 2, 196 no. 3 bed and 80 no. 4 bed dwellings, 30% of which will be provided as affordable housing;
- A public house with associated car parking;
- A two form entry primary school together with associated 4G playing pitch and ancillary spaces;
- The means of access from the A3022/Brixham Road via a new 4 arm roundabout and internal access roads;
- Strategic landscaping and onsite ecology mitigation provision; and,

- Offsite land suitable for the mitigation of potential impacts on Greater Horseshoe Bats and Cirl Bunting.

2.4. Planning Context - Planning History

Planning Application History

2.4.1 Whilst the site is greenfield and in agricultural use, it has been the subject of planning applications and consideration through the Local Plan policy formulation process.

2.4.2 At the 1989 Torbay Local Plan Inquiry much of the Abacus Projects/Deeley Freed land interest, including the application site, was considered as having the potential to be included as a housing and employment allocation, but ultimately rejected at that time.

2.4.3 Planning applications covering part of the study site were submitted in 1995 (ref. 95/0998/OA) and 1996 (ref. 96/1288/OA) for housing and associated open space, including the realignment of Brixham Road. The earlier of the two applications was refused planning permission in October 1995 and the latter application was withdrawn in June 1998. In broad terms, the first application was refused due to a lack of housing need at that time and the potential for adverse landscape and highways impacts.

2.4.4 In October 1995 an outline planning application (ref. 1995/1304/OA) was submitted for land to the north of the site together with a large portion (but not all) of the site which is the subject of this current application.

2.4.5 The application proposed the erection of units for employment purposes within classes B1, B2 and B8 (although B8 uses were subsequently withdrawn). In June 1996 Torbay Borough Council resolved to grant outline planning permission subject to agreeing a S106 Agreement and reductions in the development area. In July 1996 the Secretary of State called in the application and in July 1997 determined to refuse permission.

2.4.6 In refusing the application, the Inspector, on behalf of the Secretary of State, identified that the suitability of the site for the proposed development, particularly in terms of its visual impact on the surrounding area, was a prime consideration. In doing so, he accepted that national, strategic and local planning policies do not rule out all development near Areas of Outstanding Natural Beauty (AONB) and within Areas of Great Landscape Value (AGLV) and considered the key question to be whether the development would harm the special landscape qualities of these areas and the attractiveness of the area for tourists. In this instance, the decision was that the proposed development would have an unacceptable impact.

2.4.7 In the wider area, a number of planning applications have been submitted to develop land at White Rock to the north, including for a business park (in 2005). This application was made in response to an allocation in the Adopted Torbay Local Plan (2004) for 11.8ha of land for employment use. This application was approved although not implemented.

2.4.8 In 2010 work commenced to develop a masterplan for the redevelopment of White Rock, incorporating a mix of uses with high quality employment use in the Western Bowl area, housing development in the order of 350 units, associated public open space and a new Local Centre in the east, adjacent to Brixham Road.

2.4.9 The masterplan was submitted as part of an application for outline planning permission and a Committee resolution to grant permission was made in February 2012. Following negotiation of a section 106 agreement, consent was granted in April 2013. Since then a number of reserved matters applications have been approved and the first phases of residential development completed/commenced with occupation ongoing.

2.4.10 In support of Torbay Council's work to prepare a new Local Plan, Stride Treglown (on behalf of Abacus /Deeley Freed) actively engaged in the preparation and examination process. This principally took the form of a Land Promotion document, submitted to the Council to demonstrate the potential capacity of the site, within the known opportunities and constraints information available at the time.

2.4.11 The Council submitted their Draft Local Plan in February 2014 and the examination hearing sessions were held in November 2014. During the course of the hearings and the subsequent publication of Interim Findings, the Inspector identified that there was a potential need for the plan to include a higher housing target within the strategic policies. In order to address this, the Council published Main Modifications (MM) which had the effect of increasing the level of housing required to be delivered via the plan and, specifically, proposed the allocation of the land (as a Future Growth Area) which is now the subject of this planning application.

2.4.12 Consultation on the proposed MM prompted objections from a number of parties, including Natural England. In broad terms, concerns were raised that, at that point in time, there was insufficient evidence on the potential ecology and landscape impacts to be able to draw a sufficiently robust conclusion that the site could be allocated for development without resulting in significant impacts. Aligned to this, concerns were expressed regarding the delivery of permanent mitigation land for the purposes of ensuring the future support of the local Greater Horseshoe Bat population.

2.4.13 Following these concerns the Council proposed Replacement Main Modifications (RMM) which, amongst other matters, reversed the proposal to allocate the site as a Future Growth Area. Following further consideration, the Inspector reported on the soundness of the Local Plan in October 2015.

2.4.14 In reporting on the Local Plan the Inspector recognised the logic behind the Council's decision to remove the proposed allocation (via the RMM) although did note that the situation is less than ideal in the context of ensuring that the Authority are able to meet their long term housing needs (refer para 61 of the Inspectors Report, October 2015).

2.4.15 In considering the detailed concerns raised by Natural England, the Inspector noted (paragraph 62) that:

"if the necessary work is undertaken and shows that from an environmental point of view the site is developable, there is nothing to stop the Council from carrying out a partial review of the Plan as soon as it has the necessary evidence. This course of action would enable sensible medium term planning to be undertaken…".

2.4.16 Whilst the Inspector indicated that an early focused review of the Plan, once adopted, would be the preferred approach Torbay Council have indicated through the course of general discussions and formal pre-application discussions that the preferred option would be to consider the development potential of the site via a planning application rather than Local Plan review. This is also supported by the Council's latest Local Development Scheme (March 2017). It is understood that this is primarily a matter of the likely time and cost involved in such a review, it being considered that a positively determined planning application (if the Council resolve to grant permission) is likely to be the most time effective method to ensure the early delivery of housing.

2.4.17 The Plan was subsequently adopted as part of the statutory Development Plan on 10th December 2015. Detailed consideration of the relevant policy framework is set out below.

2.5. Planning Context – Planning Policy Overview

2.5.1 This section considers the planning policy framework relevant to the determination of a planning application and the context within which assessment work is undertaken.

2.5.2 Planning Policy at the National level is set out in the National Planning Policy Framework (the NPPF or Framework). This was published in March 2012 and sought to consolidate the suite of former Planning Policy Statements/Guidance into a single document. The Framework is accompanied by online Planning Practice Guidance (PPG) which provides practical advice and further articulation of policy.

2.5.3 The NPPF has at its heart the principle of Sustainable Development. This is defined as *"meeting the needs of the present without compromising the ability of future generations to meet their own needs"*. In support of the principle, the NPPF establishes that there are three dimensions: economic, social and environmental and directs that the planning system considers how it functions in support of these roles.

2.5.4 Paragraph 14 establishes the *"presumption in favour of sustainable development which should be seen as a golden thread running through both plan-making and decision-taking".* In respect of determining planning applications, this is seen to be ensuring that Local Authorities approve *"development proposals that accord with the development plan without delay."*

2.5.5 In support of the principle set out above, paragraph 17 establishes core planning principles which are expected to underpin decision-taking. Of relevance to this application are the following:

- planning should *"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"*;
- *"proactively drive and support sustainable economic development to deliver the homes, business and industrial units, infrastructure and thriving local places that the country needs"*;
- *"always seek to secure high quality design and a good standard of amenity for all existing and future occupants of land and buildings"*;
- *"promote mixed use developments, and encourage multiple benefits from the use of land…recognising that some open land can perform many functions (such as for wildlife, recreation, flood risk mitigation, carbon storage, or food production)"*; and,
- *"actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling"*.

2.5.6 Section 1 of the Framework sets out how *"the Government is committed to securing economic growth in order to create jobs and prosperity"*. In support of this, paragraph 19 notes that "planning should operate to encourage and not act as an impediment to sustainable growth".

2.5.7 Whilst much of Section 1 is concerned with guiding Local Planning Authorities to ensure that their Local Plans provide for the required level and type of employment, in the right locations, it also notes that there is a need to ensure that:

"polices should be flexible enough to accommodate needs not anticipated in the plan and to allow a rapid response to changes in economic circumstances".

2.5.8 Paragraph 32 of the Framework requires *"developments that generate significant amounts of movement…[to] be support by a Transport Statement or Transport Assessment". In making decisions, consideration needs to be given to "the opportunities for sustainable transport modes"* to be utilised, the ability for "*safe and suitable access to the site" and to seek to "effectively limit the significant impacts of the development"* (if such impacts arise).

2.5.9 Paragraph 32 concludes that permission should only be refused *"where the residual cumulative impacts of development are severe"*.

2.5.10 Section 6 provides guidance on planning for housing delivery. Paragraph 47 establishes the principle of maintaining a rolling 5 year supply of land to meet housing needs together with the need to identify land or locations for growth in later phases of the plan period.

2.5.11 Paragraph 49 provides clarity in those circumstances where a 5 year supply cannot be demonstrated, noting that *"relevant policy for the supply of housing should not be considered up-to-date" and that applications should then "be considered in the context of the presumption in favour of sustainable development".*

2.5.12 Paragraph 50 makes the practical link between housing need/delivery and placemaking, identifying the need *"to deliver a wide choice of high quality homes, widen opportunities for home ownership and create sustainable, inclusive and mixed communities".*

2.5.13 Section 7 of the Framework establishes the role of design and that it *"is a key aspect of sustainable development [and] is indivisible from good planning".* Paragraph 59 highlights the potential for design codes to assist in the delivery of a higher standard of design.

2.5.14 It is recognised within paragraph 60 that there is an importance placed on the promotion/reinforcement of local distinctiveness albeit this should not give rise to the imposition of certain architectural styles or tastes.

2.5.15 Section 8 makes an important contribution to the policy framework to ensure that the social aspect of planning makes a positive contribution to the creation of healthy and inclusive communities. Paragraph 69 highlights the importance of ensuring that development, through features such as strong centres and active streets, can provide for social interaction, and, in turn, promote social cohesion. Paragraph 70 continues, noting that planning has an opportunity, particularly through decisions on applications, to *"ensure an integrated approach to considering the location of housing, economics uses and community facilities and services"*.

2.5.16 Paragraph 72 emphasises that *"the Government attaches great importance to ensure that a sufficient choice of school places is available to meet the needs of existing and new communities"*. Paragraph 73 recognises the important role which the provision of high quality open space can have on the health and wellbeing of communities. Paragraph 75 builds on this in respect of the importance of enhancing public rights of way and access opportunities.

2.5.17 Section 10 of the Framework addresses matters of climate change and flooding, including highlighting the importance of ensuring that development is directed to areas which are at the lowest risk of flooding (paragraph 100).

2.5.18 The role of planning in conserving and enhancing the natural environment is addressed in Section 11. Paragraph 109 highlights the importance of *"minimising impacts on biodiversity and providing net gains in biodiversity where possible*". The importance and weight to be applied to the protection of Areas of Outstanding Natural Beauty is set out in paragraph 115.

2.5.19 Section 12 considers the importance of conserving and enhancing the historic environment. Paragraph 128 identifies the importance of considering applications in the context of a proportionate call for evidence on the significance of any heritage assets that may be affected by development. Where substantial harm or loss occurs as a result of development, paragraph 133 identifies the need to demonstrate that there are *"substantial public benefits that outweigh that harm or loss".*

2.5.20 The sustainable use of minerals is addressed in Section 13, paragraph 142 recognising the essential role that they have in supporting sustainable economic growth. Paragraph 144 establishes the importance of minerals safeguarding areas.

2.5.21 The Development Plan for Torbay is the Torbay Local Plan, A Landscape for Success - The Plan for Torbay 2012 to 2030, adopted December 2015 (hereafter referred to as 'the Plan'). It sets out strategic policy detail for the Torbay area, including the Council's ambitions to deliver a tandem jobs and housing growth strategy. This strategy is articulated in the first three policies of the Plan.

2.5.22 Of particular relevance is Policy SS1 Growth Strategy for a prosperous Torbay which confirms that the Plan seeks to support the creation of 5,000 – 5,500 net additional jobs and the delivery of approximately 17ha of employment land. On housing, SS1 identifies a housing target of *"about 8,900 over the Plan period of 2012 – 2030"*. The Policy confirms how this will be provided over the three main periods of the Plan, namely:

- existing commitments in the first 5 years (to 2016/17);
- the completion of committed sites and those identified in the three Neighbourhood Plans (to 2021/22); and,
- in Strategic Delivery Areas/Future Growth Areas in the latter stage of the Plan period.

2.5.23 Policy SS3 Presumption in favour of sustainable development reiterates the presumption that is set out as a key principle in the NPPF. It notes that the Council *"will work proactively…to find sustainable solutions, enabling development proposals to be approved where they will evidently provide a balanced approach to improving economic, social and environmental conditions."*

2.5.24 Aspiration 1 of the Plan provides policy for securing the economic recovery and success across the Bay area. Policies SS4 The economy and employment and Policy SS5 Employment space provide further articulation of the jobs growth target set out in Policy SS1. Paragraph 4.2.20, in support of the former policy, provides for flexibility in delivery, noting that where onsite provision "*is not practicable…the Council will seek a financial contribution towards employment creation or employment initiatives locally*".

2.5.25 Aspiration 2 seeks to achieve a better connected, accessible Torbay together with the provision of and essential infrastructure. Policy SS6 Strategic transport improvements provides for *"on-line improvements*" on the Western Corridor (2(ii)) together with improvements to the Walking and Cycling Network and Bus/Public Transport.

2.5.26 Policy SS7 Infrastructure, phasing and delivery of development highlights that "*in order to be permitted, development must be supported by provision of the critical infrastructure required for the development to procced."* It also notes the importance *of "physical, social and green infrastructure…to help Torbay grow in a sustainable, healthy and prosperous way"*.

2.5.27 The environment of the Bay areas is protected through aspiration 3: (Protect and enhance a superb environment). Policy SS8 Natural environment places significant importance on ensuring that those sites which are protected under European legislation are safeguarded, conserved and enhanced. Matters addressed within the policy include: protection of protected sites, species and habitats; where sites are outside of the AONB, ensuring that they conserve of enhance the distinctive features, and; seek management practices which ensure the long term protection of greenspace (including amenity space), provision/protection of dark corridors and improving public access to the countryside.

2.5.28 Policy SS9 Green infrastructure picks up this last point in more detail, highlighting the importance of the provision of a green infrastructure led approach to the design of new development which incorporates multifunctional spaces providing public access. In addition, green infrastructure is highlighted as having an important role in mitigating for impacts on the sustenance zone and flyways used by Greater Horseshoe Bats. Finally, Policy SS10 Conservation and the historic environment provides protection for heritage assets across the Bay area.

2.5.29 Aspiration 4 seeks to create more sustainable communities and better places and is the second key tenet of the Plan's growth strategy. Policy SS12 Housing provides an overarching policy on the housing target of 8,900 homes over the plan period. Table 3 associated within the Policy provides for a spatial distribution across the three Strategic Delivery areas of Torquay, Paignton and Brixham.

2.5.30 Policy SS13 Five year housing land supply sets out the commitment to maintaining a 5 year housing land supply together with the housing delivery trajectory. The policy outlines the important role of Neighbourhood Plans in supporting delivery during the middle phase of the plan period. It notes, in response to concerns raised in the report on the soundness of the Local Plan, that mechanisms to boost supply if it begins to falter include the preparation of a Site Allocations Development Plan Document and to *"consider favourably applications for new housing, consistent with Policy SS2, H1 and other Policies of this Plan"*. The policy also notes that the 5 year supply figure is a target and not a ceiling and that this can be exceeded where *"the proposed would bring social, regeneration or employment benefits, including through the provision or funding of infrastructure*".

2.5.31 As noted in respect of Policy SS1, the Plan secures the principle of Neighbourhood Plans providing for the medium term (in Plan period terms) delivery of housing. A series of Strategic Delivery Areas (SDA) are established which correspond with the Neighbourhood Plan Forum areas of Torquay (SDT1), Paignton (SDP1) and Brixham (SDB1). Each of these policies is accompanied by tables establishing the expected delivery of employment and housing development. For each SDA there are a number of sub-policies which propose more specific local level distribution of development.

3. Alternative Development Options

3.1.1 In their adopted Scoping Opinion Torbay Council provided guidance on how the subject of alternative forms of development of use should be dealt with as part of the EIA process.

3.1.2 Specifically, it was noted that the evaluation should consider:

- Options for alternative uses of the site;
- Options for alternative patterns and forms; and,
- Alternative sites for the proposed development.

3.1.3 In providing guidance on the approach to take to this matter, the Council indicated that consideration should be concise and limited to an outline of principle alternatives and the reasons for selecting the preferred option.

3.2. Alternative Uses of the Site

3.2.1 As set out in the previous Chapter, the site is currently actively farmed. The retention of the existing use is clearly an alternative option for the site. However, such an approach would not allow for the desired project outputs, namely to provide land suitable to assist in meeting the long term housing needs of the Torbay area together with the provision of land for community/employment use.

3.2.2 The next most realistic option for an alternative use would be to consider development on a smaller portion of land, with the remainder being retained in active agricultural use. However, due to the current use there is a significant level of infrastructure required in order to unlock the site for delivery at any level, principally focused on providing appropriate highway access but also in respect of essential services, including gas, electricity, foul drainage connection and communication networks. On this basis, a reduced level of development on the site would mean that development costs are disproportionately larger due to costs having to be spread across a smaller developable area/quantum of development.

3.2.3 As noted in the previous Chapter, the proposals are for a largely residential led mixed use development project. Alternative development options might include solely residential, solely employment use or potentially retail or leisure use. Each is consider in brief below.

Solely Residential

3.2.4 This is not considered to be an appropriate use of the site. The approach set out in the Torbay Local Plan is one of a tandem jobs/housing led growth strategy. The principle purpose of adopting this approach is to ensure that the area is able to increase the degree to which it is attractive to inward investment and the delivery of new jobs at a suitably high skills base.

3.2.5 If this development site were delivered solely for housing there would be inevitable questions as to whether the site can be considered to be sustainable and consistent with the spatial strategy.

Solely Employment

3.2.6 As with a development which only provides housing, one which provided employment space only would arguably be equally unsustainable. Furthermore, whereas the NPPF expects the maintenance of a rolling 5 year supply of housing land, there is no such expectation in respect of employment land, albeit it is good planning to ensure that supply is maintained in the medium-long term.

3.2.7 In addition to such a narrow focus not meeting the expectations set out in the adopted Local Plan, the planning history of the site is such that employment only development has been dismissed as inappropriate. Whilst this was a decision made in 1997 (Secretary of State call-in decision) it would not be unreasonable to anticipate that a similarly focused development might raise similar concerns, particularly if the development were focused on larger units.

Retail/Leisure Focused

3.2.8 The final alternative form of development, which might be considered for the site, is retail and/or leisure led. However, this has not been given any significant consideration on the basis that there is no identified need in the adopted Local Plan.

3.3. Alternative Patterns/Forms of Development

3.3.1 As noted in Section 2.4 above, the promotion of the site for potential development has been ongoing over a number of years, principally through the process which led to the examination and adoption of the Local Plan in December 2015.

3.3.2 As part of the Land Promotion exercise an initial design solution was proposed. This was derived from an interim assessment of key matters, including ecological impacts, landscape and visual impacts, highways opportunities, flood risk and site levels.

3.3.3 Following the decision not to allocate the site for development in the adopted Local Plan, the applicant a full consultant team to consider how the matters raised during the course of the examination (principally the response to the proposed Main Modifications published by the Council which would have had the effect of allocating the site) could be resolved.

3.3.4 The initial approach was focused on ecology, landscape and visual impacts and highway access/impacts, these being the three areas considered critical to establishing whether the site has potential in the first instance to be considered for development. In effect this represented a fresh approach to considering the opportunities and constraints relating to the site.

3.3.5 The interim findings of this baseline assessment work, together with that produced by other technical consultants, was used by the design team to reconsider matters of site design. In the first instance, this involved a review of the layout submitted through the Land Promotion exercise. This review established a need to move away from that approach, particularly in respect of the swathe of open land running through the centre of the site which was established to not be necessary to mitigate impacts previously perceived. Instead, the position relating to ecology and landscape and visual impacts demonstrated an alternative approach.

3.3.6 In addition, in respect of highways access and wider network improvement/mitigation, a review identified that the previous proposed solution for providing access and network improvements, namely an offline dual carriageway was considered to be unnecessary and have the potential to result in unacceptable impacts in other areas. The outcome of this work was a revised development concept.

3.3.7 Following further technical assessment work, informed by the Council's adopted EIA Scoping Opinion and a range of pre-application meetings with Officers and other technical consultees/stakeholders, the design proposal has further evolved. Full details of the design evolution can be found within the integrated Planning, Design and Access Statement but the changes can be summarised as follows:

- Removal of proposed commercial units in the area north of the access roundabout;
- Inclusion of a public house on a parcel of land at the entrance to the site;
- Redesign to include bus stops within the 'heart' of the development in a single area accessed from the roundabout, rather than on the edge of the Brixham Road carriageway;
- Evolution of landscape and visual/ecology mitigation provision on the southern and western edges of the site; and,

- Inclusion of a 2 Form Entry Primary School within the site.

3.3.8 On the basis of the above and specifically the design evolution that has taken place both since the original Land Promotion exercise and during the pre-application process (in response to technical baseline/assessment work), it is considered that due consideration has been given to the potential for alternative forms/patterns of development.

3.4. Alternative Sites for the Proposed Development

3.4.1 The Council's adopted EIA Scoping Opinion makes reference to a need to consider alternative sites in the context of allocated Local Plan sites. On the basis that the Local Plan has been adopted relatively recently, and that the growth and spatial strategy can be considered to remain as the Council's preferred option, consideration of alternative sites is undertaken within this context.

3.4.2 The consideration of alternative sites for development is inevitably skewed by matters relating to land ownership and availability, in large part driven by matters of assembly (where there are multiple landowners) and willingness/interest in developing. The process and output by which the Council undertake a Strategic Housing Land Availability Assessment is the primary method for establishing sites which are available for development and in turn drives the consideration of alternative options.

3.4.3 As set out in Chapter 2, it is important to remember that the Council gave serious consideration to the potential of the site, to the extent that it was proposed to be allocated to provide for future housing need. This decision was taken in the context of a Council led review of all other sites that might have been considered to have the potential to meet an increased level of housing, driven by the Inspector's interim findings that there was a need to consider providing for a higher housing target.

3.4.4 With this context in mind, the approach to considering alternative sites is by necessity limited. The relatively recent Local Plan process identified this site as effectively being the next best site for providing genuine sustainable development in support of the Local Plan growth strategy. In addition to this, consideration of alternative sites is restricted bya lack of knowledge of land ownership and possible land assembly issues.

3.4.5 On this basis, the site which is the subject of this EIA/ES and planning application is considered to be appropriate in the context of others. Given that the recent Local Plan allocates a number of other locations for future development to meet the stated need in the Local Plan, this site represents the next logical step in considering other locations both to meet future growth, shortfall in the current delivery pipeline or simply to ensure a robust rolling 5 year (plus) housing land supply.

3.5. Overview

3.5.1 This Chapter has considered alternative options in relation to development of the site, in terms of uses, layout or other spatial locations for development.

3.5.2 It is clear from the above analysis, together with the work presented in the wider ES and the planning application (principally the Planning, Design and Access Statement which explicitly addresses design evolution), that due consideration has been given to how best to approach the site in terms of mitigating impacts and then accommodating development.

3.5.3 The conclusion of this is that the site is considered to be appropriate in the context of alternatives.

4. Scoping and Methodology

4.1. EIA Scoping

Request to adopt an EIA Scoping Opinion

4.1.1 In order to identify the issues to be considered as part of the Environmental Impact Assessment (EIA) and to be reported upon within this Environmental Statement, an EIA Scoping Opinion request was submitted to Torbay Council on 22nd December 2016.

4.1.2 The letter was volunteered under Regulation 13 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (as amended) (hereafter referred to as the EIA Regulations). A copy of the request is appended to this ES (see Appendix 2).

4.1.3 The request identified the nature and scale of the project as defined at that stage, namely a residential led mixed use development comprising of:

- Residential dwellings in a mix of 1, 2, 3, 4 and 5 bedroom units up to a maximum of circa 450 units, to include affordable housing to be secured via a section 106 agreement;
- Approximately 2,500m2 of employment floorspace (B1 office use);
- The means of access from the A3022/Brixham Road (exact form of access to be defined following the technical assessment and design process);
- Strategic landscaping suitable to provide mitigation for any landscape impacts arising together with functioning as ecological mitigation; and,
- Public open space (formal and informal), to provide for the needs arising from development and to facilitate the delivery of countryside access as required by the adopted Plan.

4.1.4 The letter confirmed the nature of the potential impacts to be assessed as part of the EIA and the methodology for doing so together with outlining the proposed structure of the ES.

The Adopted Scoping Opinion

4.1.5 The Council responded on 16th February 2017 confirming their adoption of the Scoping Opinion, a copy of which is appended at Appendix 3.

4.1.6 In general terms the Council endorsed the proposed scope of the EIA as set out in the Regulation 13 request. Following consultation with key external agencies and Officers within the Council clarification was provided on specific required which were considered necessary to be addressed as part of the EIA process/ES reporting.

4.1.7 In addition to those matters included within the Stride Treglown proposed scope, Torbay Council confirmed that they would expect the EIA to also consider Agricultural Land and Soils. It was also confirmed that the following technical reports would be required as part of the planning application: Energy and Sustainability; Community and Socio-Economic Impacts; and, Air Quality.

Review of the Adopted Scoping Opinion

4.1.8 On receipt, the Council's adopted Scoping Opinion was reviewed by both the EIA Co-ordinator and the wider team in order to ensure that the scope established by the Council was reflected in both the initial work undertaken and programme for further assessment moving forward.

4.1.9 The review of the Scoping Opinion also confirmed the necessary content of the Environmental Statement to be prepared and submitted with the application, specifically that it should address:

- Ecological Impacts;
- Landscape and Visual Impacts;
- Traffic and Transport;
- Noise; and,
- Agricultural Land and Soils.

4.1.10 The submitted Scoping Opinion request had also confirmed the other areas to be considered via the application package, including:

- Flood Risk Assessment;
- Cultural Heritage
- Aboricultural Impact;
- Noise;
- Ground Conditions;
- Energy and Sustainability;
- Community and Socio-economic Impacts; and,
- Air Quality.

4.1.11 On this basis, the ES is structured as set out above and the wider application has been informed by and based upon the additional technical input.

4.2. Methodology

4.2.1 The EIA has been undertaken and the ES prepared in accordance with standard industry practices and follows the approach endorsed by the Institute of Environmental Management and Assessment (IEMA).

Approach

4.2.2 Each technical chapter of the ES follows the following, standard format:

- Introduction – scope of the chapter and nature of the impacts to be considered
- Brief outline of the relevant policy and legislative context;
- Methodology and assessment criteria;
- Description of the baseline (existing) conditions;
- Specific elements of the Proposed Development which are relevant to the topic;
- Identification of the likely effects – in relation to construction and operational phases;
- Evaluation & assessment of the significance of the effects identified (including positive effects);
- Proposed Mitigation - Describe mitigation measures designed to reduce the environmental effects of the Proposed Developments;
- Residual Effects - Effects after mitigation measures have been implemented; and
- Identification of any further mitigation measures that could avoid, remedy or reduce the adverse effects, where relevant.

4.2.3 The significance of the various effects identified will inevitably vary based on the subject. Some effects will be more measurable, for example traffic and transport, whereas others will be less so, for example cultural or community benefits.

4.2.4 An effect may be significant even though it may only have a minor impact and will be dependent on a number of factors:

- The extent and magnitude of the effect;
- The duration of the effect (seasonal or short/long term);
- Ability for the effect to be reversed;
- Sensitivity of the receptor; and
- How it measures against environmental quality standards.

4.2.5 Within this ES, levels of significance have been estimated (where appropriate) in accordance with topic related standard methodologies. The levels used are:

- Substantial;
- Major;
- Moderate;
- Minor; or
- Negligible (meaning that there is either no effect of that the significance can be considered to be negligible).

4.2.6 The effects of the proposed development are set out in a Summary of Effects Table that draws on the content of the technical chapters (6-14 inclusive); the table is included within Chapter 10.

5. Ecology

5.1. Introduction

5.1.1 This Chapter of the Environmental Statement (ES) describes the flora, fauna and habitats of the proposed development site and assesses the biodiversity impacts of the proposed development during construction and operation. This chapter also identifies appropriate mitigation and enhancement measures with the overall aim of minimising and compensating for any identified negative impacts on biodiversity.

5.1.2 The site description is provided in ES Chapter 2. The development proposals which have been assessed, and the scope of the assessment are described in ES Chapter 4 and the accompanying figures. Landscape and ecological mitigation and enhancement measures included in the proposals are shown in the Green Infrastructure Parameters Plan, Illustrative Masterplan, Lighting Plan, Phasing Plan, Framework Landscape and Ecological Management Plan and Farm Management Plan.

5.1.3 The baseline ecology report is provided as an Appendix.

5.2. Planning policy and guidance

5.2.1 In carrying out this ecological impact assessment relevant legislation, planning policies, development plans, national and local Biodiversity Action Plans (UKBAP and LBAPs respectively) and best practice guidelines were consulted. These included:

- National Planning Policy Framework (NPPF);
- Conservation of Habitats and Species Regulations 2010;
- Wildlife and Countryside Act 1981;
- Countryside and Rights of Way (CRoW) Act 2000;
- Natural Environment and Rural Communities (NERC) Act 2006;
- Marine and Coastal Access Act 2009;
- BS 42020 - Biodiversity. Code of practice for planning and development
- Protection of Badgers Act 1992;
- Hedgerows Regulations 1997;
- UK Biodiversity Action Plan;
- Local Biodiversity Action Plans; and
- South Hams SAC – Greater horseshoe bat consultation zone planning guidance.

National Planning Policy Framework

5.2.2 The National Planning Policy Framework (NPPF) sets out the Governments planning policies for England and how local planning authorities should incorporate them into their own policies and plans. Section 11 of the NPPF contains several policies targeted at enhancing the natural environment and requires local authorities to consider how impacts on biodiversity can be minimised and provide net gains in biodiversity. Paragraph 118 states that when determining planning applications: "local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest;

development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;

opportunities to incorporate biodiversity in and around developments should be encouraged;

planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss.

5.2.3 In addition the Government published the National Planning Practice Guidance (NPPG) in March 2014 to support the NPPF. This includes guidance on the Natural Environment, in particular on:

- Landscape;
- Biodiversity, ecosystems and green infrastructure; and
- Brownfield land, soils and agricultural land.

The Conservation of Habitats and Species Regulations 2010

5.2.4 The Conservation of Habitats and Species Regulations 2010 constitute the UK Government's implementation of the EU Habitats Directive in England and Wales. The Regulations provide for the designation of both Special Protection Areas (SPA) (first established under the Birds Directive, 1979), Sites of Community Importance (SCI)[1] and Special Areas for Conservation (SAC) as part of the Natura 2000 network of protected areas across the European Union.

5.2.5 For European Protected Species (EPS) the 2010 Regulations give protection from deliberate capture, killing or disturbance (where disturbance affects the ability of the EPS to survive, breed or reproduce, to rear or nurture their young, to hibernate or migrate, or significantly affects the local distribution or abundance of the EPS). It is also an absolute offence to destroy or damage the resting site or breeding site of an EPS.

The Wildlife and Countryside Act 1981 (as amended)

5.2.6 The Wildlife and Countryside Act 1981, as amended and strengthened by the Countryside and Rights of Way Act 2000, is the principal legislative mechanism for the protection of wildlife in Great Britain. The Act established a statutory framework for the protection of wildlife. It provides for the designation of Sites of Special Scientific Interest (SSSI), which are selected as the best national examples of habitat types, sites with notable species and sites of geological importance.

[1] Sites of Community Importance (SCI) are sites that have been adopted by the European Commission but not yet formally designated by the government of each country.

5.2.7 Schedules 1- 4 of the Wildlife and Countryside Act (as amended) deal with the protection of wild birds, making it an offence (subject to exceptions) to intentionally kill, injure or take any wild bird or their eggs or nests. Bird species listed on Schedule 1 have additional protection to prevent disturbance of these birds at their nests or the disturbance of their dependent young. Schedule 5 of the Act details protection of other animal species. Partial protection under Section 9 is given to certain other species, including all common species of reptile and EPS such as bats (which receive the majority of their protection under the Conservation of Habitats and Species Regulations 2010). Schedule 8 of the Wildlife and Countryside Act details protection for plants and fungi.

Countryside and Rights of Way (CRoW) Act 2000

5.2.8 The CRoW Act 2000 gives greater protection to SSSIs and strengthens wildlife enforcement legislation by the introduction of the offence of 'reckless disturbance'. The Act also required Government Departments to have regard to biodiversity and conservation; Section 74 of the Act required lists of habitats and species of principal importance to be produced, for which conservation steps should be taken or promoted. The requirement to prepare such lists of habitats and species has been extended by the Natural Environment and Rural Communities (NERC) Act 2006 (see below).

Natural Environment and Rural Communities (NERC) Act 2006

5.2.9 The NERC Act places a duty upon public bodies, in exercising its functions, to have regard to the purpose of conserving biodiversity and consider enhancement of biodiversity within all of their actions. In addition, this Act places a duty on the Secretary of State, under Section 41 (S41), to publish a list of habitats and species of principal importance for the purpose of conserving biodiversity.

Marine and Coastal Access Act 2009

5.2.10 The Marine and Coastal Access Act 2009 gained Royal Assent on 12th November 2009 and provides the legal mechanism to help ensure clean, healthy, safe, productive and biologically diverse oceans and seas by putting in place a new system for improved management and protection of the marine and coastal environment. It is the act under which Marine Conservation Zones can be designated.

BS 42020 - Biodiversity. Code of practice for planning and development

5.2.11 This first British Standard on biodiversity management aims to promote, clarify and provide consistency in the quality and appropriateness of ecological information submitted with planning applications.

5.2.12 The standard provides:

- Guidance on how to produce clear and concise ecological information to accompany planning applications
- Recommendations on professional ethics, conduct, competence and judgement to give confidence that proposals for biodiversity conservation, and consequent decisions/actions taken, are sound and appropriate;
- Direction on effective decision-making in biodiversity management; and,
- A framework to demonstrate how biodiversity has been managed during the development process to minimize impact.

The Natural Choice

5.2.13 In 2011, the Government published a white paper 'The Natural Choice: securing the value of nature' which sets out a number of commitments relating to:

- Protection and enhancement of the natural environment;

- The development of a greener economy; and,
- Strengthening the connection between the community and nature.

5.2.14 A number of these principles are relevant to the Ecological Impact Assessment (EcIA) process, for example the report set outs commitments for the:

5.2.15 Use of biodiversity offsets where a development would result in a loss to biodiversity;

5.2.16 Use of urban green infrastructure with Public Open Space (POS) that should be managed to provide a wide range of functions, thus benefitting people and wildlife by delivering ecosystem services;

5.2.17 Provide access to the countryside and nature, through voluntary activities, with the aim of reconnecting people with nature through education.

UK Biodiversity Action Plan - UK Post-2010 Biodiversity Framework

5.2.18 In July 2012, the UK government responded to a change in strategic thinking, following the United Nations 2010 Convention on Biological Diversity (CBD), by the development of the 'UK Post-2010 Biodiversity Framework' and the instigation of the EU Biodiversity Strategy. The Framework supersedes the UK BAP. The Framework includes five internationally agreed strategic goals and 20 new global 'Aichi' targets to be achieved by 2020.

5.2.19 It set a broad enabling programme that includes a 'shared vision' and priorities for UK scale activities, to involve all four UK countries, to help deliver the Aichi targets and the EU Biodiversity Strategy. Although the UK BAP partnership no longer operates following the publication of the Framework, the principles of the UK BAP still remain of use, for example the background information on UK BAP priority habitats and species which still form the basis of much biodiversity work at country level. The habitats and species listed as having principle importance within the NERC Act 2006 continue to be regarded as conservation priorities in the new Framework and these are the species and habitats requiring action under the UK BAP. As such, the species list on the UK BAP and LBAP list (see below) will still be taken into consideration.

Devon and Torbay Biodiversity Action Plans

5.2.20 Local Biodiversity Action Plans identify conservation priorities for habitats and species which are of importance in a local context and determine the contribution they can make to the delivery of the UK BAP. The Devon BAP identifies priorities for conservation within the county as a whole whilst the Torbay BAP (The Nature of Torbay) identifies targets for conserving and enhancing habitats and species which are of particular importance in Torbay.

The Adopted Torbay Local Plan (2012 - 2030)

5.2.21 The Local Plan contains a number of Policies that set out measures to address nature conservation. The majority of the measures focused on reducing and managing adverse impact on the environment including European designations, as illustrated below:

5.2.22 Policy SS8 requires all development to contribute to the conservation and enhancement of the natural assets and setting of the Bay;

5.2.23 Policy SS9 seeks to integrate new development with strategic green infrastructure, and to protect and provide high quality green space at a local level;

5.2.24 Policy C1 requires development to be resisted where this would lead to the loss of open countryside or creation of urban sprawl, or where it would encourage the merging of urban areas and surrounding settlements to the detriment of their special rural character and setting;

5.2.25 Policy C2 supports development that conserves the character of the undeveloped coast and seeks to enhance its distinctive landscape, biodiversity, geological, and recreational and cultural value;

5.2.26 Policy C3 requires development not to adversely affect the natural and historic environment of the area, including geodiversity, maritime archaeology and marine ecology;

5.2.27 Policy C4 requires development to off-set any harm to trees, hedgerows or landscape features, and preferably achieve landscape and biodiversity improvements, and make provision for ongoing management;

5.2.28 Policy C5 permits development in Urban Landscape Protection Areas (ULPAs) only where it does not undermine the value of the ULPA as an open or landscaped feature within the urban area; and it makes a positive contribution to the urban environment and enhances the landscape character of the ULPA.;

5.2.29 Policy NC1 seeks to conserve and enhance Torbay's biodiversity and geodiversity, through the protection and improvement of the terrestrial and marine environments and fauna and flora, commensurate to their importance;

5.2.30 Policy ER2 requires development proposals to avoid harm to surface waters (including rivers and coastal waters) and sensitive water-reliant habitats and species and any adverse impacts on the quality and quantity of groundwater and provide appropriate sewerage disposal systems (both foul and surface water). Where possible it should reduce water being discharged into shared sewers.

Torbay Green Infrastructure Delivery Plan (April 2011)

5.2.31 The Torbay Green Infrastructure (GI) Project is being taken forward by a partnership championed by Torbay Coast and Countryside Trust, Torbay Council and Natural England. One of the strategic aims of the plan is 'to enhance biodiversity and landscape character' and the plan includes a number of main objectives under this theme for protection, creation, restoration enhancement and management of biodiversity assets that occur in Torbay. These have been listed below:

- Enhance and restore biodiversity and landscape in 'Key Natural Areas' and establish restoration zones;
- Create and enhance urban and rural wildlife corridors;
- Protect and enhance Torbay's most important species;
- Planning for wildlife.

5.2.32 The plan also includes objectives specific to Paignton which has been identified as one of four 'action areas' which, due to their unique characters, have individual priorities for biodiversity and GI delivery. One of the project aims for this action area is to provide additional country parks to provide greenspace adjacent to urban areas where it is currently lacking. The development site is within the plan area, including a proposed country park/ access.

South Hams SAC – Greater horseshoe bat consultation zone planning guidance

5.2.33 The aim of this document is to ensure that the relevant planning authorities are in a position to meet the statutory obligations associated with the Greater Horseshoe bat conservation interest of the South Hams SAC. It includes guidance on specification for surveys in relation to planning applications affecting Greater Horseshoe bat strategic flyways and sustenance zones. It understood from consultation with Torbay Council a second edition of this guidance is due for publication in spring 2017. Part of the consultation with Torbay Council has included them providing information on the likely changes to the existing guidance. This has included in indication that survey specification guidance will change to reference/be in accordance with the 3rd edition of the Bat Conservation Trust's Bat Surveys for Professional Ecologists (BCT, 2016) and an update guidelines on presentation of results.

5.3. Assessment methodology

Scope of the Assessment

5.3.1 This assessment provides an evaluation of the likely effects of the proposed development (including during construction and operation) on the ecological features. It is based on a combination of desk-based consultation, extensive ecological habitat surveys and numerous species specific surveys. Full details of the surveys, method and results are presented in the Ecology Baseline Report.

5.3.2 The scope of the Phase II surveys were set out in the scoping report submitted to Torbay on the 23rd of September 2016 and agreed by Torbay Council in their Scoping Opinion issued on the 16th February 2017. The bat survey specification was also discussed in detail with Mike Oxford who advises South Devon Councils on SAC bat issues. Assessment of the potential ecological impacts was based on estimates of the likely magnitude of impacts and the value of the ecological receptors identified within and in the vicinity of the development proposals.

Zone of Influence

5.3.3 The Zone of Influence (ZoI) is an area over which ecological features may be subject to significant effects as a result of the proposed development and associated activities. The ZoI can differ depending on the sensitivity of the ecological feature. The effects can be those which may occur as a result of habitat loss and those which may occur through disturbance such as an increase in recreational pressure and/or lighting.

5.3.4 The ZoI was determined through:

- A review of existing baseline conditions in comparison with that proposed by the development;
- Consideration of the proposed activities (during all phases);
- Desk study information;
- Consultation responses;
- Findings of the survey work; and
- Through liaison with other specialists involved in assessing the effects in other interrelated disciplines.

Temporal Scope

5.3.5 Potential impacts on ecological features have been assessed in the context of how the predicted baseline conditions within the ZoI might change between the surveys and the start of construction. This includes taking into account that the Site is subject to an off-site LEMP for a project known as White Rock to the north. This LEMP proposed enhancing many of the hedgerows at Inglewood. At the time of survey most of these measures appeared to have been implemented (planting to strengthen hedgerows), with the exception of the creation of wildflower margins adjacent to hedgerows. Given that these measures should have been fully implemented ahead of any construction related to this project, the impact section of this chapter considers them as such (i.e. implemented and established).

Desk Study

5.3.6 In June 2016 records of wildlife sites and legally protected, biodiversity priority, red data book (RDB) and county notable species, within a 2km search buffer surrounding the Site boundary were requested from the Devon Biodiversity Records Centre (DBRC). The search buffer was extended to 4km for bat records. Devon Bat Group were subsequently contacted to ascertain if there were records of Greater Horseshoe bat (GHS) *Rhinolophus ferrumequinum* maternity roosts within this search buffer.

5.3.7 In November 2016 records of Schedule 1 birds within 1km of the Site and off-site mitigation land were requested from the RSPB. This included records from the RSPB's 2016 Cirl Bunting *Emberiza cirlus* Population Survey.

5.3.8 Records of SSSIs, National Nature Reserves (NNR) and Marine Conservation Zones (MCZ) within a 5km radius of the Site and records of Special Areas of Conservation (SAC), Special Protection Areas (SPA), Sites of Community Importance (SCI) and Ramsar Sites (i.e. sites of international importance) within a 10km buffer of the Site were retrieved from Natural England's Nature on the Map website[2].

5.3.9 Aerial photography and OS mapping were also reviewed to help place the Site in context. Ecology surveys were previously undertaken on Site to support a planning application for a site to the north known as White Rock (Planning reference P/2011/0197) and also to support a land promotion study for a development on this Site. These reports have been reviewed to inform the understanding of the ecology baseline conditions of the Site.

Extended Phase 1 Habitat Survey

5.3.10 An Extended Phase I Habitat Survey of the Site was undertaken in April 2016 by an experienced ecologist from NPA. Habitats and obvious features within the Site were mapped following the Joint Nature Conservation Committee's Phase 1 Habitat Survey Method (2010) to map habitats and land use categories to a consistent level of detail and accuracy.

5.3.11 The scope of the Phase 1 Habitat Survey was further widened in accordance with the methodology provided by the Institute of Environmental Assessment (IEA, 1995) in that provision was made for recording information on features suitable for faunal species of conservation interest. This included, for example, an assessment (from ground level) of all mature trees on Site for their potential to support roosting bats and roosting Barn Owls *Tyto alba*, as well as a search for any evidence of Badger *Meles meles* setts.

5.3.12 An area of land to the west of Site (see Figure 1 of the baseline ecology report) within the client's control was also subject to a Phase 1 Habitat Survey in August 2016 to help determine its suitability/potential to provide off-site mitigation, hereafter referred to as the off-site mitigation land (OSML).

5.3.13 Following the Extended Phase I Habitat Survey, it was considered that further species-specific surveys were required for the following species/species groups:

- Badgers;
- Dormouse;
- Bats;
- Great Crested Newts;
- Breeding birds;
- Reptiles;
- Cirl buntings; and,
- Invertebrates.

5.3.14 These surveys (see Baseline Ecology Assessment for detailed methods) recorded no evidence of Dormouse, Great Crested Newt, active Badger setts and only a low population of Slow Worms *Anguis fragilis*. Given their absence/limited ecological value, no significant impacts would be expected on these species/species group, and as such are not considered further within this chapter.

[2] http://www.natureonthemap.naturalengland.org.uk/ [Last accessed 22nd May 2017]

5.3.15 The Site was also considered suitable to support other BAP species including Brown Hare *Lepus europaeus* and Hedgehog *Erinaceus europaeus*. Indeed Brown Hare were incidentally recorded on a few occasions. However further surveys for these and other BAP species were scoped out on the basis that mitigation proposals for Cirl Bunting and Greater Horseshoe bats would avoid significantly impacting these species (e.g. through retention of a mixed farming system, no net loss of hedgerows, increased areas of tall grass). As such other BAP species are not discussed further in this assessment.

Bats

5.3.16 The aims of the bat surveys were to:

- identify any bat roosts on or immediately adjacent to Site;
- estimate the minimum number of bat species using the Site; and
- identify key habitats for commuting and foraging bats.

5.3.17 All surveys were undertaken in accordance with the South Hams SAC – Greater horseshoe bat consultation zone planning guidance (Natural England, 2010) and the Bat Conservation Trust's Bat Surveys for Professional Ecologists (Collins, J, 2016).

Preliminary Assessment of Features

5.3.18 An assessment from the ground of trees on and adjacent to the Site was undertaken as part of the Extended Phase I Habitat Survey to determine their potential to support roosting bats. This involved a search for suitable features such as cracks, splits, cavities, knotholes and loose bark.

5.3.19 Whilst there are no buildings on Site, White Rock Cottages (OS Grid SX 88087 57898) and derelict farm buildings (OS Grid SX 88015 57992) approximately 150m north of the Site were also assessed for their potential to support roosting bats.

5.3.20 White Rock Cottages were assessed from the boundaries of the property with the use of binoculars, and whilst access was permitted to the derelict farm buildings their condition prevented internal access to some areas.

5.3.21 Based on the number and quality of features present/evidence recorded each tree/building was assigned a rating (negligible; low; moderate; high; confirmed roost) for its potential to support roosting bats.

Bat activity surveys

5.3.22 A series of activity surveys for bats were conducted to assess the use of the Site by bats. The surveys consisted of walked transects, emergence and re-entry surveys, deployment of automated bat detectors over a series of nights and hibernation surveys.

5.3.23 All surveys were undertaken in suitable weather conditions for bat activity (no or little rain, no strong wind above Beaufort 4, and moderate temperature, typically not below 10^0C). During manual surveys temperature (^{0}C), cloud cover (%), wind (Beaufort) and intensity of rain were recorded at hourly intervals. Whilst the automated detectors recorded temperature, additional weather information was taken from a weather station[3] based in St Mary's Brixham, approximately 4km south east: of the Site

[3] https://wow.metoffice.gov.uk/observations/details/20170119catkqds6gae6pfybyyguicqpgo

Manual Activity Surveys

5.3.24 Three transects routes which covered a cross-section of habitats present on Site were attempted/undertaken on 13 survey visits in April to October 2016 (See Figure 2 of the baseline ecology report). This included one dusk and dawn survey on the 17th and 18th of August. Due to a positive TB test the movement of cattle was restricted during the course of 2016 and transect routes/ surveyor numbers were adjusted to deal with the presence of bulls and/or cattle and calves.

5.3.25 Each transect began 15 minutes prior to sunset, and lasted until 3 hours after sunset. Each surveyor remained static for the first 1hr and 15 minutes (i.e. until 1hr post sunset to identify potential roosts and/or early commuting routes) and then walked the transect route at a steady pace stopping at pre-defined listening points for at least 5 minutes to record bat activity. Incidental records of bats in-between listening points were also made.

5.3.26 In August additional dawn emergence surveys were also undertaken at features on and adjacent to Site, that were considered suitable for roosting bats (See Figure 2 of the baseline ecology report). These began at least 1.5hrs before sunrise, with the surveyor remaining in position until at least sunrise.

5.3.27 The off-site derelict farm buildings, were also subject to emergence/re-entry surveys given their potential to support Greater Horseshoe bat roosts (a qualifying feature of the South Hams SAC that lies approximately 5km to the south east). The number and duration of these surveys were adjusted, based on the results of the automated detectors deployed internally, to try and identify the presence of night as well as day roosts (See Figure 3 of the baseline ecology report).

5.3.28 When a bat was encountered the time, species and notes on activity were recorded. Bat echolocation was recorded using time expansion bat detectors (AnaBat Walkabout, Pettersson D240X (connected to Edirol solid state WAV recorder) or Echo Meter 3).

5.3.29 Recorded echolocation calls were manually analysed using BatSound and/or AnaLookW to verify species identification. As the calls of *Myotis* bat species are very similar, with most of the variation between their calls attributable to the habitat in which they occur (Russ, 1999), the *Myotis* recordings have not been attributed to a particular species.

Automated Surveys

5.3.30 Automated bat detectors (AnaBat Express) were also deployed across the Site (See Figure 2 of the baseline ecology report) to supplement the manual surveys. AnaBats were placed approximately 1m off the ground and left in position for at least five nights (dusk-dawn). They were programmed to come on at least 15 minutes before sunset and turn off no earlier than 15 minutes after sunrise.

5.3.31 Recorded echolocation calls were run through filters for both horseshoe bat species within AnaLookW to identify likely horseshoe bat calls (see Table 1 below for filter parameters). These were then analysed manually to verify if they were attributable to either Lesser *Rhinolophus hipposideros* or Greater Horseshoe bats.

	Greater Horseshoe Bat	Lesser Horseshoe Bat
Characteristic Frequency (KHz)	75-90	95-120
Call Duration (ms)	0.2-100	0.2-100

Table 1: Horseshoe Filter Parameters

5.3.32 Identification of other bat species was gained through use of the automated species identification feature within Kaleidoscope 4.1. Whilst the accuracy of the automated species identification works well for certain species (e.g. 95% accuracy for Pipistrelles) it is less accurate for others (e.g. ~50% accurate identification to a particular Myotis species). For the purpose of this project Myotis were not attributed to species and the larger bat species Noctule *Nyctalus noctula*, Leisler's Bat *Nyctalus leisleri* and Serotine *Eptesicus serotinus* (N-L-S) were grouped together. In addition any records of Barbastelle *Barbastella barbastellus* were analysed manually for verification (due to their rarity).

5.3.33 In addition automated detectors (AnaBat Expresses and SM2s) were also deployed in the derelict farm buildings (see Figure 3 of the baseline ecology report) to help identify the presence of roosting horseshoe bats. Recorded echolocation calls were analysed using the horseshoe filters within AnaLookW and as above, those identified were then analysed manually.

Hibernation Surveys

5.3.34 The internal/external assessment of the derelict farm buildings identified the basement of an off-site building known as Inglewood (See Figure 3 of the baseline ecology report) was considered suitable to support hibernating horseshoe bats. Access into the basement was not possible due the buildings derelict nature. As such AnaBat Express detectors were deployed in the basement (suspended from gaps in the floorboards above) in January and February 2017 to help determine if the building supported hibernating bats.

Breeding birds

5.3.35 Breeding Bird Surveys (BBS) were completed during spring 2016 using a methodology based upon a combination of Common Bird Census methodology, devised by the British Trust for Ornithology (BTO), and the national Breeding Bird Survey (BBS) techniques, jointly devised by the BTO, Royal Society for the Protection of Birds (RSPB) and the Joint Nature Conservation Committee (JNCC) as well as standard methodology outlined in Bibby *et al* (2000). This technique records the species, their breeding status and estimates the number of individual territories of the birds within the site or survey area.

5.3.36 The survey aimed to determine possible, probable and confirmed breeding status of all species heard or observed and to determine which birds are using the Site for breeding or foraging purposes. The locations of birds which were seen or heard during the surveys and their signs (moulted feathers, egg shells etc.) were carefully noted and recorded. In order to define possible, probable or confirmed breeding, details were recorded of birds behaviour in favourable habitat and those displaying, singing, calling, exhibiting territorial aggression, carrying food or nesting material and juvenile birds and family groups.

5.3.37 The method comprised three survey visits to the site during the breeding season, April to July between the hours of 5.30 am and 11.00 am at a time when birds are generally most active. Visits were carried out in the early morning with a start time just after sunrise; this period was chosen to avoid the first hour after dawn (as recommended by Gilbert, Gibbons and Evans, 1989). A suitably experienced surveyor slowly walked a predetermined transect and sought to maximise the observance of all habitat types present within the route by either incorporating, or passing within 50m of each habitat type. These were walked at a slow and constant pace with frequent pauses being made at appropriate vantage and listening points to enable nest searches within notable habitats or suitable trees to be undertaken.

5.3.38 Visits were undertaken on 26th April, 12th May and 21st June 2016 and notes made as to the birds present, resulting in population estimates and mapping of locations on site for each of the individual species. This in turn allowed for an assessment of the Site's overall value to breeding birds. Days were selected when weather conditions were forecast to be optimal for survey, with no rain, light winds and temperatures normal for early mornings during the spring and summer months.

5.3.39 Additionally, a combined crepuscular visit for breeding birds and Cirl Buntings was made on the 21st July and during this survey observations were made to establish whether the Site was utilised by hunting Barn Owl or other nocturnal species.

5.3.40 Weather conditions at the time of the surveys were recorded and presented in Table 2 below.

Date	Start Time	Finish Time	Start Temp(°C)	Start Cloud Cover (okta)	Wind Speed (Beaufort)
26/04/2016	06:00am	11:00am	4	0	3
12/05/2016	05:00am	10:00am	11	7	0-1
21/06/2016	05:00am	10:30am	14	6	2
21/07/2016	16:30pm	20:30pm	18	6	2-3

Table 2: Breeding bird survey dates, times and weather conditions

5.3.41 A weakness of the methodology is the tendency for inconspicuous and /or skulking species to be under-recorded. Conversely, numbers of species with large territories (e.g. Buzzard, Wood Pigeon and Magpie) may have been over-recorded as a consequence of double counting as individuals moved across the Site during the survey period.

Cirl Buntings

Breeding Survey

5.3.42 A minimum of five survey visits were undertaken on the following dates in accordance with the methodology detailed in the 'Survey methodology to establish presence of breeding Cirl Buntings on a site' (RSPB 2015). Details of the survey dates and weather information during the surveys are detailed in Table 3 below.

Date	Survey Number	Start Time	Finish Time	Surveyor	Weather Information
27/04/2016	1	06:00am	11:15am	Mark Tunmore	Clear, dry, breezy, 3-8°C, light frost first thing
13/05/2016	2	05:20am	11:00am	Daryl Robinson	Partly cloudy, rain previous evening, light breeze, 12°C
22/06/2016	3	06:00am	11:00am	Daryl Robinson	Still, misty start then clear, 12°C
21/07/2016	4	16:30pm	20:30pm	Daryl Robinson	Partly cloudy, no rain, gentle breeze, 18°C

16/08/2016	5	06:00am	11:00am	Daryl Robinson	Cloudy and warm, no rain, breezy sometimes strong

Table 3: Cirl Bunting Survey Details

5.3.43 A route was plotted on a map of the Site and ensured that the route taken by the surveyor approached to within 10m of every hedge within the survey area. The route was walked slowly to aid detection and the direction of the route was varied between visits. Visits were timed to avoid periods of low activity between the hours of 1100 and 1500hrs.

5.3.44 During the surveys all Cirl Buntings either seen or heard were mapped accurately onto a map noting, the appropriate BTO behaviour codes, the time, habitat, movements and behaviour of each individual or pair. Records such as age and sex of each individual bird were recorded were possible. After the final survey visit, all sightings were transferred onto a single map to identify clusters of Cirl Bunting sightings. These clusters were then allocated to possible territories.

5.3.45 Areas adjacent to the Site were also surveyed where practicable and any registrations of Cirl Buntings in these areas were noted. A large area of possible mitigation land (approximately 500m to the west of the Site) was also surveyed to gain an understanding of Cirl Bunting numbers.

5.3.46 The interpretation of behaviour to assess breeding[4] is shown in Table 4 below.

Possible breeding	Probable breeding	Confirmed breeding
Bird recorded in suitable breeding habitat Singing male	Pair in suitable nesting habitat Territorial behaviour Display Visiting probable nest site Agitated behaviour Carrying nesting material	Adult carrying faecal sac or food for young Recently fledged young Chicks heard

Table 4: Interpretation of Behaviour to Assess Breeding

Survey Limitations

5.3.47 The presence of cows and bulls in Fields 3 and 4 prevented the effective survey the hedges on their western boundary on two occasions, due to health and safety risks. However, the surveyor was able to get close enough to observe this hedgerow using binoculars whilst listening for singing males or any other calls made by the Cirl Bunting. In addition, on the first Cirl Bunting survey visit, when the cows and bulls were not in this field, a single male Cirl Bunting was seen along this hedgerow.

5.3.48 As Cirl Bunting are so elusive, some individuals may have been missed during the surveys, however all surveys were undertaken in accordance with best practice guidelines and used experienced surveyors to minimise this possibility.

[4]Balmer, D.E., Gillings, S., Caffrey, B.J., Swann, R.L., Downie, I.S. & Fuller, R.J. 2013. *Bird Atlas 2007-11: The breeding and wintering birds of Britain and Ireland*. BTO Books, Thetford

Wintering Survey

5.3.49 Wintering surveys were undertaken by EcoSulis between December 2015 and February 2016. The report (see Appendix 1 of the baseline ecology report for full details) states four survey visits were undertaken in accordance with the methodology detailed in the RSPB 2015 guidance.

Invertebrates

5.3.50 A site visit was undertaken by an experienced entomologist on 20th April, 2016, during generally warm and sunny conditions. The Site was walked and key habitat features supporting or beneficial to key invertebrate assemblages/species were recorded using geo-referenced target notes. Particular emphasis was placed on habitat features important to S41 species and other species of note which have been recorded within the locality. Due to the perceived low value of improved agricultural land, the survey focused primarily on the network of hedgerows and associated margins. Details of vegetation composition and structure were recorded within the target notes, to add resolution to the potential of the site to support invertebrate species with a known affinity to a particular food-plant.

Data analysis

5.3.51 No formal data analysis was undertaken for the purpose of the current project, however, all recorded species were entered into an Excel spreadsheet and the conservation status of each species was checked using available materials such as the Taxon Designation Spreadsheet (available from the JNCC website) and various published taxon-specific atlases and reviews; Hyman and Parsons (1992) for example.

Limitations

5.3.52 This effort undertaken was essentially a scoping study (report provided in Appendix of baseline ecology assessment). Findings are based on a review of local record centre data-search and on the findings of a single visit survey which aimed to assess invertebrate habitat potential only. Whilst some species were recorded incidentally during the survey, these records cannot be seen as providing a representative cross section of species potentially occurring on site. From assessment of the habitat present on site it is possible to reasonably evaluate the site's potential value for invertebrates, however, there is no guarantee that rare, uncommon or designated species are not present on the site.

5.3.53 The DBRC data-search provides background information on certain species or species groups which have been recorded historically within a two kilometre radius of the site. However, certain records held by groups such as those held by the county invertebrate recorders may not be represented within the dataset.

Evaluation

5.3.54 The evaluation of ecological resources and characterisation of potential effects was undertaken in general accordance with the CIEEM's Guidelines on Ecological Impact Assessment (EcIA; 2nd edition, 2016[5]). These Guidelines have been endorsed by many non-statutory as well as statutory agencies including Natural England and the Environment Agency. The guidelines advocate an approach to valuing features that involves professional judgement based on available guidance and information.

[5] 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

5.3.55 The value or potential value of all ecological resource and features identified through the baseline surveys was determined within a defined geographical context. The following frame of reference was used:

- International;
- National;
- Regional;
- County;
- District;
- Local; and
- Site.

5.3.56 Designated Sites

5.3.57 Some sites have already been assigned a level of nature conservation value through designation, and the guidelines recommend that the reasons for this designation need to be taken into account in the assessment. Such designations include:

- Internationally important sites such as SACs, SPAs, SCI and Ramsar sites;
- Nationally important sites such as SSSIs and NNRs; and
- Regional/County important sites.

5.3.58 Where a feature has value at more than one designation level, the assessment considers the impacts of the development in respect of each of the features for each of the designations, to distinguish between them in accordance with the respective legislation and policy.

Habitats

5.3.59 The guidelines recommend that the value of areas of habitat and plant communities should be measured against published selection criteria where available. Habitat types of European (International) conservation importance are listed on Annex I of the Habitats Directive. Habitat types that are considered priorities for conservation in England and Wales are listed as habitats of principal importance under sections 41/42 of the NERC Act 2006. Locally important habitats may be listed in local Biodiversity Action Plans. For habitats that do not meet the necessary criteria for designation at a specific level, the guidelines recommend that the ecologist may consider the local context, if appropriate.

Species

5.3.60 The guidance deals with species that need to be assessed because they are of biodiversity value, rather than because they are legally protected (although some species may fit in both categories).

5.3.61 In assigning value to a species, it is necessary to consider its distribution and status, including a consideration of trends based on available historical records. The valuation of populations should make use of any relevant published evaluation criteria. Species that are considered priorities for conservation in England and Wales are listed as species of principal importance under sections 41/42 of the NERC Act 2006. Species may be listed on the UK BAP list (see above) and/or locally important species may also be listed in local Biodiversity Action Plans.

Assessment of potential impacts

5.3.62 In accordance with the CIEEM guidelines, the next step is to characterise the likely impacts of predicted biophysical changes on ecological resources as far as possible. This process entails consideration of all impact characteristics such as: impact magnitude, extent, duration, reversibility, timing, frequency, in order to determine which impacts are significant in ecological terms (see below).

5.3.63 Impacts during the construction and operation phases of the proposed development were assessed and a distinction made as to whether effects were considered to be short, medium or long-term (with consideration for each receptor i.e. lifecycle). Similarly, impacts were also separated into those which were directly or indirectly associated with the development and whether they were of a temporary or permanent nature. Judgement of the magnitude of each potential impact was based on the best available knowledge of the sensitivity, vulnerability, and recoverability of the habitat, species or assemblage being assessed.

5.3.64 Mitigation measures are developed iteratively through the assessment and design process to avoid, reduce or remedy any significant adverse impacts, as far as possible, throughout the assessment and project design process. It is sometimes difficult to distinguish between pure mitigation measures, and features of the project that mitigate potential adverse effects 'through design', also known as 'inherent mitigation'. In the case of the proposed development most positive measures that would enhance biodiversity resources have been considered integral to the purpose and design of the proposals.

5.3.65 Finally, the CIEEM Guidelines recommend that any residual impacts, whether positive or negative, be reviewed against planning policy to determine the implications for action, the acceptability of the proposals and/or the requirements for additional compensation.

Criteria for Assessment

5.3.66 Significant effects encompass impacts on structure and function of defined sites and ecosystems. For the purpose of EcIA, a significant effect is:

'an effect that either supports or undermines biodiversity conservation objectives for important ecological features or for biodiversity in general.'

5.3.67 The conservation objectives will vary depending on the ecological features. For example, they may be specific (e.g. for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local.

5.3.68 For habitats, conservation status is:

'determined by the sum of the influences acting on the habitat and its typical species that may affect its long-term distribution, structure and functions as well as the long-term survival of its typical species within a given geographical area'.

5.3.69 For species, conservation status is:

'determined by the sum of influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within a given geographical area'.

5.3.70 In order to assess whether the conservation status of any ecological features are likely to be affected by proposed development, potential impacts on all features are given a value that must be fully characterised as described above. On the basis of all of these factors, available scientific knowledge of the feature, and available information on sensitivities to predicted biophysical changes, a professional judgement can then be made as to whether there would be a potential effect on the conservation status of the feature, in other words, whether the impact would be 'significant' in ecological terms. The 'level of significance' can then be defined by stating the value of resource affected or restored/created through the effect e.g. 'a significant negative impact at the County level'.

5.3.71 The level of confidence attached to all predictions is also stated, because where impacts would occur but would probably not be significant in terms of integrity or conservation status, measures can always be put in place to increase the degree of confidence in such a prediction. The scale used here is as follows:

- Certain/near-Certain: probability estimated at 95% chance or higher;
- Probable: probability estimated above 50% but below 95%;
- Unlikely: probability estimated above 5% but less than 50%;
- Extremely Unlikely: probability estimated at less than 5%.

5.3.72 In addition to determining the significance of an impact on any ecological features, this Chapter also identifies any legal requirements in relation to wildlife.

Assumptions / Limitations

5.3.73 Any limitations to the survey work in terms of access to the Study Area are noted in the relevant species sections. All surveys were undertaken in suitable weather conditions at optimum times of year following recognised best practice guidance.

5.3.74 It should be noted that owing to the seasonality of some species, as well as the ability for some species to quickly colonise sites, the absence of evidence of any particular species from within the Site should not be taken as conclusive proof that the species is not present or that it will not be present in the future. However, it is considered that the results of the Phase 1 survey and additional Phase 2 surveys are sufficient to have allowed for the identification of the habitats and the presence or absence of legally protected species and other valued ecological feature.

5.4. Baseline conditions

5.4.1 This section describes the results of the desk study and field surveys undertaken to inform the EcIA process.

Designated Sites

Statutory Nature Conservation Designations

5.4.2 There are nine statutory sites within the area of search, details of which are provided in Table 5 below and mapped in Figure 6 of the baseline ecology report.

Site Name	Reasons for designation	Distance from Site.
Lyme Bay and Torbay marine SCI	Annex I habitats that are a primary reason for selection of this site: Reeds Submerged or partially submerged sea caves	**1.2km east**
Torbay MCZ	Conservation objectives for the protection of: Intertidal coarse sediment Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Low energy intertidal rock Moderate energy intertidal rock Subtidal mud Intertidal underboulder communities Seagrass beds Long-snouted seahorse *Hippocampus guttulatus*; and Native oyster *Ostrea edulis*	**1.1km east**

South Hams SAC	Five discrete sites spread across Devon, with nearest being the Berry Head to Sharkham Point SSSI component. Annex I habitats that are a primary reason for selection of this site: European dry heaths Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: Vegetated sea cliffs of the Atlantic and Baltic Coasts Caves not open to the public, and Tilio-Acerion forests of slopes, screes and ravines * Priority feature Annex II species that are a primary reason for selection of this site: Greater Horseshoe bat – South Hams in south-west England is thought to hold the largest population of Greater Horseshoe bat in the UK, and is the only one containing more than 1,000 adult bats (31% of the UK species population). It contains the largest known maternity roost in the UK and possibly in Europe. As the site contains both maternity and hibernation sites it demonstrates good conservation of the features required for survival. Berry Head to Sharkham Point SSSI component is understood (information from Devon Bat group) to support approximately 65 GHS during the maternity period, and approximately 100 GHS during the hibernation period. The Site falls within a GHS sustenance zone for the SAC.	**5.0km south east**
Berry Head to Sharkham Point SSSI	This site is important for its extensive area of limestone grassland containing many nationally rare plants and for its important assemblages of lichens. Also, the sea cliffs support the largest Guillemot colony to be found along the south coast of England. In addition, important geological features are to be found at Shoalstone Beach. The SSSI citation also notes "*The flooded marine caves with their wide range of salinity and light conditions have an interesting cave and marine fauna. Some are inhabited by Greater and Lesser Horseshoe Bats Rhinolophus ferrumequinum and R. hipposideros."*	**5.0km south east**
Berry Head NNR	Main habitats: coastal, lowland grassland	**5.0km south east**
Saltern Cove SSSI	Saltern Cove is an important geological locality. It also supports a diverse intertidal flora and fauna including communities characteristic of both sediment and rocky shores.	**1.4km east**
Sugar Loaf Hill and Saltern Cove LNR	No information given by DWT	**1.4km east**

Roundham Head SSSI	Geological SSSI (as such, not discussed further in this assessment)	**2.3 km north east**
Lord's Wood SSSI	**The site comprises one of the best examples of oak-hazel-ash woodland in Devon and is an important representative of woods developed on loamy soils in western and northern Britain.**	**3.0km south**

Table 5: Statutory Nature Conservation Designations within Area of Search

5.4.3 The SCI and SAC are of International value; the SSSIs and MCZ are of UK value and the NNR and LNR are of National value.

Non-statutory Sites

5.4.4 There are approximately 30 non-statutory sites within 2km of the Site, which are made up of County Wildlife Sites (CWS), Unconfirmed Wildlife Sites (UWS) and Other Sites of Wildlife Interest (OSWI). The closest sites are provided in Table 6 below.

Site Name	Reasons for designation	Distance from Site.
Galmpton Common CWS SX85/095	Herb-rich neutral and calcareous grassland, with some woodland blocks	450m south east
Manor Farm OSWI SX85/092	Broadleaved woodland & scrub, with semi-improved & species-rich calcareous grassland	450m south
Tor Rocks CWS SX85/096	Broadleaved woodland	500m east
Waddeton UWS **SX85/120**	**Orchard**	550m south west

Table 6: Closest Non-statutory Nature Conservation Designations

5.4.5 CWS are defined in Devon as sites of county value for wildlife, designated on the basis of the habitat or the known presence of particular species. OSWI are defined in Devon as sites of significant wildlife interest within a local context that have been surveyed but do not reach the criteria for County Wildlife Sites, and as such are considered in this assessment to be of District Value. UWS are defined in Devon as sites identified as having possible interest but not fully surveyed. Some of these sites will be areas of significant wildlife interest. On a precautionary basis this assessment considers UWS to be of District Value.

5.4.6 Given the distances to the non-statutory sites no impact pathways are predicted. As such non-statutory sites are not discussed further in this assessment.

Stewardship agreements

5.4.7 The hedge banks and field margins present in Field 5 and in the OSML fields to the west of Waddeton Road are subject to an Entry Level Stewardship (ELS) agreement. The agreement is due to run to August 2021 and requires there to be 2m grass margins (Option EE1), sensitive hedge management (Option EB2) and protection of the earth banks (Options EB13). In addition the field to the west of Waddeton Lane Plantation is subject to a Higher Level Stewardship (HLS) agreement, which requires "reduced-depth, non-inversion cultivation" to protect archaeological features.

Protected and notable species

5.4.8 Records of legally protected or otherwise notable species of flora and fauna within 1km of the site (extended to 4km for bats) were provided by Devon Wildlife Trust. A summary of the most significant results is given in Table 7 below and discussed in more detail in the relevant species specific sections below.

Species	Record Summary
Amphibians	Records of Common Frog *Rana temporaria*, Toad *Bufo bufo*, Smooth Newt *Lissotriton vulgaris* and "newt". Nearest record is for a Common Frog approximately 50m west on Steed Close. Nearest records for "a Newt" are all greater than 500m from the Site.
Badgers	None on or in close proximity to the Site.
Bats	Records of nearly all UK species (no records for Leisler's bat or some Myotis inc. Bechstein's Bat *Myotis bechsteinii*). Nearest records of Greater Horseshoe bat are approximately 1km away. Records do not state if they are for roosting or foraging bats, but Paignton Zoo caves (approx. 1.7km north) are understood to support hibernating GHS, and Devon Bat Group confirmed they have no records of GHS maternity roosts within 4km of the Site, with nearest known to be at Berry Head and Dartmouth >5km away.
Birds	Diverse range of bird species records. Most records from costal or riparian habitats. Also species associated with farmland, including Cirl Bunting, Fieldfare *Turdus pilaris*, Redwing *Turdus iliacus*, Barn Owl, Red Kite *Milvus milvus*, Red-backed Shrike *Lanius collurio*, Whimbrel *Numenius phaeopus* and Brambling *Fringilla montifringilla* (although none recorded on/adjacent to Site). RSPB returned approx. 10 records of Cirl Bunting within 1km of the Site.
Brown Hare	Nearest records approximately 500m west.

Dormouse	One record from 2002, shown in woodland approximately 800m north east.
Hedgehog	One record approximately 200m east.
Invertebrates	Noting four exceptions (two dragonflies, a bush-cricket and a cave shrimp), limited to records of butterflies and moths (Lepidoptera). Records include Marsh Fritillary *Eurydryas aurinia*, Brown Hairstreak *Thecla betulae* and White-letter Hairstreak *Satyrium w-album* and over 30 S41 species.
Reptiles	Records Slow Worm *Anguis fragilis,* but none on or in close proximity to the Site.

Table 7: Desk Study records of note within 1km (4km for bats) of the Site

5.4.9 Table 8 below provides a summary of the key information recorded by EcoSulis historical surveys on Site.

Species	Record Summary
Amphibians	Ponds not considered suitable for GCN. As such no surveys undertaken.
Badgers	No setts recorded on or adjacent to Site.
Bats	No roosts recorded on or adjacent to Site. Surveys in 2010 and 2015 recorded the following species foraging on site: GHS, Lesser Horseshoe bat, Barbastelle, Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Myotis and Serotine.
Birds	2010 surveys recorded a good population of breeding birds, including Birds of Conservation Concern (BOCC), UK BAP and Devon BAP species.
Cirl Bunting	Breeding surveys split over 2014/15 recorded found the Site to support two probable breeding territories of Cirl Bunting, with a further territory located directly south of the Site. Wintering Cirl Bunting surveys recorded two males and a female in the field adjacent to the northern boundary of the Site. These were recorded during three of the four survey visits.
Brown Hare	Seen on the White Rock 1 Site.

Dormouse	2010 survey did not record any evidence
Invertebrates	An invertebrate survey conducted in September 2010 within the White Rock survey area recorded a species of micromoth formerly classed as Red Data Book (RDB3) 'Rare' in the UK, the Chestnut Pigmy Moth *Stigmella samiatella* (the species has now been subject to a status revision due to an increasing number of UK records). The other significant record was for Great Green Bush-cricket *Tettigonia viridissima*, listed as a Devon LBAP species.
Reptiles	2010 surveys recorded a low population of Slow Worms.

Table 8: Summary of Historical EcoSulis Survey Data

Extended Phase 1 Habitat Survey

Site Description

5.4.10 The results of the Site field survey are indicated on Figures 7 and 8 of the baseline ecology report, with the associated target notes (TNs) provided in the baseline ecology report. Plant names follow Rose (2006). A full description of the habitats and target notes are provided in the Ecological Baseline Report in ES Appendix X, with a summary provided below.

5.4.11 The Site is located on the western edge of Paignton (central OS grid reference SX881575), bounded by Brixham Road to the east, a recent mixed used development known as "White Rock" in close proximity to the north and open farmland to the south and west. The approximately 28ha Site consists of five fields:

- one permanent cattle pasture;
- one used to grow cereal crops; and
- three in arable/pasture rotation.

5.4.12 All are bounded predominantly by hedge banks (and also a woodland plantation along a short approx. 100m section of it southern boundary) and two small (<100m^2) ponds.

5.4.13 Parts of the Site are subject to management plan to provide mitigation for the White Rock development. Where relevant the habitat descriptions below set out the proposed management prescriptions.

Habitats

5.4.14 The general nature of the main or important habitats is described below. Important habitats are defined here as those that are listed by the UK BAP, with a Habitat Action Plan (HAP) published in the local BAP, or that are otherwise considered to be important in a local context. Local BAP habitats (found in the field survey) are cross-referenced with standard JNCC Phase 1 habitat types in Table 9 below.

Habitat Type/ Feature	UK BAP	Devon BAP	Torbay BAP
Poor Semi-improved Grassland	N/A	N/A	Farmland
Open Water	Ponds not considered to qualify under the UK BAP Priority habitat given their eutrophic nature.	N/A	Farmland
Arable	N/A	N/A	Farmland
Hedgerows	Hedgerows	Species-rich hedges	Farmland
Unimproved Neutral Grassland	Lowland Meadow	Flower-rich meadows and pastures	Farmland

Table 9: Summary of main habitats present on Site and their corresponding BAP habitats (where applicable)

Poor semi-improved grassland

5.4.15 Field 1 covers approximately 5.4ha and appears to be permanent pasture grazed by cattle. For the majority of the survey period this field was grazed leaving a short (<5cm) sward. This has resulted in a relatively low diversity of flora with Perennial Rye-grass *Lolium perenne* abundant, with Yorkshire Fog, Sweet Vernal-grass *Anthoxanthum odoratum*, White Clover *Trifolium repens*, Dandelion, Bird's Foot-trefoil *Lotus corniculatus,* Broad-leaved Dock, Creeping Buttercup and Ribwort Plantain also recorded.

5.4.16 Whilst the field may qualify as "Farmland" under the Torbay BAP, given the limited diversity of species recorded in the sward and lack of diversity in sward height, Poor semi-improved grassland is considered to be of Site value only.

Open Water

5.4.17 Two ponds are present in/on the boundary of Field 1. The pond in the western hedgerow boundary of Field 1 is approximately 80m^2. It is stone edged and heavily over-shaded by mature multi-stemmed Goat Willow *Salix caprea* and Hawthorn. It was approximately 1m deep with shallow margins at time of the April Phase 1 Habitat survey, with no visible macrophyte vegetation. The pond became dry during the course of the summer. Banks with Ivy *Hedera helix,* Common Nettle *Urtica dioica* and Lesser Celandine *Ranunculus ficaria*.

5.4.18 The pond in the middle of Field 1 is approximately 100m^2. It is less shaded than pond 1 with Goat Willow growing in and around the pond and also Ash and stone rubble on the banks. At the time of the Phase 1 Habitat Survey the pond was shallow (<50cm deep). During the course of the summer the pond became dry. It is heavily cattle poached at the margins and eutrophic with blanket algal blooms. It contained some macrophyte vegetation Floating Sweet Grass *Glyceria fluitans* and Brooklime *Veronica beccabunga*.

5.4.19 Whilst ponds are rare in the wider landscape, given the eutrophic nature of both ponds and the absence of Great Crested Newts, the ponds are considered to be of Local Value only.

Arable

5.4.20 Field 5 is approximately covers approximately 9ha, of which approximately 5ha is within the red line planning boundary. During the course of the ecology surveys it supported cereal crops, one which was harvested in the summer, with another being sown in the autumn (i.e. no winter stubbles present). Approximately 3m wide poor semi-improved grassland margins where present all-round the field. They were tussocky for the majority of the time (subject to a summer cut) with Perennial Rye-grass, Cock's foot, Yorkshire Fog, False Oat-grass *Arrhenatherum elatius*, Hogweed, Spear-thistle *Cirsium vulgare,* Cut-leaved Crane's-bill, Broad-leaved Dock, Germander Speedwell *Veronica chamaedrys*, Dandelion, White Clover and Ribwort Plantain recorded.

5.4.21 The remaining three fields, totalling approximately 21ha (with approx. 4.5ha of Field 3 lying outside the red line planning boundary) are managed as grassland leys and late summer/autumn sown crop rotations. The improved grassland leys were dominated by Perennial Rye-grass, with White Clover, Broad-leaved Dock, Dandelion, Creeping Buttercup, Creeping Bent and Ribwort plantain also recorded. Field 2 was sown with Kale in later summer 2016, with 5m field margins left uncultivated. The grassland leys were grazed in rotation by cattle.

5.4.22 Whilst the crop field (Field 5) is subject to an environmental stewardship agreement (requiring there to be 2m grass margins, sensitive hedge management and protection of the earth banks), given that arable fields are common in the wider landscape, the crop field is not left as over-wintering stubble and the grassland leys are of very limited botanical and structural diversity, they are considered to be of Site Value only.

5.4.23 *Hedgerows*

5.4.24 Species-rich hedge banks with and without trees define the majority of the field boundaries. Most hedgerows appear to have been subject to heavy management/cut close to the hedge bank in recent years. They supported typical hedgerow species, including Blackthorn *Prunus spinosa* and Hawthorn *Crataegus monogyna* being most abundant, with other low growing woody species including English Elm *Ulmus procera,* Goat Willow, Elder *Sambucus nigra*, Hazel *Corylus avellana* and Holly.

5.4.25 Several ancient woodland indicator species (also associated with old hedgerows) were recorded including native Bluebell *Hyacinthoides non-scripta,* which occurred on the banks of a number of hedges and species such as Ransoms *Allium ursinum* and Wood False Brome *Brachypodium sylvaticum*. Other characteristic hedgerow herbs recorded on hedge-banks included Lesser Celandine *Ranunculus ficaria,* Primrose *Primula vulgaris,* Common Dog Violet *Viola riviniana,* Sweet Violet *V. odorata,* Dog's Mercury *Mercurialis perennis,* Ground Ivy *Glechoma hederacea*, Red Campion *Silene dioica*, Hedge Bedstraw *Galium mollugo*, Stinking Iris *Iris foetidissima,* Herb Robert *Geranium robertianum*, Shining Crane's-bill *Geranium lucidum* and Wood Avens *Geum urbanum*.

5.4.26 Many of the hedge banks are defined as species-rich with trees only due to the recent tree planting undertaken as part of the mitigation measures required for White Rock (set out in the off-site LEMP).

5.4.27 Given that the hedgerows qualify as both UK and Local BAP habitat, that most are species-rich, and that they support a diverse range of fauna, they are considered of District Value.

Unimproved neutral grassland

5.4.28 The White Rock LEMP also proposes there would be a 3m wide crop free margin either side of hedgerows to be managed under the LEMP (based on the centre line of the hedge), with these margins to be sown with a wildflower mix. Whilst no evidence of such margins was recorded, if the measures were undertaken in accordance with the LEMP over its 20 year period, it might be possible for approximately 0.4ha of grassland approximating unimproved neutral grassland to establish.

5.4.29 Given the decline of unimproved neutral grassland across the UK and Devon in the 20th century (because of changing agricultural practices), these margins could qualify as Lowland Meadows and Flower-rich meadows UK and Devon BAP habitats, it is considered they could be of District Value.

Off-site mitigation land

5.4.30 The off-site mitigation land (OSML) is to the west of the Site (See Figure 8 of the baseline ecology report). It covers approximately 25ha and consists of five fields (one of which is part of the on Site cereal crop field noted above), with another three being used to grow cereal crops and one in arable/pasture rotation). The cereal crop fields surround the existing/established Waddeton Lane Plantation, are bounded by hedgebanks and recently planted (<5 years) woodland plantations and generally have 1-2m wide species-poor grass margins. They are not left as over wintering stubbles. The field in arable/pasture rotation is very similar to those described on Site (i.e. managed as grassland leys and late summer/autumn sown crop rotation).

Fauna

Bats

Preliminary Assessment of Features

5.4.31 Eight trees on Site were considered to offer suitable habitat for roosting bats. Figure 2 of the baseline ecology report shows their locations and provides details of the potential bat roosting features.

5.4.32 Whilst no buildings are present on Site, White Rock Cottages and the derelict farm buildings to north of the Site were considered to offer suitable habitat for roosting bats, with the latter offering potential roosting habitat for horseshoe bats. Figure 3 of the baseline ecology report shows their locations and provides details of their suitability.

Activity Surveys

Roosts

5.4.33 The activity surveys did not record any roosts on Site. It did however record bats roosting in the derelict farm buildings approximately 200m to the north of the Site.

5.4.34 The AnaBat in the basement of Inglewood recorded calls suggesting that both Greater and Lesser Horseshoe bats were both day roosting here. The manual emergence and re-entry surveys here in late August and September recorded a single Lesser Horseshoe bat emerging/returning to the basement on three separate occasions, but no other bat species (including Greater Horseshoe bats) were recorded roosting.

5.4.35 Given the lack of GHS bats recorded roosting during the emergence surveys and the conditions of the basement (relatively open/limited sheltered locations resulting in fluctuations in temperature and humidity, damp and risk of disturbance/attack by cats with being at ground level) it is considered unlikely to support a maternity roost.

5.4.36 A single storey barn (building 5) was found to support a GHS night roost and a day roost for a single Common Pipistrelle. Buildings 9 and 11 might also support night roosts for both horseshoe species.

5.4.37 The earliest/latest records for GHS (defined by being within 30 minutes of sunset or sunrise) were recorded at AnaBat location 1 (see Table 10 below. Note that no GHS records were made within 30 minutes of sunrise). This accords with the records of GHS bats roosting at Inglewood farm building to the north i.e. the closest known GHS roost and with AnaBat location 1 being on hedge with trees leading to the farm buildings.

AnaBat Location	GHS records* within 30 mins of Sunset
1	29
2	0
3	1
4	0
5	2
6	0
7	0
8	1
9	2
10	1
11	2
Total	38

Table 10: Total number of early GHS records by location

* Record defined as a file that contained an echolocation of that species

5.4.38 The majority of these "early" records were made in October (Table 11 below). This suggest that Inglewood might also support a transitional GHS roost. However, an AnaBat was deployed in Inglewood from the 28th of September to 10th of October 2016, and only four records of GHS were recorded and these being "in the middle of the night" (see Table 12). This suggests that GHS may either have used a different emergence point to where the detector was located or potentially are roosting somewhere else in close proximity.

Month	GHS records within 30 mins of Sunset
April	4
May	4
June	7
July	0
August	0
September	0
October	23

Table 11: "Early" GHS records by Month

Date (Year-Month-Night)	Time	Sunset	Sunrise
2016/09/28	04:12:09	18:53	07:11
2016/09/28	04:24:49	18:53	07:11
2016/09/28	04:26:52	18:53	07:11
2016/10/05	01:15:31	18:43	07:22

Table 12: GHS recorded at Inglewood (Farm Building) in September/October

5.4.39 The majority of GHS bats were recorded "in the middle of the night" (defined as not being within 3hrs of sunset or sunrise), see Table 13 below. This suggests that most GHS might be travelling some distance to forage on Site. However it's worth noting that 238 of the GHS records were made at location 5 on the 13th of September, between 01:28 and 01:40 (i.e. likely intense feeding activity by single or low number of GHS). If this feeding bout is discounted the "middle of the night" count would drop to 545, and be roughly equivalent to the total count of GHS records within 3hrs of sunset or sunrise (665). This suggests the Site may be of equal importance for GHS day roosting locally as it is for those commuting from further afield/night roosting in the vicinity.

Month	GHS records within 3hrs of sunset	GHS records within middle of the night	GHS records within 3hrs of sunrise
April	103	38	1
May	116	161	69
June	21	42	19
July	11	28	6
August	123	72	7
September	8	450	9
October	161	37	11
Total	543	828	122

Table 13: Time of GHS records by month.

Species Diversity

5.4.40 The activity surveys recorded at least* nine species of bat on Site, these being:

- Noctule;
- Serotine;
- Barbastelle;
- Common Pipistrelle;
- Soprano Pipistrelle;
- at least one species of Long-eared bat *Plecotus sp*.;
- at least one species of Myotis;
- Greater Horseshoe; and
- Lesser Horseshoe bat.

*With further analysis it may be possible that Leisler's bat, Nathusius' Pipistrelle *Pipistrellus nathusii* as well as other particular species of Myotis bats could be verified as present on Site.

5.4.41 The activity was dominated by pipistrelle bats with them accounting for over 85% of bat calls recoded by the automated detectors, as shown in Table 14 below.

Species/ Species Group	Count of records
Pipistrelle species	50,170
Noctule- Leisler's-Serotine (N-L-S)	4,125
Myotis Species	2,015
Greater Horseshoe bat	1,321
Lesser Horseshoe bat	670
Long-eared bat	266
Barbastelle	10
Total	58,577

Table 14: Total number of bat records by species

Key commuting and foraging habitat

5.4.42 Bat activity was fairly well distributed across the Site, with:

- the manual surveys recording most activity along the hedgerows and woodland edge (accepting this was the route the transects took, activity could also be recorded/and was in the fields on these transects);
- a large proportion of activity was recorded along the Brixham Road, with pipistrelle species feeding around the street lamps and tree cover; and
- the majority of bat activity was recorded within close proximity of Brixham Road (See Table 15 below and Figures 9a-g of the baseline ecology report), even accounting for the varying number of nights activity was recorded).

AnaBat Location	Count of records	Nights of recording
4	10,127	59
5	9,373	67
10	9,356	77
9	8,046	61
11	6,413	59
7	4,085	67
6	3,141	58
1	2,520	75
8	2,083	66
3	1,990	50
2	1,443	72

Table 15: Total number of bat records by location by automated detectors

5.4.43 A total of 1,493 GHS records were recorded by the AnaBats (See Table 17). This figure is higher than the 1,321 figure presented in Table 16, due to the horseshoe filters in AnaLookW in combination with manual verification being more powerful than the automated species identification in Kaleidoscope. Whilst this equates to a very small proportion (<3%) of the bat records, it should be seen in the context that GHS are very rare.

5.4.44 Table 16 below shows that most GHS were recorded at location 5, followed by locations 7, 1, 6, 11 and 10. The records made at location 5 include the likely feeding bout in September discussed above. Locations 4, 2, 8 and 9 recorded the fewest GHS. This might be as Brixham Road is lit, there is a 200m break in the hedge to the west of location 2 and GHS could be commuting through Nords plantation as well/in preference to commuting along its edge.

AnaBat Location	Count of GHS records	Nights of recording
5	465	67
7	198	67
1	178	75
6	141	58
11	134	59
10	117	77
3	94	50
4	52	59
2	43	72
8	40	66
9	31	61
Total	1493	

Table 16: Total number of GHS records by location (in descending order of records)

5.4.45 Of the 23 manual records made of GHS, no feeding activity was specifically recorded over the cattle pasture. However it should be noted that surveyors only saw a small proportion of the GHS they heard on the detectors.

5.4.46 A total of ten records of Barbastelle Bat were made (all on the automated detectors), with the locations and times given below Table 17. The records are not close to Barbastelle emergence times and together with the limited records recorded on Site and with only one record returned in the desk study (approx. 3km north in Collaton St. Mary) suggest there is not a Barbastelle roost in close proximity and the Site is not a key foraging area for them.

Month	Location	Date (Year/Month/Night)	Time
August	10	2016/08/10	22:51:09
August	10	2016/08/16	01:58:55
August	10	2016/08/16	23:50:57
August	10	2016/08/16	01:35:00
August	10	2016/08/17	23:24:41
August	10	2016/08/17	01:53:19
August	7	2016/08/20	02:29:00
August	7	2016/08/24	04:03:19
September	7	2016/09/06	20:45:35
September	3	2016/09/11	23:48:13

Table 17: Barbastelle records

Seasonality

5.4.47 There appears to have been increased bat activity in May, August and October, and reduced activity in April (see Table 18 below).

Month	Count of Records	Nights of recording
April	1,776	87
May	10,767	97
June	8,542	111
July	5,510	104
August	9,934	89
September	7,111	100
October	14,937	123

Table 18: Total number of bat records by month

5.4.48 The amount of GHS records made in each month (see Table 19 below) suggests reduced GHS activity in June and July, with increased activity in May and September. This might be because pregnant females/ young mothers remain closer to the maternity roost at Berry Head and do not commute as far as this Site and/or be a reflection that GHS were feeding more within the cattle pasture in these months away from the AnaBats positioned on the hedgerows (although no GHS were specifically recorded feeding over cattle pasture by the manual survey effort).

Month	Count of GHS records	Nights of recording
April	142	87
May	346	97
June	82	111
July	45	104
August	202	89
September	467	100
October	209	123

Table 19: Total number of GHS records by Month

Hibernation Surveys

5.4.49 The AnaBats recorded one horseshoe record, that being for a Lesser Horseshoe bat on the 18th February at 18:14, when sunset was at 17:37. As such it is considered Inglewood at least supported a Lesser Horseshoe bat hibernation roost.

Valuation

5.4.50 Whilst no roosts were recorded on Site or at White Rock Cottages:

- the following roosts were recorded at the derelict farm buildings approximately 200m north of the Site:
  - GHS and Lesser Horseshoe summer day roosts at the Inglewood building (non-maternity);
  - Potential transitional day roost at Inglewood too;
  - GHS night roost in one of the derelict stables (building 5), and
  - Common Pipistrelle summer day roost at the same stable (single bat/non-maternity).
  - Potential night roosts for both species of horseshoe bat in buildings 9 and 11.
- a relatively diverse assemblage of bats was recorded foraging on Site, including one very rare (GHS) and two rare species (LHS and Barbastelle), with these three species being restricted in distribution,
- there is an extensive network (approx. 3.3km) of species-rich Devon hedgebanks on Site which provide commuting and foraging habitat,
- the Site includes approx. 22ha of potential grazed pasture (with the cattle currently not being treated with an avermectin based wormer) which is of known value for GHS feeding due to the associated dung beetle prey assemblage, and

- the Site is within the SAC sustenance zone for GHS,

5.4.51 As such, the Site is considered of Regional Value for bats.

Birds

5.4.52 The habitats within the area provide breeding and foraging opportunities for common bird species associated with farmland, hedgerows and woodland.

5.4.53 A full list of bird species recorded during the surveys is given in Table 20 below. The table details the habitat with which each species was observed to be associated, the breeding status, the maximum number of pairs likely to be breeding within the Site and the conservation status, as categorised by Eaton *et al.,* (2016). The approximate breeding locations are presented in Figures 11a-c of the baseline ecology report, and UK BAP Species, Wildlife and Countryside Act Schedule 1 and Species of Principal Importance recorded within the Site are given in Table 21.

5.4.54 A total of thirty-two bird species were recorded during the surveys, four of which were only recorded flying over.

5.4.55 Of the species recorded on Site, five are considered to be of high (red-listed) conservation status: Skylark, Cirl bunting, Linnet, House Sparrow and Herring Gull. Of these, House Sparrow, Linnet and Skylark are probable breeders. Cirl Bunting is a confirmed breeder on Site. Herring Gulls were most likely commuting between foraging grounds and roosting/breeding locations.

5.4.56 Seven species are considered to be of medium (amber-listed) conservation status: Dunnock, Stock

5.4.57 Dove, Mallard, Meadow Pipit, Willow Warbler, Bullfinch and Lesser Black-backed Gull. Of these dunnock is a confirmed breeder whilst Bullfinch is a probable breeder. Meadow Pipit, Stock Dove, Mallard and Lesser Black-backed Gull were observed on Site but not thought to nest on site.

5.4.58 A total of seven species, with six confirmed or probable breeders, were recorded during surveys that are listed as UK Biodiversity Action Plan (BAP) Priority Species (succeeded by the UK Post-2010 Biodiversity Framework) and Species of Principal Importance.

5.4.59 One species, Cirl Bunting, listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) was recorded as breeding on Site.

5.4.60 The remainder of the bird species recorded are of low conservation status (Green listed) or are without status (e.g. Pheasant and Canada Goose).

Common Name	Latin Name	Habitat association	Breeding Status				Number of breeding pairs (max)	Conservation status
			Confirmed	Probable	Possible	Not breeding		
Species recorded during breeding bird surveys								
Barn Swallow	*Hirundo rustica*	Aerial				✓	?	Green
Blackbird	*Turdus merula*	Hedgerows/scrub, farmland, open ground	✓				8	Green
Blackcap	*Sylvia atricapilla*	Woodland		✓			1	Green
Blue Tit	*Cyanistes caeruleus*	Hedgerows, mature trees	✓				3	Green
Buzzard	*Buteo buteo*	Mature trees, farmland, aerial		✓			1	Green
Bullfinch	*Pyrrhula pyrrhula*	Hedgerows/scrub		✓			1	Amber

Canada Goose	*Branta canadensis*	Aerial			✓		n/a
Cirl Bunting	*Emberzia cirlus*	Hedgerows/scrub, farmland	✓			2	Red
Chaffinch	*Fringilla coelebs*	Mature trees, hedgerows/scrub		✓		2	Green
Chiffchaff	*Phylloscopus collybita*	Mature trees		✓		2	Green
Dunnock	*Prunella modularis*	Hedgerows/scrub	✓			4	Amber
Gold Finch	*Carduelis carduelis*	Hedgerows/scrub		✓		4	Green
Great Tit	*Parus major*	Hedgerows/scrub mature trees	✓			3	Green
Herring Gull	*Larus argentatus*	Aerial			✓		Red
Heron	*Ardea cinera*	Aerial			✓		Green

House Sparrow	*Passer domesticus*	Hedgerows/scrub, open ground		✓		4	Red
Jackdaw	*Corvus monedula*	Mature trees, aerial	✓			2	Green
Lesser Black-backed Gull	*Larus fuscus*	Aerial			✓		Amber
Linnet	*Carduelis cannabina*	Hedgerows/scrub, farmland, open ground	✓			14	Red
Long-tailed Tit	*Aegithalos caudatus*	Scrub, hedgerows				1	Green
Magpie	*Pica pica*	Hedgerows, open ground		✓		2 groups	Green
Mallard	*Anas platyrhynchos*	Farmland, water bodies			✓	-	Amber
Meadow Pipit	*Anthus pratensis*	Aerial		✓		?	Amber

Pheasant	*Phasianus colchicus*	Farmland		✓			?	n/a
Robin	*Erithacus rubecula*	Hedgerows/scrub, mature trees, open ground	✓				11	Green
Rook	*Corvus frugilegus*	Mature trees, farmland	✓				14	Green
Skylark	*Aluda arvensis*	Semi-improved grassland, open ground, arable crop		✓			8-10	Red
Stock Dove	*Columba oenas*	Semi- improved grassland on-site				✓	-	Amber
Whitethroat	*Sylvia communis*	Hedgerows/scrub	✓				3	Green
Willow Warbler	*Phylloscopus trochilus*	Hedgerows/scrub			✓		1	Amber
Woodpigeon	*Columba palumbus*	Mature trees, semi-improved grassland, farmland		✓			?	Green

Wren	*Troglodytes troglodytes*	Hedgerows/scrub	✓		17	Green

Table 20: Bird species recorded during the surveys

Bird Species	UK BAP Priority Species	Species of Principal Importance	Wildlife and Countryside Act 1981 (as amended) Schedule 1
Bullfinch	✓	✓	
Dunnock	✓	✓	
Herring Gull	✓	✓	
Cirl Bunting	✓	✓	✓
House Sparrow	✓	✓	
Linnet	✓	✓	
Skylark	✓	✓	

Table 21: UK BAP Species, Wildlife and Countryside Act and Species of Principal Importance recorded within the Site

Cirl Bunting

5.4.61 During the surveys, Cirl Buntings were recorded on and off Site, confirming that the Site and surrounding areas are actively used by this species. The full results of the survey visits to the Site are presented in Table 21 below and each individual survey visit along with locations of Cirl Buntings shown in Figures 12a-f of the baseline ecology report.

Date	Survey and Figure Number	Cirl Bunting Observations	Survey Results and Behavioural Notes
27/04/2016	1	4 (2 off-site)	Three separate individual Cirl Buntings were heard calling along the north–west hedgerows; two of these were located outside of the survey boundary. A single male was seen along the western hedgerow of the Site. No other behavioural signs were noted.
13/05/2016	2	5 (2 off-site)	A single male was seen on the ground along the northern hedgerow of the Site adjacent to a housing development but outside of the survey boundary. A single singing male was seen along central hedgerows adjacent to the arable field. Two pairs of Cirl Buntings were noted in a recently used arable field located in the south of the Site simultaneously indicating separate pairs. One of these pair was seen collecting nesting material. A single singing male was seen off-site to the south of the Site boundary near the off-site woodland.
22/06/2016	3	4 (3 off-site)	A pair of Cirl Buntings was seen in appropriate breeding habitat in the eastern corner of the Site and contact calls were heard coming from this pair. Three other sightings of Cirl Bunting were seen along the north-west hedgerows with at least one singing male heard and juvenile contact calls heard along the hedgerow that runs parallel to the road.
21/07/2016	4	4 (1 off-site)	A pair of Cirl Bunting located on the fenceline between the newly planted woodland to the north of the Site and a newly installed footpath of hardstanding. A single individual was seen along the north western hedgerow located outside the survey boundary near Waddeton Road. A pair was seen along the far south eastern corner of the Site in suitable breeding habitat. A single female was seen in the eastern corner of the Site and had been previously seen in this exact location.
16/08/2016	5	5 (Two off-site)	A pair of Cirl Buntings was seen in a previously recorded area in the eastern corner of the Site. A pair was seen feeding juveniles in a previously recorded position in the south eastern corner of the Site. Another pair with at least two fledglings were seen along a central hedgerow close to the eastern corner of the Site but were a different family group. Fledgling contact calls were heard coming from a hedgerow along the newly harvested arable field in the north of the Site. Two different pairs were seen in the area of the newly planted woodland and semi-improved grassland on Site. These were two separate pairs of Cirl Bunting.

Table 21: Cirl Bunting Survey Results

5.4.62 During the Cirl Bunting surveys conducted on Site during the breeding season in 2016, a minimum of at least four pairs (eight individuals) currently occupy the Site with a further three pairs (six individuals) located off-site in adjacent farmland but using habitats within the Site boundary to forage.

5.4.63 Three pairs are concentrated towards the south-eastern areas of the Site with partial overlaps in territories. In this area mature hedgerows and associated grazing pasture provide suitable nesting and foraging habitat. At least two of the pairs on-site were seen with fledglings during the August survey with the adult birds seen feeding the fledglings invertebrate prey.

Valuation

5.4.64 Given the presence of four pairs of breeding Cirl Buntings, Red list conservation status species and UK BAP species on Site, the Site is considered to be of Regional Value for birds.

5.4.65 Invertebrates

5.4.66 The Site was considered to support habitat of moderate potential conservation value for invertebrates; the mature hedgerow, mature and veteran hedgerow standards and associated hedge-bank structure and flora and woodland edge bordering the site offered the greatest potential value as invertebrate habitat. The Site's grasslands were of low conservation value in general terms and as potential invertebrate habitat, being improved and generally herb-poor.

5.4.67 Wood decay habitat important for supporting saproxylic invertebrate assemblages was present to some extent within the more mature and veteran standards and in general within the woody growth of the hedgerows. Evidence of saproxylic species mainly included bore-holes of beetles from families including longhorn beetles *Cerambycidae*, wood-boring beetles *Anobiidae* and bark beetles *Scolytidae* - now *Curculionidae*.

5.4.68 There was no clear evidence of heartwood decay assemblages associated with tree hollows and red rot, although some of this resource was potentially present within older standards in particular. Besides the hedgerows, the woodland area at the site's southern border also offered a reasonable wood decay resource. Habitat at the margin of this wood on the hedge bank offered some potential habitat for saproxylics and beetle holes were recorded in this location; however, much of the woods interior was rather heavily shaded and therefore suboptimal.

5.4.69 The majority of the species recorded during the survey were broadly classified within the F2 (Grassland and scrub matrix) and the F1 (Unshaded early successional mosaic assemblages) broad classifications of the Invertebrate Species-habitat Information System (ISIS) (see synopsis in Lott, 2008). Five of the remaining species were classed within wetland assemblages including W3-Permanent wet mire and W1 – Flowing water.

5.4.70 None of the species recorded are UK/European protected species, uncommon or subject to classification within Section 41 of the NERC Act (2006).

5.4.71 Whilst there were few significant invertebrate records for the Site itself, the Site showed some potential to support species such as Brown Hairstreak *Thecla betulae*, a S41 'Species of Principal Importance', which had been well recorded (post 1990) within 2km of the centre of the Site. The presence of abundant English Elm *Ulmus procera* within the Site's hedgerows also suggests the potential for another S41 species, White-letter Hairstreak *Satyrium w-album*. However, this species has only been recorded once within the search area post 1990 and is less likely to occur on the site at the current time.

5.4.72 The hedgerows and herbaceous borders of the Site also provide suitable habitat for a range of currently common and widespread moth species, listed as S41 species 'for research only'. These species are mainly habitat generalists, but include species which are documented as having undergone a significant decline in the UK in recent decades.

5.4.73 Jersey Tiger, a Nationally Scarce moth is highly likely to occur on the Site from time to time; however, this species is locally common in the Torquay area of south Devon and has generalist habitat requirements. It is possible that the site could also support other species of conservation interest both including those historically recorded from the landscape bordering the site and species as yet unrecorded. A S41 'Species of Principal Importance' the Wall *Lasiommata megera* butterfly, the pRDB3 'Rare' Bugle Marble *Endothenia ustulana* and the Orange Footman *Eilema sororcula* could all potentially occur on the site, however, the Site, in its current condition, may be suboptimal to support the first two of these species.

5.4.74 One species listed as a priority species within the Devon LBAP, the Great Green Bush-cricket *Tettigonia viridissima*, was recorded on the site in 2010 and is highly likely to occur there still. This species, which is mainly coastal in the UK, occurs widely within the locality and occurs in a fairly broad range of mainly scrubby habitats.

5.4.75 Given the potential for the Site to support a range of S41 and LBAP species, on a precautionary basis the Site is valued District Value for invertebrates.

5.4.76 Summary of Valued Ecological Receptors

5.4.77 With reference to the baseline ecological information described above (and found in ES Appendices), a number of important ecological features have been classified as having local value or above, and these are summarised in Table 22 alongside relevant policy and legislation.

Type	Receptor	Value	Legislation/Policy
Statutory Sites	Lyme Bay and Torbay SCI Reefs; and submerged sea caves	International	Habitat and Species Regulations 2010; Wildlife and Countryside Act 1981 (as amended); CROW Act 200; NPPF; Marine and Coastal Access Act 2009. Local Plan policy inc. SS8 and C3.
	South Hams SAC European dry heaths; Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites, Vegetated sea cliffs of the Atlantic and Baltic Coasts Caves not open to the public, and Tilio-Acerion forests of slopes, screes and ravines * Priority feature, Greater horseshoe bat		

	Berry Head to Sharkham Point SSSI Limestone grassland Lichens Guillemot colony	UK	
	Saltern Cove SSSI supports a diverse intertidal flora and fauna		
	Lord's Wood SSSI one of the best examples of oak-hazel-ash woodland in Devon		
	Torbay MCZ		
	Berry Head NNR Lowland grassland, Coastal habitat.	National	
	Sugar Loaf Hill and Saltern Cove LNR No information given by DWT		
Habitats	Hedgerows	District	Hedgerow Regulations 1997; Natural Environment and Rural Communities Act (NERC) Act 2006; CROW Act 2000; NPPF; Local Plan Policy inc. C4.
	Unimproved neutral grassland		
Species	Bats	Regional	Conservation of Habitats and Species Regulations 2010; Wildlife & Countryside Act 1981 (as amended); NERC 2006, ODPM 06/2005 Circular
	Birds	District	

Invertebrates	District	attached to section 11 of the NPPF.

Table 22: Summary of Importance Ecological Features

5.5. Impact Assessment

Scheme Description

5.5.1 The potential impacts of the proposed development are assessed for both construction and operational periods and are based on the description of the proposals provided in ES Chapter X and the associated figures, particularly the Green Infrastructure Parameters Plan, Illustrative Masterplan, Lighting Plans, Phasing Plan, Framework Landscape and Ecological Management Plan and Farm Management Plan. These incorporate integral avoidance, minimisation and mitigation measures, determined and agreed throughout the scoping, assessment and design process.

5.5.2 The proposals have been assessed for the likely impacts during construction and operational phases.

5.5.3 The construction phase includes construction of up to 400 dwellings, a 2 form entry primary school, public house and associated public open space and landscaping. This would lead to the following effects:

Habitat Loss (as shown in the habitat loss plans)

- Loss of approximately 450m of the 3.3km hedgerow network;
- Fourteen hedge breaks to accommodate, a roundabout to access Brixham Road, the southern housing parcel, the internal road network, the footpaths and POSs;
- Loss of approximately 15.5ha of land that is (in rotation) grazed by cattle;
- Loss of approximately 5ha of land that is used to grow cereal crops all year round (i.e. not left as over-winter stubbles); and
- Loss of approximately 700m^2 of the 0.4ha of land that should support unimproved neutral grassland (i.e. committed to in White Rock off-site LEMP, but not yet created); and
- Loss of approximately 350m^2 of land that is subject to an existing Environmental Stewardship option (EE1) to maintain 2m grass margins.

Noise, air quality, lighting

- Construction noise, dust and lighting.

5.5.4 The operational phase includes:

- Lighting of road and footpath network;
- Use of the Site by the new residents, their vehicles and pets;
- New residents visiting local nature conservation designations (terrestrial and marine);
- Discharge of foul water and/or run-off into the local network; and
- Long term management of the habitats.

5.5.5 This could lead to the following effects:

Lighting

- Lighting of habitat (especially hedgerows and woodland) limiting their value for a wide range of species.

Recreational pressure

- Disturbance to wildlife on and adjacent to Site;

- Potential conflict with cattle grazing in close proximity to Site (i.e. farmer could decide easier not graze if cattle are disturbed/stressed by people and/or dogs), and
- Increased recreational pressure on nature conservation designations in the area (e.g. through trampling).

Traffic

- Potential increased risk of bats colliding with traffic on-Site and in the wider area; and
- Management of tree/hedges not minimising the gap across roads.

Water Quality

- Discharge of foul water and/or run-off into the local network causing increased risk of pollution when discharged into the marine environment.

Habitat Quality

- Value of retained and created habitats limited by unsympathetic management.

5.5.6 To mitigate the impact of the above, the following avoidance, minimisation and mitigation measures have been incorporated into the proposals. These have been discussed with the local authority and the RSPB, and are in accordance with the guiding mitigation principles set out the in local authorities' scoping report.

Construction avoidance, minimisation and mitigation measures include:

- Retention and protection of 2.9km of hedgerows out of the 3.3km existing;
- Planting/creation of approximately 3km of new hedges to provide a net gain of approximately 2.5km of total hedgerows, a net gain of approximately 1km of "undisturbed/relatively undisturbed", minimise fragmentation within the proposed housing development; provide a strong hedgerow and woodland network around the south and west of the Site; and create a strong hedge bank network within the off-site mitigation land (based on the historical hedgerow network);
- Hedge planting to include diverse/species-rich mix of native plants, mature stock and standard trees at least every 30m;
- Reversion of approximately 16ha of arable land off-site to cattle grazed pasture to achieve no net loss of potential cattle grazed pasture (which is an important habitat for GHS);
- Fencing and hedging on the boundary between development and cattle pasture to be designed to minimise access of people, dogs and cats in to the pasture (i.e. to minimise disturbance to wildlife and cattle).
- Creation of approximately 4ha of spring sown barley crops to be left as over-wintering stubble;
- Preparation and seeding of margins around pasture and over-wintering stubble fields with wildflower meadow mixture to create 0.6ha of unimproved neutral grassland margins;
- Preparation and seeding of 2.5m margins around pasture and over-wintering stubble fields of an additional (i.e. over and above the 2m margins currently required under ELS option, plus new margins adjacent to new hedgerows) 1.0 ha tussock grassland;
- Creation/planting of > 0.5ha of broad-leaved native woodland, 0.4ha of orchards, groups of native trees (e.g. Oak) within the proposed pasture to the south of the main development to establish wood pasture and a wildlife pond;
- Creation of a bat house, located within cattle grazed pasture next to commuting features;
- Contribution to an off-site bat house;

- Installation of bird boxes on retained trees and integral to the new buildings;
- Planting the majority of habitats (i.e. those that can be / not in/adjacent to a future construction zones) ahead of the first main construction phase, and phase the loss of existing habitats to be lost over as long a time period as practicable.
- Management company provided with funds to implement habitat creation, and existing farm tenancy changed to ensure the farmer needs to accommodate them (to provide confidence of delivery).

5.5.7 Operational avoidance, minimisation and mitigation measures would include:

- Management of the retained and created habitats. The Framework Landscape and Ecological Management Plan (LEMP) and Farm Management Plan sets out key management proposals for the Site and the off-site mitigation land. This includes sensitive hedgerow management in accordance with the prescriptions set out in Higher Level Stewardship option HB11, cattle grazing in accordance with Countryside Stewardship option GS17 and spring sown barley crops left as over-wintering stubble until the end March.
- To increase confidence that the management would be undertaken in accordance with the LEMP, the farm tenancy would be changed to state that management needs to be accordance with it. A management company would be provided with funds to manage the habitat features (e.g. hedgerows, woodland blocks, orchards) within and around the main development.
- The LEMP also sets out a commitment to monitoring and reporting, to ascertain if such management is being undertaken and if it is achieving the aims of the mitigation. The LEMP also sets out a commitment to adaptive mitigation if the aims were unlikely to be met.
- Provision of wildlife information boards to highlight the biodiversity interests of the Site.
- To avoid lighting significantly impacting on nocturnal fauna (including bats) a sensitive lighting scheme has been developed to keep a coherent network of bat commuting habitat unlit/below 0.5 Lux. This even includes the majority of locations where the internal road network would breach the existing hedgebanks.
- Surface water run-off and drainage will largely be managed at source with no off-site discharge.

Designated Sites

Construction Phase

South Hams SAC

Habitat Loss

5.5.8 The South Hams SAC is approximately 5km from the Site. As such, no direct construction impacts on the SAC component at Berry Head are predicted. However the Site is within the SAC's GHS sustenance zone and GHS day (considered to be non-maternity) and night roosts were recorded in derelict farm buildings approximately 200m north of the Site. Any loss of /damage to the hedgerow network and cattle grazed pasture could fragment existing commuting routes (causing GHS to expend greater energy to reach feeding grounds or in making seasonal movements across the wider landscape to reach the SAC components) and reduce the quantity and quality of foraging habitat (inc. through loss of cattle grazed pasture in which cattle are not treated by an avermectin based wormer which can significantly reduce the presence of dung beetles which are an important prey item for GHS), which could result in a potential significant impact on the SAC.

5.5.9 Whilst there would be a phased loss of approximately 450m of hedgerow, the approx. 800m of new hedgebanks/woodland blocks around the south and west of the development would provide optimal commuting habitat around the development (to maintain connectivity to wider landscape north-south and east-west), where much of the GHS activity was recorded on Site (i.e. limited records along the Brixham Road). Hedge breaks within the built development have been minimised (in No. and in width) to allow GHS the opportunity (albeit sub-optimal) to still commute through (North-South and East-West) the built development.

5.5.10 The no net loss in cattle grazed pasture (within and connected to the Site, and within the SAC sustenance zone), and creation/planting of hedgebanks, broad-leaved native woodland, orchards, wood pasture and wildlife pond, should (once established) diversify and increase the abundance of invertebrate prey available, and provide an enhanced foraging habitat. As crop fields are of limited value for foraging GHS, the loss of approximately 21ha is not considered detrimental to the quality of foraging habitat available.

Noise, air quality, lighting

5.5.11 To avoid potential disturbance of bats either directly (e.g. through external night time working with lighting) or indirectly through damage of their habitats (e.g. damage to hedge roots, dust smothering vegetation) a Construction Environmental Management Plan (CEMP) would set out best practice working measures including avoidance of night time lighting, suppression of dust, protection of hedges etc..

5.5.12 Given the retention and creation of commuting routes around the south and west of the proposed development, the no net loss of cattle grazed pasture, the diversification of habitats, that habitat will be created well in advanced of any habitat loss and the certainty of deliverability, it is considered certain/near certain that there would be no significant negative impacts to the South Hams SAC during construction.

Berry Head to Sharkham Point SSSI

5.5.13 On the basis of the above it is also considered there would be no significant impacts to the bat population (GHS and Lesser Horseshoes) referred to in the Berry Head to Sharkham Point SSSI citation (partly the same bats for which the SAC is designated, i.e. GHS).

Other/Remaining Sites

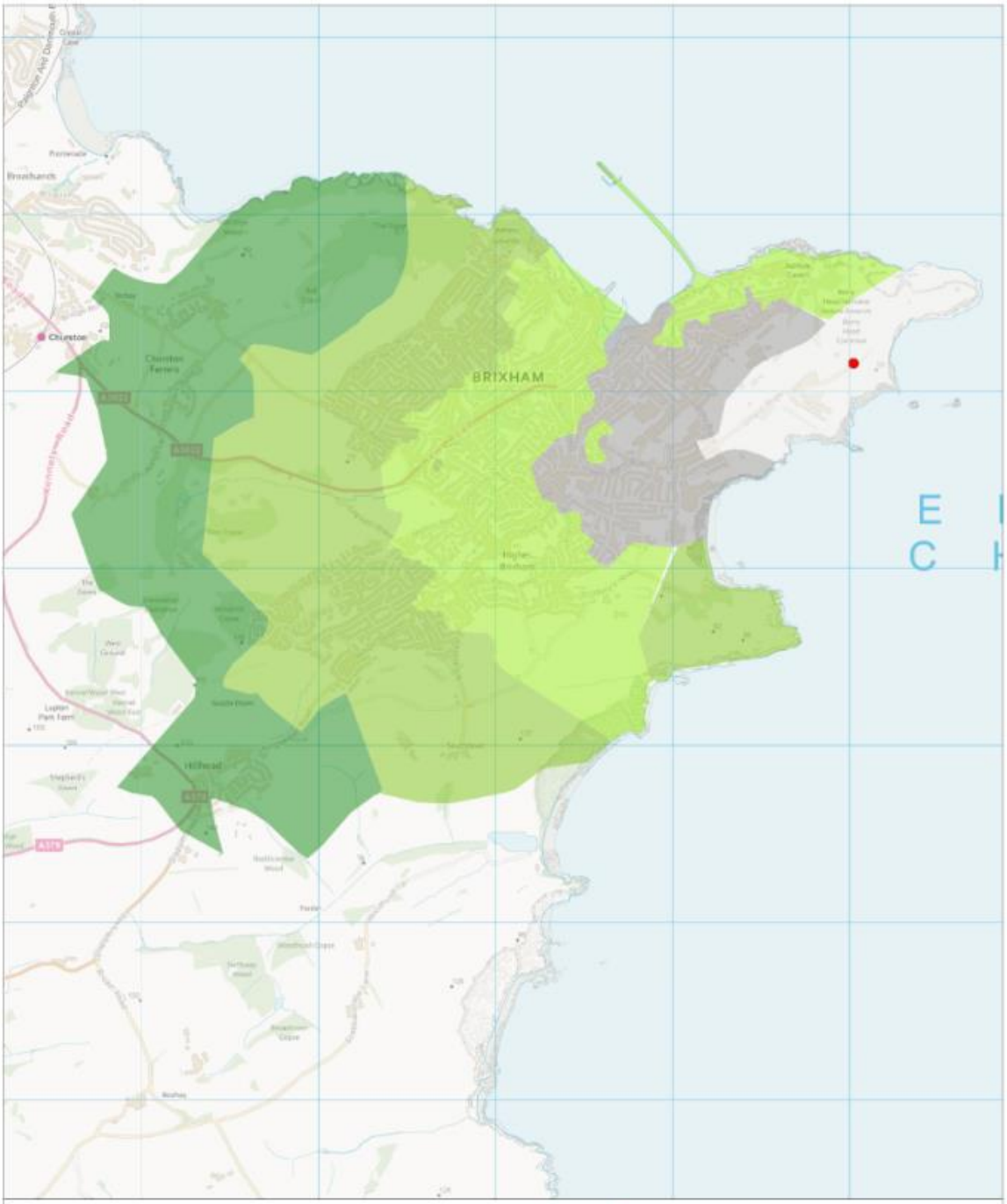
5.5.14 Given the distance to the remaining designated sites (greater than 1km) and the lack of direct hydrological connectivity to the marine designations, no impacts are predicted on these sites during construction.

Operational Phase

South Hams SAC

Recreational Pressure

5.5.15 The HRA of the Local Plan states recreational pressure at Berry Head (a component of the South Hams SAC) has led to declines in its calcareous grassland and European dry heaths, through neglect, inappropriate management and increased eutrophication through dog fouling. It also states the available data suggests there is a zone of influence of approximately 5km driving distance from the SAC. The Torbay Green Infrastructure (GI) Coordinator advised (via e-mail on the 31st of January 2017) that survey work completed in 2016 confirmed this 5km ZoI is still considered to be valid and provided the figure below that shows the driving distance bands. The figure shows that the proposed scheme falls outside the zone of influence, and as such significant negative recreational effects on the habitat features at the Berry Head component of the SAC are considered unlikely. The proposed scheme also proposes a network of walks to provide countryside access, which would limit the need for residents to visit Berry Head. This increases the confidence that the scheme would be unlikely to result in effects to the SAC.



1km Drive-distance bands from Berry Head

Drive-distance isochrones derived using OS Meridian road network data and the routefinder add-in for Mapinfo.

Habitat Quality

5.5.16 The management prescriptions set out in the LEMP (which includes managing tree canopies either side of hedgerow break to extend over the roadways/footpaths as far as possible to minimise fragmentation impacts), along with the sensitive lighting plan, would provide strong hedge features for commuting as well as invertebrate rich habitats (including dung beetles) for foraging.

Traffic

5.5.17 The Local Plan HRA does note that increase in traffic volumes in Torbay and beyond could increase bat mortality due to collision with vehicles. Whilst the South Hams SAC GHS consultation zone map does not show at a "strategic flyway" in close proximity to the Site, Torbay Council raised a query about GHS commuting across roads at/near Windy Corner (where Dartmouth, Brixham, Bascombe Roads) i.e. where GHS might be commuting across undeveloped/ green areas from the Churston Golf Club area to the west of Brixham Road. Given the speed limit on these roads is 30mph and that this area is over 4km from the nearest known GHS maternity roost (with Local Plan HRA stating *"inexperienced juvenile bats are particularly at most risk.")*, the risk of collision is considered limited. In addition it is understood the majority of vehicle journeys that would be generated by this proposal would be to the north, with fewer journeys to the south. Table 23 below shows the 7 day average traffic flow over a 24hr period at a point on Dartmouth Road just south of Langdon Lane, and that the expected increase in traffic to the south is less than 2% in every given time period.

Time Range	2019* Two-way	2019 + Inglewood Two-way	Increase in Traffic**
00:00-01:00	89	91	1
01:00-02:00	51	52	1
02:00-03:00	42	42	1
03:00-04:00	59	59	1
04:00-05:00	79	81	1
05:00-06:00	216	219	3
06:00-07:00	536	544	8
07:00-08:00	1296	1320	23
08:00-09:00	1925	1962	36
09:00-10:00	1864	1886	22

10:00-11:00	1894	1915	21
11:00-12:00	1808	1829	21
12:00-13:00	1912	1935	22
13:00-14:00	1738	1761	23
14:00-15:00	1799	1824	24
15:00-16:00	1943	1975	32
16:00-17:00	2059	2091	32
17:00-18:00	2000	2036	37
18:00-19:00	1492	1517	25
19:00-20:00	1003	1018	15
20:00-21:00	687	697	10
21:00-22:00	512	520	8
22:00-23:00	300	304	4
23:00-24:00	164	166	2
Total	25468	25843	375

Table 23: 7 day average traffic flow at a point on Dartmouth Road just south of Langdon Lane

* 2019 is what the traffic assessment has taken as the potential opening date of the proposed scheme

** Calculation based on rounding to the nearest whole number (i.e. 90.73 - 89.42 –= 1.32, is shown as 91-89=1).

Lighting

5.5.18 To allow residents to safely access the facilities in White Rock to the north (and vice versa) it is proposed to create a footpath/cycle connection to the north, and light it. Such lighting would need to be sensitively designed (e.g. low level bollards, timed, no UV content, motion activated, warm white light) to avoid/minimise affecting the ability of the GHS roosting at the farm buildings to reach the wider landscape/ the viability of these roosts. No other lighting is proposed (i.e. other footpaths would be lit by the street lighting) including no sport pitch lighting or lighting of public open spaces. Locations where car lighting would light bat commuting features have been limited and where car lights could otherwise do so, planting has been proposed to shield the commuting feature.

5.5.19 Given the extent and diversity of retained and proposed habitats of known value to GHS, their proposed sensitive management, the provision of two purpose built bat houses, the sensitive lighting plan, the limited increase in vehicle flow at/near Windy Corner, the certainty of deliverability, together with the monitoring and remedial measures (if required), it is considered likely there would be a significant positive impact on the GHS interest of the SAC in the long term (i.e. once new habitats had established) at the District Level. (i.e. once new habitats have established).

Berry Head to Sharkham Point SSSI and Berry Head NNR

5.5.20 On the basis of the above it is also considered unlikely the scheme would lead to significant impacts on the Berry Head to Sharkham Point SSSI and Berry Head NNR (as they designated for partly same interest features).

Lyme Bay and Torbay SCI

Recreational Impacts

5.5.21 The Local Plan HRA identifies potential impacts to the Mackerel Cove to Dartmouth component of the Lyme Bay and Torbay SCI, through recreational activities (including shipping, recreational fishing and anchoring). It does however note (paras 7.3.2 & 7.3.3) that some of these activities will not have impacts because they do not have a significant mechanism for interaction with the sites' interest features (reefs and sea caves). It also notes that "based on levels of existing recreational pressure, the measures in place and proposed to reduce human disturbance to sensitive habitats and species of the SAC (MARPOL), and conservation objectives for the management of Lyme Bay and Torbay SAC, it would be reasonable to assume that impacts of additional development from the Local Plan will be low to moderate.". Given the above and that the scheme is greater than 5km driving distance to either Paignton or Brixham harbours, it is considered extremely unlikely the scheme would result in significant recreational impacts to the SCI.

Water Quality

5.5.22 Given the distance between the sites, the lack of direct natural hydrological connectivity, that surface water run-off and drainage will largely be managed at source with no off-site discharge (see flooding and drainage assessment for more detail) and the strict controls governing the quality and volume of release of treated effluent to the environment, no water quality impacts are predicted.

Torbay MCZ

5.5.23 On the above basis it is also considered unlikely the scheme would result in significant impacts to the Torbay MCZ.

Other/Remaining Sites

No operational impacts are predicted for the remaining statutory designations given their distance to Site (greater than 1km), lack of mobile species for which the development Site could be a core sustenance zone and the lack of any identified risks from visitor pressure (e.g. within SSSI condition assessments).

Hedgerows

Construction Phase

Habitat Loss

5.5.24 The majority of the hedgerow network would be retained and protected during construction (through fencing measures which could be set out in a Construction and Environmental Management Plan (CEMP)). However approximately 450m would be lost to accommodate roads, housing layout and footways. The roundabout would account for approximately 200m of that loss. It has been proposed as a signal controlled junction onto Brixham Road (which would require less hedgerow removal) would result in unacceptable traffic impacts.

5.5.25 In addition a further approximately 1.6km of hedgerows would be in close proximity to construction activities (rather than agricultural fields) and subject to disturbance. This would reduce the ability of those hedgerows to support species that require the presence of adjacent habitats and/or are sensitive to disturbance.

5.5.26 To mitigate for the above hedge loss, fragmentation and disturbance, the scheme proposes the creation of in excess of 3km of hedges (see GI Parameters Plan and Illustrative Masterplan). This would, provide a net gain of approximately 2.6km of hedgerows, a net gain of approximately 1km of "undisturbed/relatively undisturbed" hedgerows, minimise the hedgerow fragmentation within the proposed housing development, provide a strong hedgerow network around the south and west of the Site and create a strong hedge bank network within the off-site mitigation land (based on the historical hedgerow network). The hedgerows around the edge of the main development and within the off-site mitigation land would be adjacent to agriculture fields (cattle pasture, spring sown barley) that would be managed for the benefit of wildlife (principally to provide mitigation and enhancement measures for GHS and Cirl Bunting).

5.5.27 Given the proposed hedgerow retention, creation, that planting would begin ahead of the first main construction phase, and hedge loss would be phased over many years, it is considered unlikely there would significant negative impact on hedgerows.

Operation

Habitat Quality, Lighting and Recreational Pressure

5.5.28 The management prescriptions set out in the LEMP (which includes sensitive hedgerow management) and the sensitive lighting plan would, once established, provide a strong hedgerow network. Approximately 1.6km of hedgerows would be in close proximity to the development (rather than agricultural fields) and subject to disturbance (e.g. pedestrian and vehicle movement, noise, lighting), reducing their ability to support species that require the presence of adjacent habitats and/or are sensitive to disturbance. However, the proposed 3km of hedgerow creation, would provide a net gain of approximately 1km of hedgerows that were not immediately adjacent to the development / subject to disturbance and the sensitive lighting plan avoids lighting the majority of the retained or created hedgerows.

5.5.29 Given the proposed hedgerow management and the confidence in deliverability, it is considered likely that the development would have a significant positive impact on hedgerows in the medium-long term at the District level (i.e. once the new hedgerows had established).

Unimproved Neutral Grassland

Construction

Habitat Loss

5.5.30 The majority of the field margins would be retained and protected during construction (through fencing measures which could be set out in a Construction and Environmental Management Plan (CEMP)). However approximately 0.07ha would be lost to accommodate roads, housing layout and footways.

5.5.31 In addition a further approximately 0.24ha of field margins would be in close proximity to construction activities (rather than agricultural fields) and subject to disturbance. This would reduce the ability of those hedgerows to support species that require the presence of adjacent habitats and/or are sensitive to disturbance.

5.5.32 To mitigate for the above loss, fragmentation and disturbance, the scheme proposes the creation of in excess of 3km of hedgerows (see GI Parameters Plan and Illustrative Masterplan) with associated margins. This would, provide a net gain of approximately 0.5ha of unimproved neutral grassland and a net gain of approximately 0.3ha of "undisturbed/relatively undisturbed" margins.

5.5.33 Given the proposed unimproved neutral grassland retention, creation, that planting would begin ahead of the first main construction phase and hedge loss would be phased over many years, it is considered unlikely there would significant negative impact on unimproved neutral grassland.

Operation

Habitat Quality

5.5.34 The management prescriptions set out in the LEMP (which includes a late summer cut to field margins with arisings removed) would, once established, provide a net gain of approximately 0.5ha of unimproved neutral grassland and a net gain of approximately 0.3ha of "undisturbed/ relatively undisturbed" margins (i.e. margins that were not immediately adjacent to the development/ subject to high levels of disturbance).

5.5.35 Given the proposed field margin management and the confidence in deliverability, it is considered likely that the development would have a significant positive effect on unimproved neutral grassland in the medium-long term at the District level.

Species

Bats

5.5.36 Whilst there are differences between the ecological needs/ niches of GHS and other bat species, given their broad/overarching ecological requirements (need for roosting habitat, a strong coherent network of habitats rich in invertebrate prey) it is considered that the potential impacts and mitigation set out above for the GHS interest of the South Hams SAC, would likely avoid significant impacts to all bat species during construction and likely provide significant positive impacts to all bat species at the District level in the long term (i.e. once new habitats had established).

5.5.37 One notable exception between GHS and some other bat species, is the potential for them to roost within trees. Whilst no tree roosts were recorded during the surveys, trees with the potential support bats would all be retained to maintain this potential. This adds to the confidence that all bat species would not be significantly impacted during construction.

5.5.38 Construction

Habitat Loss

5.5.39 Whilst the majority of the hedgerow network would be retained, approximately 450m would lost and 1.6km would be in close proximity to the main development/construction activities, resulting in a loss of potential nesting habitat. As such it is proposed to create/ plant in excess of 3km of hedgerows adjacent to existing agriculture fields (cattle pasture, spring sown barley) that would be managed for the benefit of wildlife. The proposed planting of broad-leaved woodland, orchards, groups of native trees (e.g. Oak) within the proposed pasture to the south of the main development to establish wood pasture, trees adjacent to the internal hedgerow network, creation of unimproved neutral grassland field margins and incorporation of bird boxes within the main development buildings (e.g. for House Sparrow, House Martin, Swift) and on retained trees, would, once established, provide a net gain in nesting habitat.

5.5.40 Whilst there would be no loss of cattle grazed pasture, there would be a loss of approximately 21ha of crop fields, but it is considered that the provision of the habitats listed above and creation of a wildlife pond to the south of main development Site, would provide enhanced foraging habitat.

5.5.41 Four pairs of Cirl Bunting were recorded breeding on Site. The RSPB Cirl Bunting Development Guidance (Draft October 2016 provided by the RSPB) states that if more than 0.7ha of suitable habitat within a breeding territory (i.e. within 250m of their nests) is to be lost, then at least 2.5ha of suitable habitat should be provided per territory as mitigation. The guidance states that this should be made up of at least 1.13ha of rough grassland, 0.2ha of hedge/scrub and 1ha of spring barley. More than 0.7ha of suitable habitat (albeit most of it less than optimal i.e. short grazed pasture of limited structural or botanical diversity) would be lost from each territory. As such the scheme proposes the retention/creation of 22ha of cattle grazed pasture, the creation of 0.9ha of hedgerows (i.e. 3km of 3m wide hedgerow) and 4ha of spring barley.

5.5.42 Much of this provision is proposed on the off-site mitigation land, on which it is accepted that at least four other pairs of Cirl Bunting breed (based on the RSPB 2016 survey results). However it is considered that the loss of the majority of cereal crops in these fields (which aren't currently left as over-wintering stubbles) and the introduction of pasture, hedgerows and over-wintering stubbles in this area, will also provide overall habitat benefits for the existing pairs in this area.

5.5.43 In the absence of mitigation, construction activities could damage/destroy active bird's nests and/or disturb them and affect their ability to breed and rear young. It is an offence under the Wildlife and Countryside Act 1981 to damage or destroy any active bird's nest, additionally it is an offence to disturb any species listed under schedule 1 of the act (e.g. Cirl Bunting) while they are nest building, or at a nest containing eggs or young, or to recklessly disturb their dependant young. As such hedgerows and trees to be retained should be protected during construction and good working practices should be adhered to in order to minimise potential disturbance. Hedgerow removal works should be undertaken outside the nesting bird season (this should extend from March to mid-September given the relatively long breeding period undertaken by Cirl Bunting), or where this is not possible the habitat affected should be checked by a suitably qualified ecologist immediately prior to works commencing.

5.5.44 Given the proposed retention and creation of habitat (including native broad-leaved woodland, hedgerows, orchards, wildlife pond, nest boxes, wood pasture), that the majority of features would be created ahead of the first main construction phase, hedge loss would be phased over many years and the certainty of deliverability, it is considered unlikely there would significant negative impact on birds during construction.

Operation

Habitat Quality

5.5.45 The management prescriptions set out in the LEMP (which includes sensitive management of hedgerows, leniently grazed pasture, spring sown barley crops left as overwintered stubble until the end March) would provide optimal nesting, summer foraging and winter foraging habitat.

5.5.46 Given the extent and diversity of retained and proposed habitats of known value to farmland birds, their proposed sensitive management and the certainty of deliverability, it is considered likely there would be a significant positive impact on the birds in the long term (i.e. once new habitats had established) at the District level.

Invertebrates

Construction

Habitat Loss

5.5.47 The invertebrate survey considered that the mature hedgerows (including their trees, structure and flora) offered the greatest potential value as invertebrate habitat. Whilst the majority of the hedgerow network would be retained, approximately 450m would lost. As such it is proposed to create/plant in excess of 3km of hedgerows adjacent to existing agriculture fields (cattle pasture, spring sown barley) that would be managed for the benefit of wildlife.

5.5.48 In addition the proposed broad-leaved native woodland, orchards, wood pasture and wildlife pond, should (once established) diversify and enhance the habitats available, and be of benefit to the Section 41 species the scoping survey identified the Site potentially suitable for, with Blackthorn and Elm (the respective larval food plants of the Brown Hairstreak and White-letter Hairstreak) being part of the hedgerow planting mix, and the woodland planting being of particular benefit to the Orange Footman (as there caterpillars live on lichens growing on Oak).

5.5.49 Given the proposed retention and creation of habitat (including native broad-leaved woodland, hedgerows, orchards, wildlife pond, wood pasture), that the majority of features would be created ahead of the first main construction phase, hedge loss would be phased over many years and the certainty of deliverability, it is considered unlikely there would significant negative impact on invertebrates during construction.

Operation

Habitat Loss

5.5.50 The relaxed management prescriptions set out in the LEMP (which includes sensitive management of hedgerows, leniently grazed pasture, sensitive management of woodlands and orchards) would provide optimal habitat for a wide range of invertebrates, including the Great Green Bush-cricket which the scoping survey identified the Site as suitable for.

Lighting

5.5.51 The sensitive lighting scheme would also limit impacts on invertebrates from artificial lighting.

5.5.52 Given the extent and diversity of retained and proposed habitats of known value to invertebrates, their proposed sensitive management and the certainty of deliverability, it is considered likely there would be a significant positive impact on invertebrates in the long term (i.e. once new habitats had established) at the District level.

5.6. Cumulative effects

5.6.1 As no significant or non-significant residual impacts have been identified for any of the ecological receptors, it is considered that this proposal would not lead to any cumulative effects/impacts with other proposals in its zone of influence.

5.7. Conclusion

5.7.1 Given the mitigation inherent in the design and that it accords with that set out in the local authority scoping opinion, it is considered that significant negative impacts are avoided on all important ecological features during construction, with significant positive impacts predicated on the bat interest of the South Hams SAC and Berry Head to Sharkham Point SSSI, bats, birds and invertebrates in the long term.

5.7.2 The mitigation and enhancement measures identified in this ES will be incorporated into detailed designs and further documentation, including detailed Management Plans and CEMP which could be secured under a suitably worded planning condition, with the provisions taken forward in subsequent reserved matters applications.

5.7.3 A summary of the assessment is tabulated overleaf in Table 24.

Summary

5.7.4 The valued ecological receptors which have been identified in this chapter, the potentials impacts of the proposed development on this receptors, mitigation and resulting residual impacts are summarised in Table 24 below.

Ecological Receptor	Value	Impact	Mitigation / Enhancement measures	Residual impact
Construction				
Designations				
Lyme Bay and Torbay SCI	International	None predicted given distance to Site and lack of direct hydrological link.	CEMP to set out best practice working methods inc. methods to prevent siltation problems and accidental spillages.	No significant residual impacts are predicted
South Hams SAC	International	*Habitat Loss* • Loss of (450m) and fragmentation (>10 hedgerow breaks proposed) of hedgerow network and loss of 15.5ha of cattle grazed pasture within the GHS sustenance zone. • Accidental damage to foraging habitat (i.e. hedgerows). *Noise, air quality, lighting* • External night time working (requiring lighting), that could disturb behaviour of light sensitive bats (inc. GHS).	• Retention and protection of the majority (>85%) of the existing hedgerow network. • Planting/ creation of 800m of new hedgebanks around the south and west of the development to provide optimal commuting habitat around the development. • Planting/creation of additional hedgerows (2.2km), orchards (0.4ha), broad-leaved woodland (0.5ha), wood pasture, unimproved grassland, two bat houses and wildlife pond to diversify and strengthen foraging and roosting habitat. • Reversion of 16ha of arable land to cattle grazed pasture (to achieve no net loss of potential cattle grazed pasture). • Planting the majority of habitats (i.e. those that can be / not in/adjacent to a future construction zones) ahead of the first main construction phase, and phase the loss of existing habitats to be lost over as long a time period as practicable (Ref Phasing Plan). • CEMP to set out best practice working methods inc. hedge protection measures and avoidance of night time working (that would require external lighting).	No significant residual impacts are predicted
Berry Head to Sharkham Point SSSI	UK	As above	As above	No significant residual impacts are predicted
Saltern Cove SSSI	UK	None predicted given distance to Site and lack of direct hydrological link.	CEMP to set out best practice working methods inc. methods to prevent siltation problems and accidental spillages.	No significant residual impacts are predicted
Lord's Wood SSSI	UK	None predicted given distance to Site	N/A	N/A
Torbay MCZ	UK	None predicted given distance to Site and lack of direct hydrological link.	CEMP to set out best practice working methods inc. methods to prevent siltation problems and accidental spillages.	No significant residual impacts are predicted
Berry Head NNR	National	None predicted given distance to Site	N/A	N/A
Sugar Loaf Hill and Saltern Cove LNR	National	None predicted given distance to Site	N/A	N/A
Habitats				

Hedgerows	District	*Habitat Loss* • Loss of (450m) and fragmentation (>10 hedgerow breaks proposed) of hedgerow network.	• Retention and protection of the majority (>85%) of the existing hedgerow network. • CEMP to set out hedge protection measures (inc. fencing). • Planting/ creation of 3km of new hedgerows and hedgebanks around development and off-site mitigation land. • The majority of hedgerows (i.e. those that can be / not in/adjacent to a future construction zones) to be planted ahead of the first main construction phase, and the loss of existing habitats to be lost phased over as long a time period as practicable.	No significant residual effects are predicted
Unimproved neutral grassland	District	*Habitat Loss* • Loss of approx. 0.07ha (out of 0.4ha). • An additional approx. 0.24ha in close proximity to construction activities	• Preparation and seeding of margins around pasture and over-wintering stubble fields with wildflower meadow mixture to create 0.6ha of unimproved neutral grassland margins. • CEMP to set out best practices working methods inc. hedge and margins protection measures.	No significant residual effects are predicted
Species				
Bats	Regional	*Habitat Loss* • Loss of (450m) and fragmentation (>10 hedgerow breaks proposed) of hedgerow network and loss of 15.5ha of cattle grazed pasture within the GHS sustenance zone. • Accidental damage to foraging habitat (i.e. hedgerows). *Noise, air quality, lighting* • External night time working (requiring lighting), that could disturb behaviour of light sensitive bats (inc. GHS).	• Retention and protection of the majority (>85%) of the existing hedgerow network. • Planting/ creation of 800m of new hedgebanks around the south and west of the development to provide optimal commuting habitat around the development. • Planting/creation of additional hedgerows (2.2km), orchards (0.4ha), broad-leaved woodland (0.5ha), wood pasture, unimproved grassland, bat houses and wildlife pond to diversify and strengthen foraging and roosting habitat. • Reversion of 16ha of arable land to cattle grazed pasture (to achieve no net loss of potential cattle grazed pasture). • Planting the majority of habitats (i.e. those that can be / not in/adjacent to a future construction zones) ahead of the first main construction phase, and phase the loss of existing habitats to be lost over as long a time period as practicable (Ref Phasing Plan). • CEMP to set out best practice working methods inc. hedge protection measures and avoidance of night time working (that would require external lighting).	No significant residual impacts are predicted
Birds	District	*Habitat Loss* • Loss of nesting habitat (450m of hedgerow removed). • Disturbance, with approx. 1.6km of hedgerow in close proximity to hedgerows. • Loss of more than 0.7ha of suitable habitat from the territories of four Cirl Bunting pairs.	• Retention and protection of the majority (>85%) of the existing hedgerow network. • CEMP to set out best practice working methods inc. hedge protection measures and measures to avoid damage/destruction of active birds' nests. • Planting/ creation of 3km of new hedgerows and hedgebanks around development and off-site mitigation land. • Planting/creation of orchards (0.4ha), broad-leaved woodland (0.5ha), wood pasture, unimproved grassland and wildlife pond to diversify and strengthen nesting and foraging habitat. • Bird boxes incorporated within buildings and retained trees. • Creation of 22ha of suitable grassland, 0.9ha of hedgerows and 4ha of spring barley to provide mitigation habitat for Cirl Buntings.	No significant residual impacts are predicted

Invertebrates	District	*Habitat Loss* • Loss of 450m hedgerow (identified as the habitat that offered the greatest potential value on Site)	• Retention and protection of the majority (>85%) of the existing hedgerow network. • CEMP to set out hedge protection measures (inc. fencing). • Planting/ creation of 3km of new hedgerows and hedgebanks around development and off-site mitigation land. • Planting/creation of orchards (0.4ha), broad-leaved woodland (0.5ha), wood pasture, unimproved grassland and wildlife pond to diversify and strengthen habitat. • Planting to include species of benefit for Brown Hairstreak, White-letter Hairstreak and Orange Footman. • The majority of habitat creation (i.e. those that can be / not in/adjacent to a future construction zones) to be planted ahead of the first main construction phase, and the loss of existing habitats to be lost phased over as long a time period as practicable.	No significant residual impacts are predicted
Operation				
Lyme Bay and Torbay SCI	International	*Water quality*	• Surface water run-off and drainage to be largely managed at source with no off-site discharge. • Strict controls to govern the quality and volume of release of treated effluent to the (marine) environment.	Not significant
South Hams SAC	International	*Recreational pressure* *Lighting* *Habitat Quality*	• Creation of a network of walks to provide local countryside access and limit desire to visit Berry Head; • Sensitive lighting plan to leave a coherent network of dark commuting corridors. With coherent network kept below 0.5 Lux. • LEMP to set out sensitive habitat management prescriptions.	Significant positive impact at the District Level in the long term
Berry Head to Sharkham Point SSSI	UK	As above	As above	Significant positive impact at the District Level in the long term
Saltern Cove SSSI	UK	*Water quality*	• Surface water run-off and drainage to be largely managed at source with no off-site discharge. • Strict controls to govern the quality and volume of release of treated effluent to the (marine) environment.	Not significant
Lord's Wood SSSI	UK	None predicted	N/A	N/A
Torbay MCZ	UK	*Water quality*	• Surface water run-off and drainage to be largely managed at source with no off-site discharge. • Strict controls to govern the quality and volume of release of treated effluent to the (marine) environment.	Not significant
Berry Head NNR	National	*Recreational pressure*	Creation of a network of walks to provide local countryside access and limit desire to visit Berry Head.	Not significant
Sugar Loaf Hill and Saltern Cove LNR	National	None predicted	N/A	N/A
Habitats				

Hedgerows	District	*Habitat Quality* *Lighting* *Recreational pressure*	• LEMP to set out sensitive habitat management prescriptions. • Sensitive lighting to avoid/minimise lighting hedgerows (see Lighting plan). • Net gain of approximately 1km of hedgerows not in immediate vicinity of development/subject to disturbance.	Significant positive impact in the medium-long term
Unimproved neutral grassland	District	*Habitat Quality* *Recreational pressure*	• LEMP to set out sensitive habitat management prescriptions. • Approximately 0.6ha of unimproved grassland created not in immediate vicinity of development/subject to disturbance.	Significant positive impact in the medium-long term
Species				
Bats	Regional	*Lighting* *Habitat Quality*	• Sensitive lighting to avoid/minimise lighting hedgerows (see Lighting plan). With coherent network kept below 0.5 Lux. • LEMP to set out sensitive habitat management prescriptions.	Significant positive impact in the long term.
Birds	District	*Habitat Quality*	LEMP to set out sensitive habitat management prescriptions.	Significant positive impact in the long term.
Invertebrates	District	*Habitat Quality* *Lighting*	• LEMP to set out sensitive habitat management prescriptions. • Sensitive lighting to avoid/minimise lighting (see Lighting Plan).	Significant positive impact in the long term.
Cumulative Effect				
As no significant or non-significant residual impacts have been identified for any of the ecological receptors, it is considered that this proposal would not lead to any cumulative effects/impacts with other proposals in its zone of influence.				

Table 24. Summary of ecological impact assessment

6. Landscape and Visual Impact

6.1. Introduction

Background Information

6.1.1 Nicholas Pearson Associates was appointed by Abacus Projects Ltd to undertake a Landscape and Visual Impact Assessment (LVIA) to investigate the potential impacts on the site and its locality, of proposed residential development on agricultural land west of and adjacent to the urban edge of Goodrington, Paignton, Devon.

6.1.2 The purpose of the LVIA is "to identify and assess… the effects of change resulting from the proposals on both the landscape as an environmental resource in its own right and on people's views and visual amenity" (LI and IEMA 2013 3rd Ed.).

6.1.3 The assessment was undertaken:

- because the potential impacts on landscape character and visual amenity are a material planning consideration in determining the acceptability of development;
- because the development lies close to an Area of Outstanding Natural Beauty (AONB), a statutory landscape designation, and adjacent to the urban edge; and,
- to inform development proposals.

Outline of the Proposed Works

6.1.4 For a description of the proposed development refer to Chapter 2 of this Environmental Statement.

Scope and Methodology

Methodology

6.1.5 This Landscape and Visual Assessment has been prepared in accordance with GLVIA 3 (Guidelines for Landscape and Visual Impact Assessment, IEMA/ LI, 3rd Edition) which provides a suitable framework for such appraisal work. Further guidance also considered is provided within 'An Approach to Landscape Character Assessment' (2014), produced by Natural England. For a more detailed methodology, please refer to LVIA Appendices Appendix I Methodology and Appendix IV and Appendix V.

6.1.6 The LVIA is divided into a landscape character and a visual amenity assessment. Relevant planning policy and published landscape character assessments have been reviewed and relevant parts incorporated into the baseline section of this chapter. The figures in LVIA Appendix 2, which include maps and photographs, should be read in conjunction with the text.

6.1.7 Both the landscape features of the site and its local context, and the visual context are assessed. Opportunities and constraints are set out to inform potential development proposals such that any adverse landscape and/ or visual effects can be considered and efforts made to avoid, reduce or mitigate. Landscape and visual mitigation has informed the design. The impact assessment sets out the considered effects on both landscape receptors and viewers/ visual receptors of the proposals and the significance of these effects. Landscape design and general layout considerations are presented as 'primary' mitigation. Cumulative effects are also considered.

6.1.8 This chapter should be read in conjunction with the rest of the Environmental Statement (ES). The extent of the study area was determined by the anticipated visual envelope of the proposals and of the existing site. The visual envelope is defined as the area in which the site and proposed scheme options are potentially visible. To determine this field of visibility a Zone of Theoretical Visibility (ZTV), based on hypothetical development details and existing site structures, was calculated using QGIS specialist computer software and land form modelling maps. These are used to inform the selection of potential landscape and visual receptors, which are verified through site survey.

6.1.9 When the final site layout was available, the preliminary ZTV was refined using digital surface model data (DSM). The DSM includes vegetation, structures and buildings, to provide a more accurate model of potential visibility, based on known development details and building heights. This ZTV will inform the impact assessment in the Visual context baseline section below. The ZTV for the proposals is illustrated in LVIA Appendix, LVIA Figures, Figure 3.

6.1.10 At this stage, photomontages (Visually Verifiable Montages - VVMs) were also prepared to inform the LVIA and final outline design stages. The purpose of a Visually Verifiable Montage (VVM) is to represent the proposed development, as it would appear, using a baseline of verifiable visual data and information. A VVM combines photographic views with accurate CAD 3-D representations of the proposals to an agreed level of detail. Using quantifiable data this verifiable image can then be used by others (if required) to scrutinise the work, without its veracity being questioned. For the methodology used in the preparation of photographs and photomontages, refer to LVIA Appendices, Appendix IV & Appendix V

6.1.11 A visit to the site and local surroundings was undertaken in April 2016, in July 2016 in December 2016 and in January 2017. Photographs were taken using digital photography.

6.1.12 Photographs were produced in accordance with Landscape Institute Advice Note 01/11, entitled 'Use of Photography and Photomontage in Landscape and Visual Assessment. Photographs were taken using a Nikon D40 camera, with 35mm or 18mm lens setting (18mm setting giving a 28mm focal length) and presented to give the digital equivalent of 50mm lens (for standard 35mm format camera), viewed at a distance of 300mm at A3. In some instances, the representative viewpoint photograph was cropped to a different size, adjusted so it could still be viewed at the same viewing distance.

6.1.13 Photomontages were also produced with a viewing distance of 400mm. For methodology for the Photomontages refer to LVIA Appendices. Appendix IV.

6.1.14 Following the site visits in which the site and surrounding landscape were assessed and the extent of visibility of the site ascertained, landscape and visual receptors have been selected.

6.1.15 The key viewpoint locations (see LVIA Appendices, Appendix II Figure 8) and methodology (see Methodology section of LVIA Appendices, Appendix 1, Methodology) were submitted to and agreed with Torbay Council, the South Devon AONB manager and the South Hams Landscape Officer in January and February 2017.

6.1.16 While the site lies totally within the Torbay District boundary, the western site boundary runs along the district boundary of Torbay with the South Hams. The adjacent fields lie within the South Hams District. The agricultural landscape is identified as designated as Area of Great Landscape Value (AGLV) in the Enderby Torbay Landscape Character Assessment (2010) - it is no longer locally designated in the current Torbay Local Plan or the South Hams District Council's Core Strategy adopted 2006, instead the value of the landscape is determined from the Planning Authority's Landscape Character Assessment.

6.1.17 For clarity throughout this section, the term 'landscape' has been used to describe all combinations of, and relationships between, built form, surrounding 'open'/undeveloped space and other natural and man-made features within the site location. Landscape is defined in the European Landscape Convention (ELC), as follows

'...an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors'.

6.1.18 Landscape character is described by the physical parameters and features of a locality, which are characteristic of, and which define the locality, giving it a 'sense of place'. An evaluation of the character is made to identify the most valued areas and those displaying high quality characteristics. Visual considerations relate specifically to the views of a landscape afforded to people. For convenience the fields within the site have been numbered as in the diagram below.

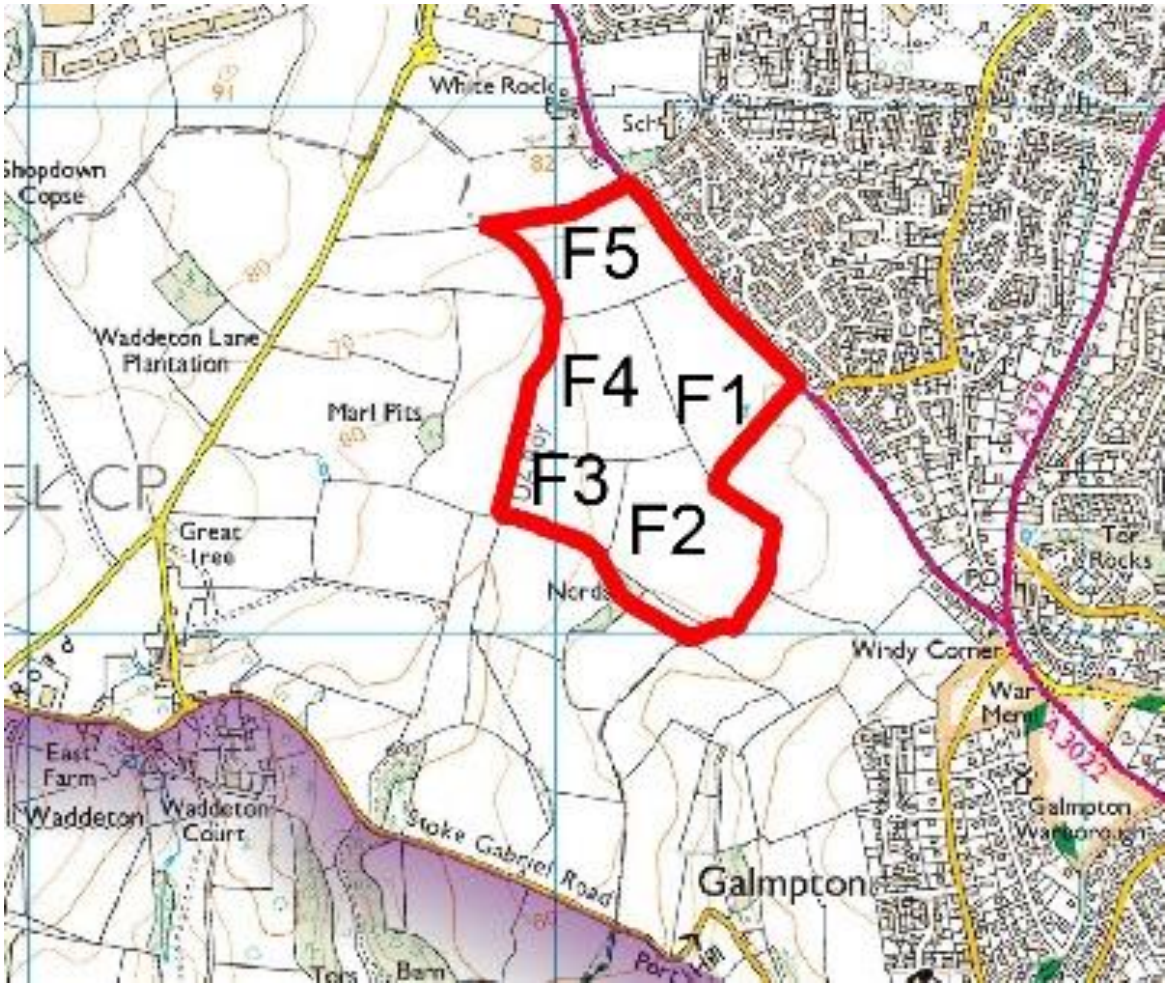


Figure A The site and field numbering

Summary of the Landscape and Visual Assessment Process

6.1.19 The chapter is divided into landscape and visibility considerations. Firstly, in the baseline section, landscape is considered, then visual amenity. The development proposals are described with 'primary' mitigation measures included in the design process. Finally, the potential effects of the scheme together with cumulative effects of other schemes on landscape character and on visual amenity (to include night-time effects) are assessed.

6.1.20 The focus of the chapter is the development proposals associated with the outline planning application. This comprises the construction phase, where the works are carried out and additional machinery and work compounds are housed on site; and the operation phase, when the works are completed and site is in use. The operation phase includes a phase of establishment maintenance and management of the soft landscape.

6.1.21 The LVIA chapter is a 3-stage assessment process, leading to an overall conclusion, as follows:

- Baseline description of landscape and visual receptors;
- Appreciation of scheme design, avoidance, and mitigation (Primary) and where possible, enhancement measures;
- Assessment of potential effects on the landscape receptors, and the viewers (visual receptors). This includes the sensitivity (susceptibility and value), the magnitude of impact/ the nature of the change, and a judgement of the level of effect resulting from the proposed scheme. A conclusion is then drawn on whether these effects would be significant or not.

6.1.22 The LVIA will present a reasoned summary of the overall effects of the specific development proposals on the baseline landscape character and visual receptors.

6.2. Planning Policy Context

National Policy

National Planning Policy Framework (NPPF)

6.2.1 The National Planning Policy Framework 2012 (NPPF) sets out the Government planning policies for England and how these are expected to be applied. The specific policies of the NPPF that relate to issues of landscape character and visual impact are set out below. One of the core principles in the NPPF (para 17) is that planning should

'take into account the different roles and character of different areas.. (and recognise)… the intrinsic character and beauty of the countryside.'

6.2.2 The NPPF states that local plans should include strategic policies for the conservation and enhancement of the natural environment, including landscape. This includes designated landscapes but also the wider countryside. The site does not lie within an AONB, but the South Devon AONB, lies within the study area. The Heritage Coast, a non-statutory designation, is outside this area and is therefore scoped out.

6.2.3 With regard to Areas Of Outstanding Natural Beauty, and places of tranquillity, the NPPF states in paragraphs 115 and 116 states that:

115. Great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty. The conservation of wildlife and cultural heritage are important considerations in all these areas

6.2.4 NPPF recommends in Para 116 that rather than develop in the AONB, consideration should be given to

developing elsewhere outside the designated area, or meeting the need for it in some other way

6.2.5 The same point is made in Footnote 9 relating to

For example, those policies relating to sites protected under the Birds and Habitats Directives (see paragraph 119) and/or designated as Sites of Special Scientific Interest; land designated as Green Belt, Local Green Space, an Area of Outstanding Natural Beauty, Heritage Coast or within a National Park (or the Broads Authority); designated heritage assets; and locations at risk of flooding or coastal erosion.

6.2.6 This is the footnote to para 14 in the Introduction to the NPPF

At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking. For plan-making this means that:

local planning authorities should positively seek opportunities to meet the development needs of their area;

Local Plans should meet objectively assessed needs, with sufficient flexibility to adapt to rapid change, unless:

any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole; or

specific policies in this Framework indicate development should be restricted..

6.2.7 With regard to non-designated landscapes which nevertheless have value, local planning policy should set policy based criteria:

109. The planning system should contribute to and enhance the natural and local environment by:…protecting and enhancing valued landscapes, geological conservation interests and soils;

113. Local planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged.

6.2.8 With regard to tranquillity and dark skies:

123. Planning policies and decisions should aim to…. Identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

125. By encouraging good design, planning policies and decisions should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

Planning Practice Guidance Notes (PPG)

6.2.9 The PPG is intended to be read alongside the NPPF and the most relevant guidance to considerations of landscape character and visual impact is set out below.

6.2.10 PPG Natural Environment – Landscape, Paragraph 001 (ID: 8-001-20140306) addresses the assessment of landscape character. It advises that landscape character assessments should be prepared to complement Natural England's National Character Area profiles. Landscape Character Assessment should help to understand the character and local distinctiveness of the landscape and identify the features that give it a sense of place.

6.2.11 There is also a planning practice guidance note specifically on Light Pollution (ID 31-001-20140306 Last updated 06 03 2014) and at section 5 it states that:

lighting schemes for developments in protected areas of dark sky or intrinsically dark landscapes should be carefully assessed as to their necessity and degree.

6.2.12 The effects of lighting at night on both landscape character and visibility is included in this assessment.

6.2.13 Existing planning policies relating to landscape matters are set out in the Torbay Local Plan 2012-2030 (adopted by Torbay Council on 10 December 2015). This forms part of the development plan for Torbay and provides the basis for decisions on spatial planning within Torbay over the next fifteen or so years. It supersedes the Torbay Local Plan 1995-2011.

6.2.14 Policies which are particularly relevant to landscape and visual amenity include:

- Policy SS8, Natural Environment
- Policy C1 Countryside and the rural economy
- Policy C4 Trees, hedgerows and natural landscape features

6.2.15 The Local Plan covers some 'big ticket' items for the Torbay Area. The items listed below illustrate key projects promoted in the Plan and the delivery focused nature of the Local Plan.

A strong urban focus – on Town Centres, brownfield sites, empty buildings and other urban sites, but out of necessity a limited amount of 'greenfield' development.

The local plan has various aspirations. Aspiration 3 is to Protect and enhance a superb natural and built environment with the following objective applying to landscape character:

To ensure new development makes a positive contribution to local character and identity, including the wider landscape character river corridors, open spaces, country parks and natural areas and setting of proposals.

Protection for and enhancement of AONB;

Identification of Village envelopes for Churston, Galmpton and Maidencombe, with greater opportunity for sensitive, modest development to support local communities.

6.2.16 The area, White Rock Extensions, in which the site lies, was broadly considered as a future growth area but has not been allocated in the current Local Plan. This was because of uncertainty about matters concerning the AONB and Habitats Regulations, as outlined in the Inspector's report. For landscape, an LVIA was needed to evaluate potential landscape and visual effects.

Policy SS3, The Presumption in favour of Sustainable Development and exceptions

6.2.17 Policy SS3 outlines the presumption in favour of sustainable development. Exceptions to this are covered in the explanatory notes, which refer to factors, which might outweigh the presumption in favour of sustainable development, such as development in relation to AONBs as described in para 115, and Footnote 9 of the NPPF, both quoted above in relation to AONBs.

Policy SS8, Natural Environment

6.2.18 Policy SS8 Natural Environment describes the relationship of the landscape with development is as follows:

All development should have regard to its environmental setting and should positively contribute to the consideration and enhancement of the natural assets and the setting of the Bay.

6.2.19 Paragraph 3 describes consideration of development outside of the AONB and its possible effect on the AONB.

Development proposals outside of the AONB will be supported where they conserve or enhance the distinctive landscape character and biodiversity of Torbay or where the impact of development is commensurate with the landscape and ecological importance. However, it will be particularly important to ensure that development outside the AONB does not have an unacceptable impact on the special landscape qualities of an adjoining or nearby AONB or other valued landscape such as country parks. In assessing new development outside the AONB, the value of natural landscapes will be carefully considered, using the Torbay Landscape Character Assessment and other relevant management plans, to help ensure the objective for their conservation are met.

6.2.20 For the proposed locations of country parks please refer to the Green Infrastructure Strategy for Paignton, described below. The landscape west of Goodrington is described as a countryside area.

6.2.21 Paragraph 4 describes the need for long-term landscape/ countryside management practices, landscape restorations and improved public amenity.

The Council will, in considering major planning applications, seek long-term land management practices to maintain or restore landscapes, greenspace, dark corridors, and amenity open spaces, integrating biodiversity and green infrastructure objectives including improved public access. If development impacts adversely upon biodiversity, geodiversity or countryside management, developer contributions and mitigation measures will be required to improve management of enhancement of the natural environment with a goal of achieving a net gain in biodiversity.

6.2.22 Paragraph 4.4.5 provides further explanation of the effect on the AONB (an indirect effect) as follows:

In landscape terms, about 700 hectares around Brixham and the south of Paignton are within the South Devon AONB. In addition, some land to the south west of Paignton has an indirect effect upon the setting of the AONB within the South Hams. The AONB is a nationally important asset and must be given the highest status of protection from development and change. Policy SS8 is consistent with the NPPF.

6.2.23 Paragraph 4.4.6 refers to the landscape character assessment and to the AONB management plan as tools in integrating the development into the landscape, and states that consideration should be given to landscape as a 'setting' for existing developments and in preventing coalescence.

The landscape character and management schedules contained in the Torbay Landscape Character Assessment (2010) will be taken into account when assessing the landscape impact of the proposed development.

Consideration should also be given to the strategic significance of key landscape areas in relation to maintaining the identity of settlements (see also policy C1 Countryside and the rural economy).

In addition other plans give guidance on landscape and related matters. These include the South Devon AONB management plan (2014) and Torbay Green infrastructure delivery plan (2011).

6.2.24 The Torbay Green Infrastructure (GI) Project is being taken forward by a partnership championed by Torbay Coast and Countryside Trust, Torbay Council and Natural England. One of the strategic aims of the plan is 'to enhance biodiversity and landscape character' and the plan includes a number of main objectives under this theme for protection, creation, restoration enhancement and management of biodiversity assets that occur in Torbay. http://www.torbay.gov.uk/media/7000/torbay-green-infrastructure-delivery-plan.pdf

6.2.25 The plan also includes objectives specific to Paignton, which has been identified as one of four 'action areas' which, due to their unique characters, have individual priorities for biodiversity and GI delivery. The northern part of the site, field 5, and the field north of that with the fields across Waddeton Road is hatched as a future country park /woodland country park. See the ecological chapter for a discussion on wildlife. The area north of the site is already planted as a country park woodland, that is a woodland with proposed access.

Policy C1 Countryside and the rural economy

6.2.26 Policy C1 Countryside and the rural economy covers development in the open countryside.

In the open countryside, away from existing settlements, and in rural areas surrounding the three towns of Torbay, development will be resisted where this would lead to loss of open countryside or creation of urban sprawl, or where it would encourage the merging of urban areas and surrounding settlements to the detriment of the special rural character and setting.

Major new urban development should focus on the Future Growth Areas in the Strategic Delivery Areas set out in the Key Diagram, consistent with the ambition and policies of the Local Plan. Otherwise development outside the main urban areas and Strategic Delivery Areas will normally only be permitted within the established boundaries of villages (village envelopes) and hamlets, provided that it is of an appropriate modest scale and consistent with relevant Local Plan Policies.

6.2.27 Paragraph 6.3.1.12 states that development outside of the intended Future Growth Areas as shown on Diagram 4 should occur inside the village envelopes according to details added in the Neighbourhood Plans.

Where new development proposals come forward, the Council will also have regard to the need to protect, conserve or enhance the distinctive landscape characteristics and visual quality of a particular location, as identified in the Torbay Landscape Character Assessment, the suitability of development and the capacity of the countryside to accommodate change.

- The countryside area is shown on the policies map and Policy C1 states that it has been identified for the following reasons:
- To identify the countryside around Torbay as a finite source and encourage its best use,
- To safeguard Torbay from further urban sprawl and maintain important green wedges,
- To prevent the main urban areas of Torbay from merging with each other and neighbouring settlements,
- To preserve the special character of the towns and villages within Torbay's overall landscape setting,
- To recognise the need to adapt to changing demands in the countryside around Torbay an priorities for development,
- To concentrate building development within the urban area and prevent the unnecessary spread of inappropriate uses into the countryside and
- To maintain a connected network of landscape features set out in the Torbay Green Infrastructure Delivery Plan.

Policy C4 Trees, hedgerows and natural landscape features

6.2.28 Policy C4: Trees. hedgerows and natural landscape features states that

Development will not be permitted when it would seriously harm, either directly or indirectly, protected or veteran trees, hedgerows, ancient woodlands or other natural features of significant landscape, historic or biodiversity value.

Where the loss of, or impact on trees hedgerows or landscape features is considered acceptable as part of development, replacement and other mitigation measures will be required through planning condition or legal requirement, [which] should at least off-set any harm, and preferably achieve landscape and biodiversity improvements, and make provision for ongoing management.

Development proposals should seek to retain and protect existing hedgerows, trees and natural landscape features wherever possible, particularly where they serve an important biodiversity role.

Proposals for new trees and woodlands will be supported in principle and will be a specific requirement of proposals in Strategic Delivery Areas and related Future Growth Areas.

6.2.29 Note: The Torbay Landscape Character Assessment Part 1 describes potential future landscape change due to housing, recreation, employment and energy development and states in paragraph 2.44 that

These changes include changes in agricultural land management, where the current environmental stewardship regime is encouraging the retention and replanting of field boundaries and small woodlands as well as the retention of traditional orchards. These are generally positive changes, which will help to maintain or enhance the character of the agricultural landscape in the medium term. Intensification of agricultural production may well cause negative landscape impacts if it leads to the construction of new agricultural buildings or the loss of field boundaries, although there was little evidence of this found during the survey.

6.2.30 It also describes the importance of woodland and trees to Torquay in paragraph 2.45:

Trees and woodlands are an essential part of Torbay"s character and identity and it has the highest density of urban forest in the south west of England. … These trees help define Torbay, and add to its attraction as the foremost UK Tourist resort. Trees, whether appearing as individuals, groups or as woodlands, have a significant effect on our quality of life by providing direct and indirect benefits. Torbay Council manages a large number of trees both directly and indirectly. However, a relatively small amount of the woodland in the area is subject to forestry management, the majority of the areas of woodland are either unmanaged or managed for amenity purposes. Current policies are encouraging the management of woodland for amenity or nature conservation, and the planting of broadleaves rather than conifers.

Landscape and relevant designations. See LVIA Appendices, Appendix II, Figures 2 & 3

6.2.31 Relevant designations to be included in consideration of landscape receptors include the South Devon AONB and the Waddeton and Galmpton Conservation Areas. AONBs are designated by Natural England (NE) in order to conserve and enhance their natural beauty, now, and for future generations.

6.2.32 The site does not lie within an AONB. It lies in the landscape between the South Devon AONB, (which lies to the south east, south and west of the site within the South Hams District Landscape) and the urban edge of Goodrington.

The South Devon AONB. See LVIA Appendices, Appendix II, Figure 2

6.2.33 The South Devon AONB has a Management Plan which is a statutory document and forms an important role in the delivery of services by the local authorities and which:

Taken as a whole, provides guidance on how to conserve and enhance the special qualities and key features of this nationally important protected landscape. A particular role for the Management Plan is to assist public organisations (defined in law as 'relevant authorities') to understand and act on their duty to 'have regard to the purpose of conserving and enhancing the natural beauty of the AONB'. The Management Plan helps to translate this duty and illustrate what it means in the context of the South Devon AONB.

The South Devon AONB Management Plan 2014 to 2019

6.2.34 The South Devon AONB Management Plan covers the five-year period 2014-19 and comprises two parts: The Strategy; and, A separate Delivery plan which provides the supporting programme of action

6.2.35 The reasons why the South Devon AONB is considered outstanding are outlined in the Strategy section. With regard to the surrounding landscape of the AONB, which functions as a 'transition' between the AONB into the adjoining landscape, the Management Plan provides the following rationale and describes the key distinctive characteristics for the South Devon AONB Designations. It describes the surrounding landscape as the 'hinterland of the AONB – particularly the rural largely undeveloped countryside, farmland and woodland' as being 'particularly significant as a setting for the AONB'. The following paragraphs are taken from the AONB Management Plan:

Rationale

The setting to the AONB provided by surrounding areas of land, sea and urban settlement together with the inter-visibility between the AONB and these areas is of great significance.

Distant views from locations within the South Devon AONB include many significant features that are not located within the AONB boundary.

Distinctive characteristics (DC) of the AONB (selected relevant)

6.2.36 Distinctive Characteristics (DC) are those components that define what it is that gives South Devon its sense of place. They generally apply to areas smaller than the AONB as a whole. The urban edge is described in the DC as a recognised part of the surrounding character of the AONB.

Plymouth and Torbay form important components of the South Devon AONB setting at the western and eastern ends of the area and contrast strongly with the deeply rural nature of the AONB itself. DC

Residents from Plymouth, Torbay and other areas of the South Hams choose to visit the South Devon AONB in significant numbers throughout the year for both leisure and business purposes. The reverse is also true with a high dependency of South Devon AONB residents for employment opportunities, goods and services provided by the neighbouring towns and city. – DC

Away from Torbay and Plymouth City, the principal character of neighbouring inland areas forming the setting of the AONB is one that is sparsely settled and deeply rural in nature.

The inland boundary of the AONB is mostly not marked by a distinct change in scenery and the landscape character continues seamlessly into the neighbouring countryside. The hinterland of the AONB – particularly the rural largely undeveloped countryside, farmland and woodland – is particularly significant as a setting for the AONB.

Relevant Special Qualities of the AONB described in the Management Plan-

6.2.37 The following italicised list of special qualities define the unique "natural beauty" for which the South Devon AONB is designated as a nationally important protected landscape:

The AONB blends into the surrounding rural landscape and is highly varied.

Iconic wide, unspoilt and expansive panoramic views.

A variety in the setting to the AONB formed by the marine environment, Plymouth City, market and coastal towns, rural South Hams and southern Dartmoor

6.2.38 The AONB lies adjacent to the tranquil and remote South Hams landscape.

Away from Torbay and Plymouth City, the principal character of neighbouring inland areas forming the setting of the AONB is one that is sparsely settled and deeply rural in nature.

6.2.39 In this locality, the AONB is grouped around the River Dart watercourses.

- *Ria estuaries (drowned river valleys), steep combes and a network of associated watercourses.*
- *Deeply rural rolling patchwork agricultural landscape.*
- *Deeply incised landscape that is intimate, hidden and secretive away from the plateau tops.*
- *Areas of high tranquillity, natural nightscapes, distinctive natural soundscapes and visible movement.*
- *A breadth and depth of significant habitats, species and associated natural events.*
- *A landscape with a rich time depth and a wealth of historic features and cultural associations.*

Vision for the AONB

6.2.40 Paragraph 4.2 in the Management Plan describes the Vision for the AONB as:

- *a place valued, recognised and treasured forever for its nationally important natural beauty and distinctive character:*
- *its rugged, undeveloped coastline with wooded estuaries, secluded river valleys, rolling hills, abundant wildlife and rich natural environment;*
- *its distinctive historic landscape character including its patchwork fields, Devon banks and*
- *hedges, green lanes, historic settlements and archaeological remains shaped by centuries of human activity and maritime and farming traditions;*
- *its rural tranquillity, dark skies, fresh air, clean water, fertile soils and mild climate;*
- *its living, working countryside where community and economic activity sustain the landscape*
- *and bring prosperity and social well-being to ensure a good quality of life for its residents.*

The Waddeton and Galmpton Conservation Areas

6.2.41 These conservation areas lie to the south west and south east of the site respectively.

6.3. Baseline Conditions

Published Landscape Character Assessments

6.3.1 For details of Devon Landscape Character Assessment please refer to LVIA Appendices, Appendix III a

6.3.2 Existing Landscape Character Assessment (LC Assessment) studies help to establish a baseline for landscape receptors. Such LC Assessments may be of varied scales, ranging from broad national character area studies to detailed local authority assessments. GLVIA3 recognises that LC Assessments

"adopted and published by competent authorities are usually the most robust and considered documents" (GLVIA3; 77).

6.3.3 Baseline studies exist to:

Establish the existing nature of the landscape and visual environment in the study area, including any relevant changes likely to occur independently of the development proposal. (and to) Include information on the value attached to the different environmental resources. (GLVIA3; 27).

6.3.4 For the purposes of this assessment existing National Character Area studies are described to provide context only, whilst character areas described by studies at a more local level are described in more detail particularly where they are especially relevant to the site.

National Character Area (NCA)

6.3.5 Originally published by the Countryside Agency in 1999, the Character of England Map, Volume 8 (South West) set out landscape character areas on a national scale. Natural England, now part of DEFRA, has updated these descriptions. The site lies within NCA 151 South Devon. This record was published by Natural England on 17 July 2012. For National Character Areas, see LVIA Appendices Appendix II Figure 4.

6.3.6 Relevant Characteristics include the following:

South Devon NCA is predominantly a plateau, dissected by steep valleys and rivers, most rising on the adjoining Dartmoor NCA. Towards the coast the often wooded valleys and rias are remote and hard to access from the land. The majority of the area consists of mixed farming, with fields flanked by Devon hedgebanks and narrow winding lanes. The south of the area contains many internationally important coastal and estuarine habitats.

Historically South Devon has tended to be an isolated part of the country, the main communities confined to the coast and estuaries and communication being by sea.

South Devon today

At its core, South Devon is a fertile, agricultural landscape, with smooth, rounded hills separated by deep, wooded valleys; a patchwork landscape of arable and improved pasture. Larger fields occur on higher, flatter land with more intricate, smaller-scale fields on the valley sides. The resultant rich and complex mosaic of habitats, supporting many arable and grassland plants and farmland birds, is further emphasised by a network of hedgebanks providing a stronghold for important, rare species, such as cirl bunting, and foraging grounds for greater horseshoe bats. A sense of enclosure pervades, particularly alongside ancient, sunken lanes, often topped with closely trimmed hedges and accompanied by a profusion of wildflowers, connecting scattered farmsteads and hamlets.

Occasional views of the sea glinting on the horizon signal the proximity of the coast. The northern edge of the area merges with the pastoral landscape of the Dartmoor fringe. The mass of Dartmoor provides a backdrop to most of the NCA.

The length and complexity of river valleys and rias, which cut through the southern plateau, impair east-west travel, contributing to the feeling of remoteness. In the valleys and estuaries semi-natural and ancient woodlands of oak and ash remain, often on steep north-facing slopes inaccessible for farming.

6.3.7 Given the relatively small scale of the type of works involved and the location adjacent to the urban edge of the Torbay urban area, the character of the NCA (South Devon) will not be affected and is not considered further, but it sets the context and describes elements of the landscape.

Local Landscape Character Areas (LCA)

6.3.8 The Devon County Council, Devon wide Landscape Character Area/ Type: LCT 3B: Lower rolling farmed and settled valley slopes, includes the landscape both sides of this district boundary as one landscape type. (The site lies within the Torbay District but adjacent to the South Hams District as the western site boundary is contiguous with the South Hams-Torbay District Boundary.)

6.3.9 Refer to Devon Landscape Character Types (LCTs) Summary List of Key Characteristics. https://new.devon.gov.uk/planning/planning-policies/landscape/devons-landscape-character-assessment.

6.3.10 The Devon Landscape Character Type, mentioned above coincides with that described in the South Hams District Council and South Devon AONB (SHSDA) Landscape Character Assessment (2007), which uses a similar name, LCT 3B Lower Rolling Farmed and Settled Slopes and description so the published assessments are co-ordinated.

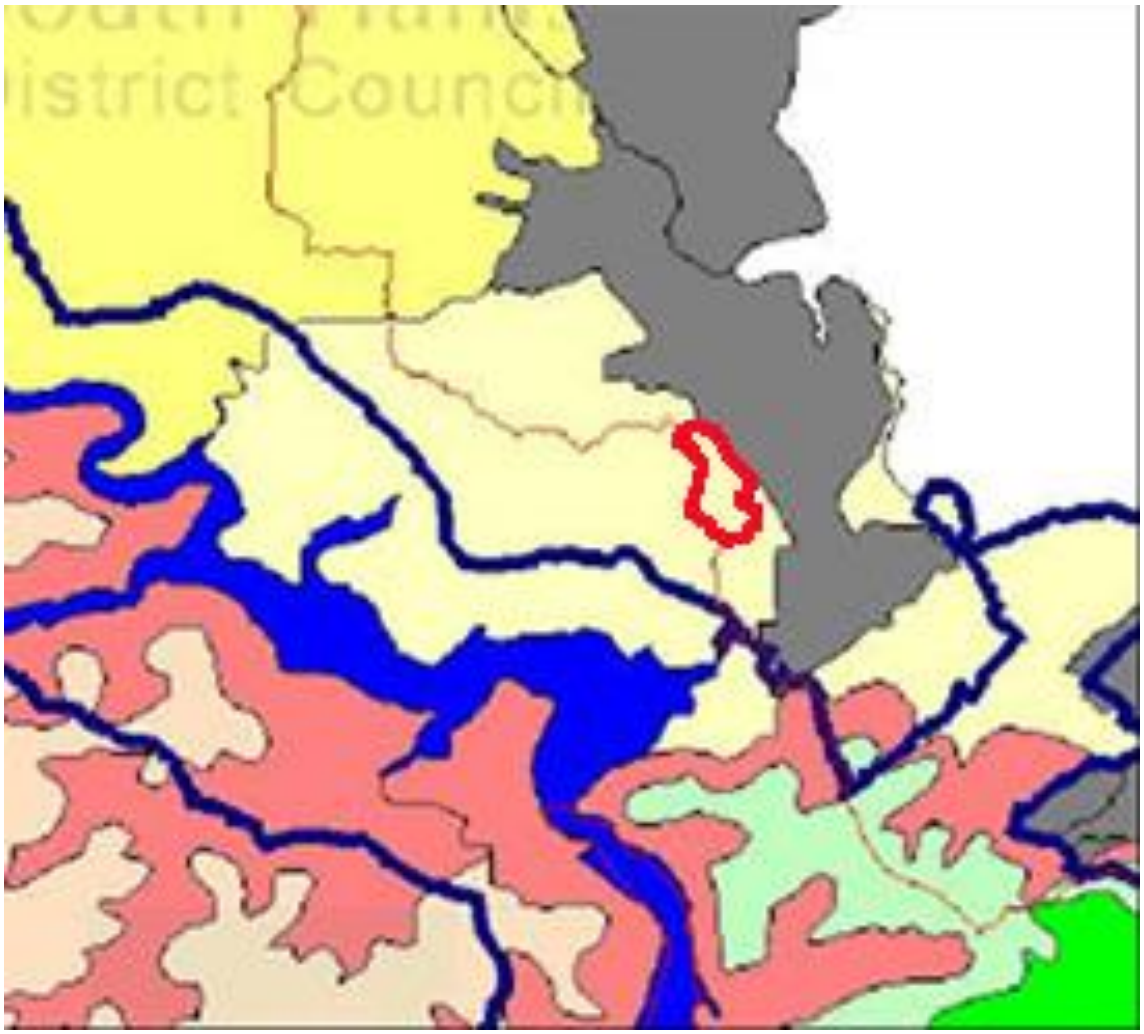


Figure B Landscape Character Types taken from the South Hams District Council and South Devon AONB (SHSDA) Landscape Character Assessment (2007).

6.3.11 Characteristics are as follows:

LCT 3B: Lower rolling farmed and settled slopes

Location - This type occupies the transitional slope immediately above the flat river valleys and tributaries in South Devon.

Key Characteristics

- *Gently rolling landform, sloping up from valley floor*
- *Variable size fields with wide, low boundaries and irregular pattern*
- *Pastoral land use, often with wooded appearance*
- *Many hedgerow trees, copses and streamside tree rows*

- *Settled, with varied building ages, styles and settlement size*
- *Much use of stone*
- *Winding lanes, often with very tall earth banks*
- *Streams and ditches*
- *Tranquil and intimate*

6.3.12 Other relevant landscape types in the SHSDA character assessment with intervisibility with the site include the following

- LCT 1B Open Coastal Plateau
- LCT 1D Inland undulating uplands
- LCT 2C: River valley slopes and combes
- LCT 3A: Upper farmed and wooded slopes
- LCT Urban (The site lies adjacent to the Brixham Road and Goodrington on the urban edge of Paignton)

Area of Local Landscape Character

6.3.13 The site itself lies within the Torbay District, which is covered by the Torbay Landscape Character Assessment. This provides a finer scaled study of the landscape character found within the Torbay District on the east of the Devon Wide/ South Devon AONB and South Hams DC Landscape Assessments. The report is in two parts. Extracts from the landscape character assessment in Part 1 are included below.

6.3.14 The site lies wholly within the Torbay Area of Local Landscape Character (AoLC,): 1O North Galmpton and in the Landscape Character Type (LCT), 1 ROLLING FARMLAND, shown in light green.

6.3.15 Within the study area to the south of the site is the Torbay LCA/ AoLC,: 3K Galmpton Valley, Landscape Character Type (LCT) 3: SECLUDED VALLEY, shown in dark green, see figure B below, taken from the Torbay Landscape Character Assessment Enderby Associates, (Pages 34, 35, 71 and 72).

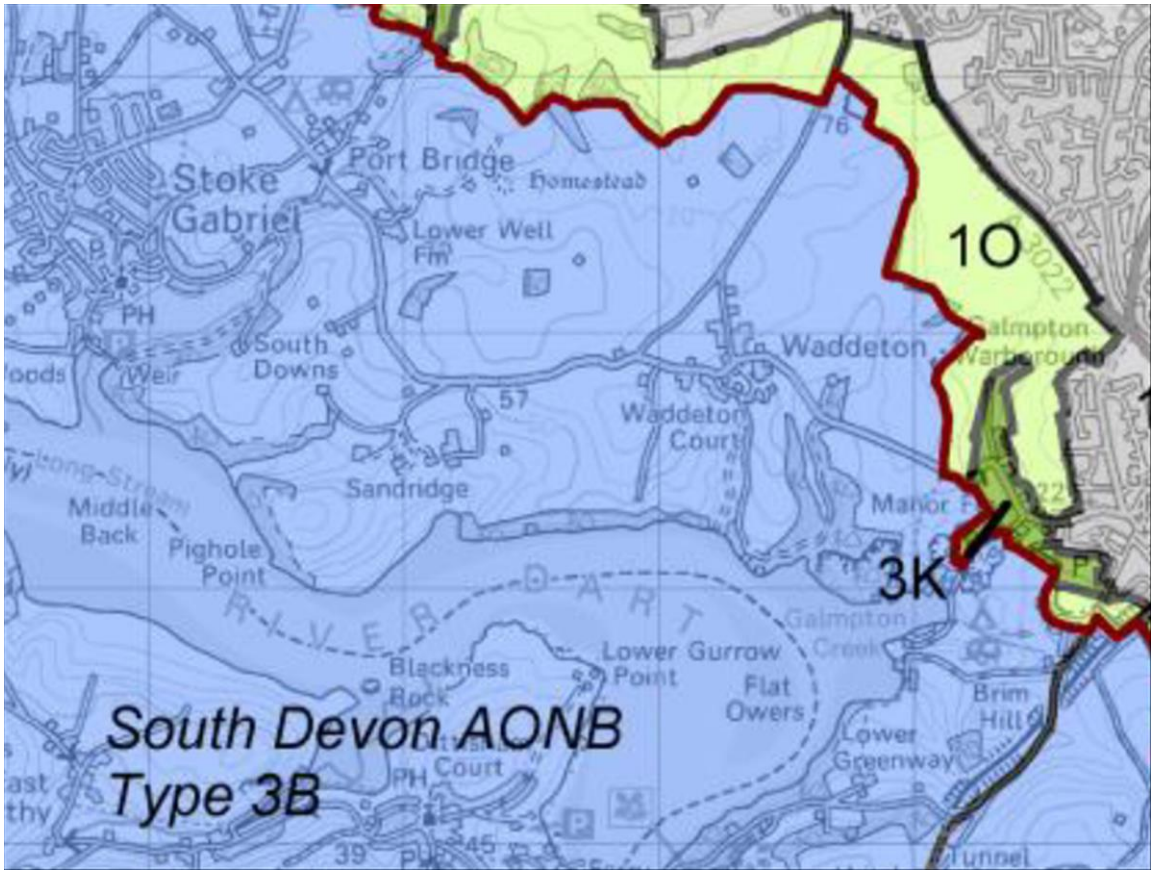


Figure C Landscape Character Types taken from the Torbay Landscape Character Assessment Part 2 (2010) to show areas 1O and 3K Note: the blue area is not the extent of the AONB but rather the extent of the SHSDA LCT 3B

6.3.16 The Rolling Farmland is described in part 1 of the Enderby Report as the typical Devon landscape.

The Rolling Farmland (Devon Type 3A & B merged) character type is the archetypal Devon landscape of rolling hills incorporating hedge banks and narrow secluded lanes. The topography is characterised by the lack of pattern to the series of relatively flat topped hills and irregular concave/convex valley sides and floor.

6.3.17 The key characteristics of this character type are:

- *The rolling topography which is the key defining feature of this landscape, where subtle changes in slope and gradient occur constantly, without a strong pattern. Flat land is uncommon and generally located on the hill tops.*
- *A rolling well farmed landscape with an irregular pattern of field boundaries and occasional hilltop woodland.*
- *A network of sunken lanes with tall hedge-banks and trees cross the area, and occasionally allow wider views across this landscape.*
- *An irregular patchwork of arable and pasture land with the distinctive red soils visible in autumn and winter.*
- *Thinly populated, with nucleated hamlets or farmsteads dispersed throughout the area.*

6.3.18 The other Torbay local landscape type is Secluded Valley. In part 1 of the Enderby assessment this is described as:

The Secluded Valley (Devon Type 3H) character type occurs within the areas of Rolling Farmland; however these have been defined separately as a distinctive character type at the Torbay level. These areas, within the context of Torbay, have a distinctly different character and would benefit from different management policies.

6.3.19 Key characteristics of this character type are:

- *A steep valley landform with narrow valley floor in the lower reaches of each valley.*
- *A topography which helps to enclose and separate these areas from the wider landscape.*
- *A secluded character due to the enclosing topography and complex network of narrow sunken lanes enclosed by high hedge-banks which contain views across fields and out to the surrounding landscape.*
- *A complex and irregular small scale pattern of hedge-banks and lanes, which separate small woodlands, orchards and areas of permanent pasture.*
- *The lanes and fields are often damp and species rich with small streams, overhanging trees and small scale enclosure.*

6.3.20 This LCA/AoLC is described as a subdivision of the Rolling Farmland. It could be seen as relating more to the River Dart and the start of a creek. In the Torbay assessment, this landscape character area is a field away from the site.

How the LCAs relate to the site

6.3.21 Overall, the LLCA (Local Landscape Character Assessment) generally represents an accurate and appropriate basis for assessing the effects of the proposals, and this is supplemented below by site-specific appraisal work. The site lies in the middle of the character area with most of the LCA to the north. The fields are undulating. Part 2 of the assessment states:

6.3.22 Parts of the southern area are slightly less sensitive due to visual containment.

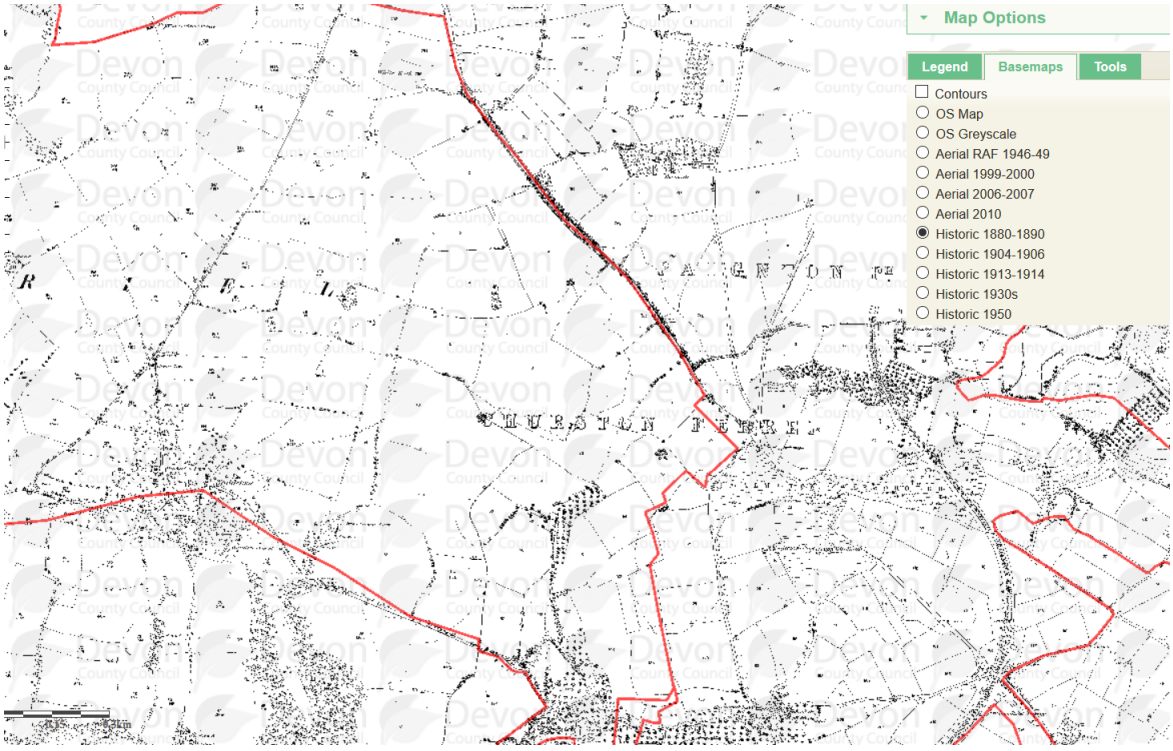


Figure D Historic map dated from around 1880 to 1890 from the Devon County Council website.

6.3.23 As part of the Devon wide Landscape Character Assessment, the county was divided into Landscape Description Units (LDUs) and the site lies within LDU 822, for which the land cover is described as 'Ancient pastoral farmlands' and settlement is described as 'Clustered with estate farms'.

6.3.24 The earliest map shown on the Devon historic landscape Characterisation website is the 1888 OS map which is compared with the current landscape.

6.3.25 The tree-lined Brixham road is on the 1888 map with agricultural fields rather than housing of Goodrington to the east.

6.3.26 The agricultural fields of the site are currently as shown on the 1888 OS map except for the removal of some hedgerow boundaries along the site boundary, and in field 1 leading to the pond, which is also on the map. Just south of the southern field boundary of field 2 there is another field boundary running along the district boundary and just north of the southern boundary of field 1 is a similar width strip of a smaller field. For field numbering used in this chapter, refer to Figure A.

6.3.27 A field to the east of the site, Marls woodland, which arose in connection with quarrying, is shown. Nords Wood is not on the map as it was planted early in the 1900s. Isolated trees in the middle of the adjacent fields are also not shown. South of Nords, the copse is associated with quarrying and is replanted ancient woodland. Traditional orchards are still part of Waddeton Conservation Area, while an orchard to the south east of the site has been lost. Further east are some blocks of plantation tree planting.

6.3.28 The nearest large estate is Waddeton Court, the buildings of which lie within the Waddeton Conservation Area and South Devon AONB to the southwest. A garden attached to Waddeton Court is shown on the Devon interactive historic maps. It lies outside the conservation area but within the AONB. Just south of the site the historic mapping shows the remains of a castle.

6.3.29 All the fields within the site boundary are Post Mediaeval. The southern fields are referred to as Barton fields, as some of the boundaries are curved, a remnant from mediaeval enclosure. The fields outside the site boundary, such as the adjacent Car Boot field to the south is Modern, as are the fields to the immediate east of the planted field north of field 5 the northernmost field. The fields adjacent to the site leading south to the River Dart are Mediaeval and the fields adjacent to the Waddeton orchards are Post Mediaeval, Barton Fields.

6.3.30 In the Torbay Landscape Character Assessment (2010) part 1, the fields are described as 'ancient agricultural probably as part of an estate'. No evidence of ornamental estate planting is on site. Moving south west away from the top of the site and away from the Brixham Road, the southern end of Waddeton Lane and the landscape around the Stoke Gabriel Road becomes more tranquil and feels more remote,. It is more of a valley side landscape before the land is wooded and drops down to the River Dart

Public Rights of Way (PRoWs), National Cycle Routes and Steam Railways

6.3.31 Although there are some urban footpath and cycle paths east of the site, there are no PRoWs on or adjacent to the site. Refer to LVIA Appendix II, LVIA Figures, Figure 2.

6.3.32 The nearest PRoW runs south from the Stoke Gabriel Road on a slope facing away from the site through woodland down to the River Dart, where it joins the Recreational Trail, the Greenway Walk. It is not in the visual envelope due to intervening woodland and landform and is therefore scoped out.

6.3.33 There is a network of PRoWs running across the AONB plateau. Some of these run across the AONB slopes that face the site. PRoWs to the south of the site include the following Recreational Trails and bridleways:

- the JMH (John Musgrave Heritage) Trail,
- the Greenway Walk,
- the Dart Valley Trail; and
- the Capton bridleway.

6.3.34 To the west the National Cycle Route, Route 2 and the JMH Trail run past the entrance to Sharpham House Grounds. This is scoped out due to distance and landform.

6.3.35 To the north a PRoW leads from Buttshill Cross along a gravel track to a reservoir. This is scoped out due to distance and landform, the site lies behind (south of) the ridge to the south of White Rock.

6.3.36 The steam railway from Paignton to Dartmouth runs to the south of the site between the site and the River Dart and within the AONB.

Local Landscape Character Baseline - The Site and Environs

6.3.37 The site comprises five fields, both pasture and arable, and is set on the lower slope of a rolling plateau area. As a whole the site slopes down to the south, while gently undulates in all directions. The higher land is at the top (northern end) of field 5, along the contour running along the field boundary at 73m AOD. The lower land lies to the south east (at around 61m AOD) and to the south west (at around 55m AOD) on the southwestern corner edge.

6.3.38 Just north of the site and outside of the site boundary, between the boundary of White Rock and the site, lies a field planted with woodland whips (young saplings).

6.3.39 The field pattern is defined by typical Devon hedge banks, some of which have hedgerows and hedgerow trees. The western site boundary runs along the district boundary between Torbay and South Hams, which, as shown on older maps, was previously defined by field boundaries. However, some of these hedgerows/ hedge-banks have been removed so that field 3 has no southern hedgerow and field 5 no western hedgerow.

6.3.40 The northern site boundary runs along the northern boundary of field 5. The new woodland planting in the field behind (north), is part of the mitigation for White Rock.

6.3.41 The eastern site boundary is defined by a hedge-bank along the A3022, the Brixham Road, the hedgerow along field 5 is minimal, while along field 1 a line of trees runs along the hedge-bank. This line with an initial gap to the south east near the road continues round the boundary to the south between fields 1 and 2 and the car boot field. As the boundary around field 2 leaves the car boot field, the trees become less frequent and although the field boundary is marked by a low hedgerow under 2m height on a hedge-bank, the site boundary runs along the district boundary, through the adjacent field to the south without a hedgerow boundary.

6.3.42 The southwestern boundary of field 2 is defined by Nords (wood) and the site boundary runs south of this including a small part of Nords. Although once bound by hedgerow, there is no current southern boundary, marking field 3, which runs from the northwest corner of Nords to meet the western boundary hedgerow and hedge-bank boundary of field 3.

6.3.43 The western boundary continues along the edge of field 4, where the hedge-bank is almost devoid of hedgerow/ with a low hedge, but with three hedgerow trees defining the western edge of field 4. The boundary continues across field 5 without any defining hedgerow.

6.3.44 The northern site boundary runs along the boundary of field 5, which has limited hedgerow to the east and a substantial block of hedgerow with 4 characterful, mature trees in varying states of vigour to the eastern end.

6.3.45 Internal hedgerow boundaries comprise hedge-banks with hedgerows and some mature hedgerow trees. A few hedgerow trees have been planted in the hedge-bank between fields 1 and 4 as part of White Rock mitigation and are still establishing.

6.3.46 Within the site, there are localised undulations with a plateau area in the middle of field 1 and field 4 at around 65 to 64m AOD and slightly higher ground at 68m AOD to the south west edge of Field 1 and the top (north east) of field 2 where the field boundaries are contiguous. At a lower point, to the south of field 1, there is an old quarry pond, (refer to cultural heritage chapter), surrounded by a few trees. Other low points occur along the western edges of fields 4 and fields 3. The southern part of field 2 falls steeply. Field 5 lies on higher sloping land rising up to the north to a local treed ridgeline, behind which lie the residences of White Rock, under construction to the north and northwest. An employment area is situated to the northwest of White Rock.

6.3.47 The surrounding topography is characterised by the gently rolling farmed landscape of the South Hams to the west and immediate south. Further south and west within the South Devon AONB, the land drops down into the estuarine landscape of the River Dart before rising up to form another plateau, twice the height of the site further southwest.

6.3.48 To the east, the tree-lined Brixham Road (A3022) contiguous with the eastern site boundary, runs uphill from Galmpton to the local ridgeline near White Rock and defines the edge of the urban area of Goodrington. On the rising land, east of the A3022, lie the residences on the urban edge of Goodrington near Paignton stacked up the hill. Further east the land drops down to the Torbay coastal landscape. The suburbs of Torquay lie further north on a higher ridge, merging with Paignton to the northeast. While undulating, the land falls to the west and south and rises to the north and east.

6.3.49 To the southeast lies the car boot field and south of that, on a lower contour than the site, Galmpton, which comprises the Open Access Land at Windy Corner and residential area. The Galmpton Conservation Area is tucked away further from the site, behind the more modern residential area and is scoped out. Further south there is rolling farmland typical of the South Hams District with the characteristics described in the LCA, namely a traditional South Devon rural landscape with hedge banks and sunken lanes. Some of this land to the south lies within the AONB.

6.3.50 Throughout much of the rolling farmed plateau landscape to the south and west, the integrity of the existing hedge-banks/ hedgerows and hedgerow trees, patches of woodland provide varying levels of enclosure. The site blends in well and is part of this agricultural landscape with its blocks of woodland and other trees. There is a line of trees on the eastern boundary of field 1 along the Brixham Road and on the other side of the road is wooded so that to the north and east, the residential areas are integrated into the landscape by lines and /or blocks of trees. To the west, there are isolated trees in the middle of the fields. Further west lies Marls Quarry with its tree group, with a plantation and historical copse even further east. To the southwest lie the traditional orchards of the Waddeton Conservation Area around the thatched cottages. To the south lies Nords woodland block comprising Pines to the north and Holm Oaks to the south and to the southeast a crescent shaped line of evergreen trees further define the landscape. The landscape is characterised by rolling agricultural fields, defined by hedgerows and hedgebanks and scattered woodland blocks, which provide some enclosure.

6.3.51 The South Devon AONB lies approximately 500m south of the nearest site boundary (the boundary across field 3 and just south of field 2). Further south the AONB land falls away from the site down to the River Dart/ Dart Estuary landscape and Dittisham. The land then rises to around 170 to 190m AOD with the slope as a whole facing north east towards the site and the urban area of Torbay beyond. The land then plateaus at around 5km from the site and starts to fall to the southeast and southwest.

6.3.52 Waddeton Conservation Area, which includes the hamlet and adjacent orchards, is situated to the south west at approximately 60m AOD in a wooded area. Its boundary lies about 500m from the nearest site boundary and there is some intervisibility with the site and residences and/or the curtilages to the south west of the site. The River Dart Estuary wraps round to the southwest of Waddeton. Further to the southwest lies Stoke Gabriel on lower land near the River Dart at about 40m AOD.

6.3.53 To the west and northwest lies rolling farmland typical of the South Hams landscape with typical characteristics as mentioned above and some scattered small woodland blocks. Within this agricultural landscape, Sharpham House lies to the far west on the other side of the River Dart within the AONB and Totnes lies to the far northwest on the north edge of the AONB.

Landscape Receptors (LRs). See LVIA Appendices Appendix II Figure 6

6.3.54 Landscape receptors, which will be used in the assessment process, have been identified. Identification of landscape receptors includes:

the constituent elements of the landscape, its specific aesthetic or perceptual qualities and the character of the landscape in different areas (GLVIA 3, 36)

6.3.55 Some are based on the published local character area descriptions and others have been selected in order to capture the local character of the site and its context. Other landscape character areas in the SHSDA Landscape character assessment as shown in figure 6 were considered in selecting the landscape receptors but as they will not be physically altered by the proposals nor by their adjacency to the proposals, these receptors are scoped out at this stage. Refer to Figure B Landscape Character Types taken from the South Hams District Council and South Devon AONB (SHSDA) Landscape Character Assessment (2007) also found in LVIA Appendices, Appendix II Figure 6.

6.3.56 The wider local landscape character area lies within the local Devon Landscape Character Type 3B Lower Rolling Farmed and Settled Slopes. This relates to SHSDA Landscape Character Type (LCT) 3B & TDC LCA (AoLC) 1O. The landscape character area sweeps across the district boundary and so the local landscape both sides are considered within this landscape receptor.

6.3.57 The agricultural landscape is both pastoral and arable. It comprises the rolling plateau on which the site lies, and which extends to the south and west. Although not in the AONB, some of it lies within the landscape context of the AONB. The landscape used to be locally designated as AGLV by both authorities. As there was to be greater reliance on the Landscape Character Assessments, this local landscape designation is now omitted from both districts' Local Plan/ Core Strategy.

6.3.58 The partially open aspect in certain locations allows views out towards and in from the distant higher land of the Devon AONB (and the rolling hills beyond and outside the AONB) to the south and west, filtered by woodland blocks, such as Nords.

6.3.59 It is assessed as a receptor in its own right, see LR5 below and also further subdivided locally in relation to the site into the following Local Landscape Receptors, LR1a and LR1b as shown in Figure E below in this Chapter and Figure 6c in the LVIA Appendices Appendix II Figure 6c.

6.3.60 The selected landscape receptors, shown in figure E below, are as follows:

- LR1a Rolling Farmed Landscape and
- LR1b Valley Side Landscape. The Waddeton Conservation Area and part of the Galmpton Conservation Area are set within the LR1b the Valley Side Landscape.
- LR2 The tree-lined Brixham Road Corridor, A3022.
- LR3 Urban edge/ urban landscape -To the east and north of the site lies the urban edge of Goodrington/ Paignton and to the south the urban edge of Galmpton. (The urban edge of White Rock, which lies to the north, is behind (north of) a line of mature trees and over the ridgeline, which separates it from the Inglewood site.)

6.3.61 The AONB and local landscape character type 3b are also included as landscape receptors:

- LR4 The Local AONB landscape as a whole. This includes LR4 [SHSDA LCT 1B] Open Inland Plateau of the AONB east of the River Dart; and LCT 2C: River valley slopes and combes
- LR5 The local landscape character area as a whole. This comprises LR3B Lower Rolling Farmed and Settled Slopes [SHSDA and Devon wide Landscape character type] to include both that in the Torbay District and that in the South Hams district as it is one Devon landscape character area
- LR6 The Conservation Areas (CA)s. There may be indirect landscape effects on the Waddeton CA and the Galmpton CA.

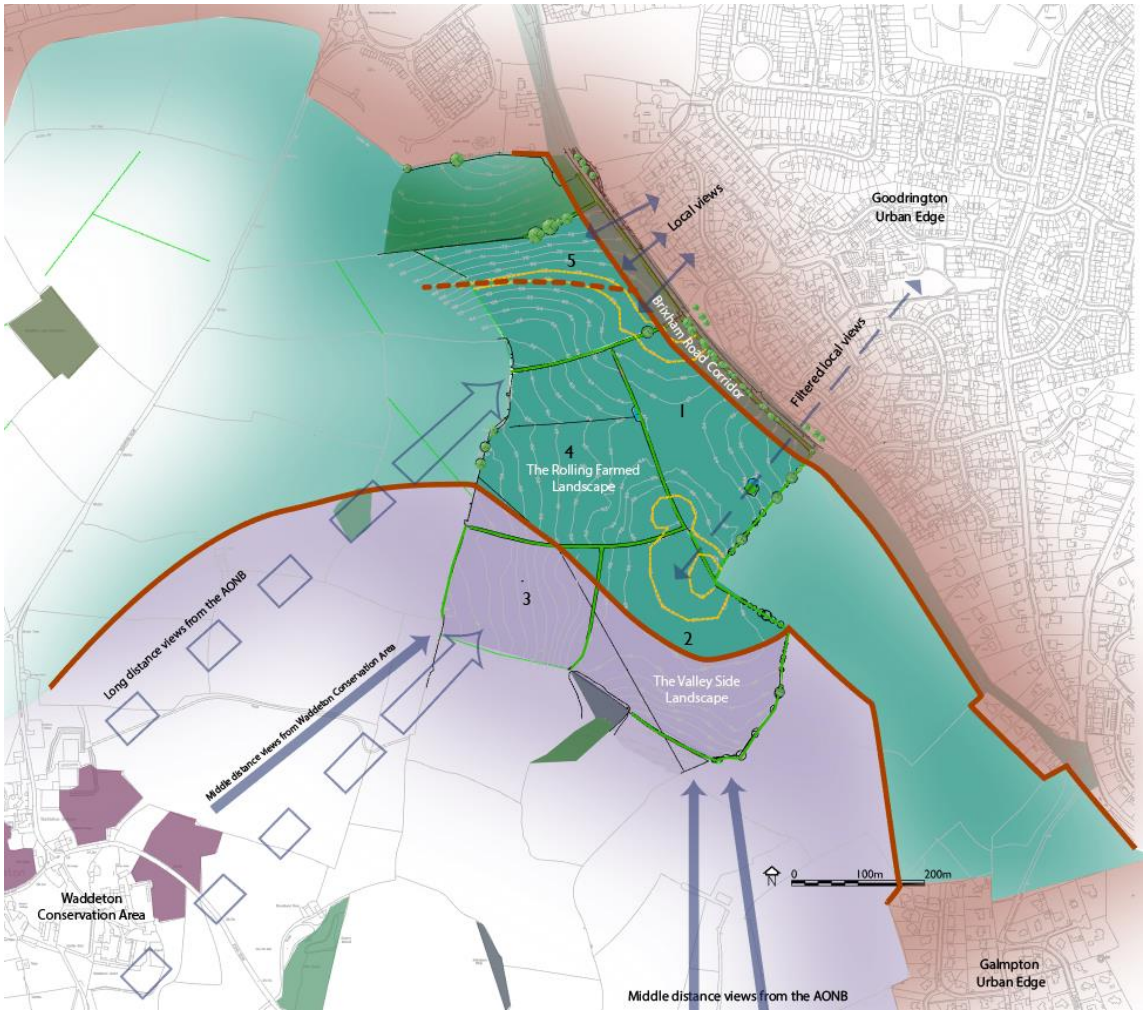


Figure E Local Landscape Receptors: LR1a Rolling Farmed landscape, LR1b Valley Side landscape, LR2 Brixham Road Corridor, LR3 Urban edge landscape-Goodrington & Galmpton. Woodland is shown is various shades of dark green, orchards around Waddeton in purple. Yellow dotted lines within the site indicate the 67m and 68m AOD contour. Site fields numbered 1 to 5. Local woodland and copses are shaded in green, coniferous in grey, orchards in purple. Note Waddeton and Galmpton CAs are shown in LVIA Appendix II Figures.

Table 1	Landscape Receptors (LR) within the study area
LR	**Name**
LR1a	The Rolling Farmed Landscape lies between Goodrington and Waddeton Lane to the west and beyond. It includes most of the site and the area outside the site in which ecological mitigation will occur.
LR1b	The Valley Side Landscape. This includes the southern part of the site and the slopes just south of the site leading to the Stoke Gabriel Road and the wooded slopes of the River Dart.
LR2	The Brixham Road, A3022 tree lined road corridor
LR3	The urban edge/ urban landscape/ Goodrington and of Galmpton
LR4	The local AONB landscape within the study area as a whole.
LR5	The local area (ie within the study area) of the Devon Landscape Character Type (LCT) 3B called the Lower Rolling Farmed and Settled Valley Slopes landscape as a whole to include both that in the Torbay District and that in the South Hams district as it is one landscape.
LR6	The Conservation Area (CA) of Waddeton
Note re LR5 and AGLV The agricultural land to the west of Goodrington. The area within the South Hams was valued as AGLV by South Hams District Council and the adjacent area within the Torbay boundary is still valued as AGLV in some Torbay Council SPDs. This is also the landscape on the edge of the AONB, between the AONB and the urban edge. This is divided into receptors LR1 Rolling Farmed Landscape and LR2 Valley Side Landscape. It is assessed locally as a whole as LR 5 above.	

Landscape Value, Susceptibility and Sensitivity

6.3.62 Value, Susceptibility and Landscape Sensitivity are examined in the Assessment of Visual Effects, Section 8 of the LVIA.

Visual Context Baseline, Visual Receptors and Existing Views

Zone of Theoretical Visibility (ZTV) and Visual Envelope.

6.3.63 The Zone of Theoretical Visibility (ZTV). provides an indication of the area from which views of the development may be gained (the potential visual envelope).

6.3.64 As an initial tool for site survey, the ZTV was calculation was based on landform only, using an anticipated component height of 9m and 12m from fields within the site.

6.3.65 The visual envelope was refined following desk study and site visit. Visual receptors were identified within this envelope and illustrative/representative viewpoints selected. Night-time photos were taken for key Representative Viewpoints.

6.3.66 Further illustrative viewpoints were added following viewpoint agreement with the AONB manager, and the landscape officers for the South Hams and for the combined service of Teignmouth and Torbay.

6.3.67 As the built form became more defined, a ZTV calculation, based on a Digital Surface Model (DSM) was made. In addition to landform, this ZTV included landscape features such as buildings, hedgerows and trees.

Description of the site in the visual envelope

6.3.68 Both the site and surroundings lie on a landscape, which undulates in all directions with an overall fall to the south/ southwest down to the River Dart. The undulation means visibility varies. The overall fall to the south and southwest means visibility is possible from the landscape to the south when it rises and to the south west on the rising landscape on the other side of the River Dart. Scattered woodland blocks, hedges on hedge-banks, and the urban edges of Goodrington to the East, and Galmpton to the southeast further curtail possible views, reducing the visual envelope. The AONB lies to the south of the site within the visual envelope.

6.3.69 The visual receptor groups have been selected from within this visual envelope. Refer to LVIA Appendix-Figures, Figure 3 for DSM ZTV, which shows the visual envelope.

Selection of Visual Receptors - People Receiving Views and the Representative Viewpoints

Identification of visual receptors is the process of identifying *'the people who will be affected by the changes in the views or visual amenity at different places' (GLVIA3,36) and their 'Value, importance, susceptibility and resilience' (GLVIA3,37)*

6.3.70 Viewers/ Visual Receptors are viewers in publically accessible places. From private locations, ie local residences, views are assessed through intervisibility. As it is unlikely that Railway users on the Dartmouth to Paignton steam train, travelling on lower lying land, will obtain views of the site, they are scoped out. Views from private land, such as those distant/ middle distance views, afforded to viewers from the access track to and from the top of Windmill Hill, are not assessed.

6.3.71 The visual receptor groups with the potential to be affected by the proposed development have been identified as:

Visual Receptor 1 (VR1) Residents

- in the Conservation Area
- outside of Conservation Areas and on the Urban Edge (outside of the AONB).
- in the settlements and scattered farmhouses in the AONB
- in the landscape outside the AONB

Visual Receptor 2 (VR2) Road users

- on the road network such as motorists and cyclists in the AONB
- on the road network such as motorists and cyclists outside the AONB

Visual Receptor 3 (VR3) Recreational and non-recreational users of Public Rights of Way (PRoWs) and Public Access land

- Recreational and non-recreational users of Public Rights of Way (PRoWs) within the AONB
- Recreational and non-recreational users of Public Rights of Way (PRoWs) outside of the AONB

Visual Receptor 4 (VR4) The AONB as a whole as a visual receptor & Visual Receptor 5 (VR5) The Conservation Areas

- Waddeton Conservation Area

- Galmpton Conservation Area viewers are scoped out as the wider village Galmpton lies between the CA residences and the site.

6.3.72 Selected viewpoint photographs from various orientations and locations were chosen to represent and describe the views obtained by the visual receptors. For representative viewpoint (RV) locations refer to LVIA Appendix, LVIA Figures, and for the RV photographs and descriptions, refer Figures 9 to 44. The RVs are also included as a list in the LVIA Appendix, in the section called 'List of Selected Representative Viewpoints'. These RVs have been used in the assessment to appreciate the visual context of the visual receptors and describe the changes in the views resulting from the proposed development. This analysis has been used to assess the impact of these proposals on the visual receptor groups. The visual receptor groups are described and linked to associated Representative Views in Table 2 below at the end of this visual baseline section.

Description of Visual Receptors - People Receiving Views

VR1 Residents

6.3.73 The group VR1 is subdivided further into VR1a to VR1d as described below:

VR1a Residents on the urban edge of Goodrington to include the houses near the top of the site

6.3.74 Visibility for these residents was assessed both from publically accessible locations such as the footpaths and Brixham Road, and by noting where there was intervisibility of windows from the site. RVs 13 and 14 were taken to describe the type of views available to these visual receptors. The west facing windows have views out across the Brixham Road onto the rolling agricultural landscape extending towards a local ridge. The site lies within this landscape adjacent to the Brixham Road. To the south west the views are out towards the AONB landscape beyond the woods on the banks of the River Dart and towards hills beyond.

VR1b Residents on the urban edge of Galmpton (outside the CA) south of the site and south of the car boot field

6.3.75 Residents on the northern and northwestern edge of Galmpton have glimpsed views of the site, filtered by the boundary vegetation. RVs 11 and 12 were taken to represent these receptors. The views are looking up from lower ground, across the car boot field towards the treed hedgerows of the site. Views of the site and landscape beyond are oblique. Nords is visible over the tops of the treed hedgerow in some views.

VR1c Residents in the settlements (such as Dittisham) and in the scattered farmhouses within the AONB

6.3.76 Residents in Dittisham whose windows or gardens are within the visual envelope will receive views of the site. Due to landform and intervening vegetation, views are available only on higher land in lower Dittisham and RV 7e would represent these views. The view is of the River Dart in the middle distance seen through woodland in the foreground. From this elevation of around 55m AOD slightly lower than most of the site, the site is seen obliquely in the far distance against the Ridge at White Rock, which from this elevation forms the skyline. A small part of the field surface of field 5 is visible. For the rest of the site as a whole, the field boundary vegetation blending in with the surrounding hedgerows and trees, rather than the surfaces of the fields is visible as a thin strip.

6.3.77 RV 5c was taken for views on higher land entering the Dittisham from the south and as representative of farmhouses in this orientation. This view includes the River Dart in the middle distance with its wooded banks and fields either side. In the far distance the site is visible as a thin strip of fields adjacent to the urban area of Torbay on the distant skyline.

6.3.78 RV 5c was also taken as representative of farmhouses south of the River Dart in this orientation, such as Cott Farm, which is near the southern boundary of the AONB.

VR1d Residents in the scattered farmhouses outside the AONB

6.3.79 On the higher more remote rural, less inhabited land just outside the AONB, views are mostly obscured at this distance (around 5km from the site) due to intervening vegetation and/ or landform. Views are obtained from windows facing the site in locations where the land slopes down in the direction of the site and there is no intervening vegetation. The views to the west, north and east includes the AONB countryside and the agricultural landscape beyond. The more elevated views include Dartmoor to the northwest and Torbay and the East Devon Coast to the northeast.

6.3.80 This is the case for farmhouses or residences such as those in the location of Foxenhole at a southwest orientation from the site as in RVs 5a and 5b; and from the upper windows of the farm residence at Kingston near the Capton Bridleway, RV4a.

6.3.81 RV4a, a distant elevated view of about 120m AOD at about 5km from the middle of the site), taken from the road at the bottom of the Capton bridleway, is representative of views from this area in a west southwest orientation.

6.3.82 In RV 5a, the site lies in the far distance and from this elevated view the urban area of Torbay forms a considerable part of the view on the distant skyline. The site is tucked directly under this, a small element in the fields on the urban edge.

Visual Receptor 2 (VR2) Road users, such as motorists, cyclists, farm vehicle drivers, pedestrians

6.3.83 The group VR2 is subdivided into groups Vr2a to VR2d:

VR2a-1Users of the road network within the AONB –south of the River Dart

6.3.84 High hedge-banks with treed vegetation and/ or robust hedgerows tend to prevent views along the lanes crossing the more rural landscape south of the River Dart. Views where available tend to be transient through gateways. However, in locations where the road runs down a slope towards the site, sequential views are available, often framed by hedge-banks.

6.3.85 RV3 represents a view through a gap in the hedgerow over the River Dart in the foreground with the site a small element in the background on the urban edge of Torbay. RVs 5 represent sequential views available to road users driving into Dittisham from Capton or Dartmouth. The view is of the fields comprising the site as a small element in the middle to far distance, set against the urban edge of Torbay, a wide element in the background. Initially the view sequence starts on a section of road outside the AONB (RV5a) moving into the AONB (RV 5b) until just beyond Cott Farm (RV 5c), when the road drops into Dittisham and the view is lost. These views are approximately 3km from the nearest site boundary. Views of the southeastern part of the site are prevented by landform and Nords wood.

VR2a-1Users of the road network outside the AONB –south of the River Dart

6.3.86 On the road from Capton to Dittisham, road users would just be able to discern the site around Bruckton Cross, where elevated views are possible over the hedgerows from the road up to near Downton Cross. Refer to RV5a. The site is not visible until reaching Foxenhole when sequential views are possible as the AONB is approached and entered, travelling towards Cott Farm. Refer to RV 5b leading into RV 5c in the AONB.

VR2b Users of the road network within the AONB –north of the River Dart –Kennel Lane near the Galmpton, Greenway Road & Stoke Gabriel Road

6.3.87 Road users travelling north along Kennel Lane as it drops down towards the edge of the Dart Valley are facing the site and will receive sequential views of the site, framed by the high hedge-banks either side of the road. Views from other neighbouring roads are curtailed by intervening vegetation/ built form. Refer to RV9. Although views are possible from a short stretch of the Greenway Road, drivers will barely perceive the site as it is at right angles to the direction of travel. Walkers would have more time to stop and turn to look over the 1m high hedge-bank/ wall. See VR3 below. Drivers and walkers along the Stoke Gabriel Road leaving Waddeton and moving east towards Galmpton would barely perceive the site, although filtered views of field 3 are available. Refer to RV 17. Continuing towards Galmpton, views are then curtailed by landform and wooded areas. Nearer Galmpton, filtered views of the site are available through limited gateways and with the buildings of Galmpton and Goodrington in the view. Refer to RV 17.

VR2c Users of the roads outside the AONB – Brixham Road.

6.3.88 Travellers along the Brixham Road will experience a broad multi-lane road by the White Rock entrance changing into a fairly narrow, two lane, tree-lined road, as it moves south up towards and over the ridge. Looking southwest from near the top of the ridge, views open out across the landscape, which rolls down to the River Dart valley and up past Dittisham to the rolling hills beyond. Refer to RV14. The traffic on Brixham Road is rather fast without a footway so avoided by pedestrians and a footpath runs parallel and offset to the east from the road up to the ridge. Over the ridge, there is a short length of footway and the occasional driveway onto the road. Refer to RV 18, RV 14, RV 13, and RV 12.

VR2d Users of the roads outside the AONB – Waddeton Lane

6.3.89 Waddeton Lane is a narrow rural mostly single-track lane with high hedge banks, typical of the South Hams rural landscape. It runs roughly parallel to the western site boundary, one or two fields away. Glimpsed views through gateways are possible of the urban edge of Goodrington. However, on the whole, views are obscured by the hedge-banks. The Lane runs from the recent development and now urban area of White Rock to the traditional thatched cottages and orchards of Waddeton in its own large Conservation Area. Refer to RV 15

Visual Receptor 3 (VR3) Recreational and non-recreational users of the PRoWs Viewers using the PRoWs are further divided into VR3a to 3d.

VR3a Users of the PRoWs outside the AONB south of the River Dart

6.3.90 Views of the site are available to walkers, horse riders and other bridleway users from the Capton Bridleway (Dittisham Bridleway 5) as it comes over the ridge and descends down to the farm at Kingston. At this distance of over 5km, the site is a small element in the view with the urban areas of Torbay extending across much of the skyline to the northeast, and with the East Devon coastline in the very far distance further east. Dartmoor forms the skyline in the far distance to the southwest. Refer to sequential views RV 4c to RV 4b.

VR3b Users of the PRoWs within the AONB south of the River Dart.

6.3.91 The Capton Bridleway descends into the AONB by the farm at Kingston and stops at the road. The road runs parallel rather than towards the site and so views are glimpsed through an occasional gateway and through gaps in hedgerows. Refer to RV 4a. Views are possible from the upper part of the PRoW (Dittisham Path 4) running down from this road just east of the farm.

6.3.92 A recreational trail runs from Dartmouth towards Beacon Hill. As the path passes Beacon Hill, and reaches the top of a ridge, the site becomes visible. The path follows a track to a gateway onto the road from Bozomzeal Farm to Bozomzeal Cross, near Cott Farm. Views from the ridge to the road are sequential and elevated. Refer to RVs 6b to 6a.

6.3.93 A PRoW (Dittisham Path 3), also a recreational trail, runs from lower down the same road to Bozomzeal Cross, down to Dittisham and sequential views are possible for most of the length of the path. Refer to RVs 7, the sequential views start from 7b continuing to 7e.

6.3.94 A PRoW (Dittisham Path 2) runs across a triangular field near Bozomzeal Cross Farm down to lower Dittisham, Views are possible from the triangle but then the path runs down along a sunken lane track with high hedgerows until it is joined by path 3, when views are possible but very oblique from this lower vantage point. Refer to RV 5d (and 7e).

VR3c Users of the PRoWs within the AONB north/east of the River Dart

6.3.95 The undulating landform, hedge–banks and treed landscape prevents views from most stretches of the PRoWs.

6.3.96 Views are possible for about a 500m stretch of the recreational trail, the John Musgrave Heritage Trail (JMH Trail) where the views are across a slight valley with open fields towards, field 2 of the site. Refer to sequential RVs 8a to 8c with glimpsed view 8d.

6.3.97 Views are available from the Greenway permissive footpath as it crosses the Greenway Road. Sequential views of part of the site are possible for walkers as they walk along the Road to the recreational trail, the Greenway Walk. Refer to RV19.

VR3d Users of the PRoWs outside the AONB north of the River Dart

6.3.98 These are scoped out as there are no PRoWs within the visual envelope in this area.

Visual Receptor 4 (VR4) The Local AONB as a whole within the study area as a visual receptor

6.3.99 The South Devon AONB website describes the South Devon AONB as follows:

6.3.100 Covering 337 square kilometres (130 square miles) of coastline, estuaries and countryside, South Devon Area of Outstanding Natural Beauty (AONB) stretches from Berry Head in Brixham to Jennycliff in Plymouth. As well as being a place of fabulous views and fantastic countryside it is home to 34,000 people. The shaded area in the map below shows the South Devon AONB designated area.

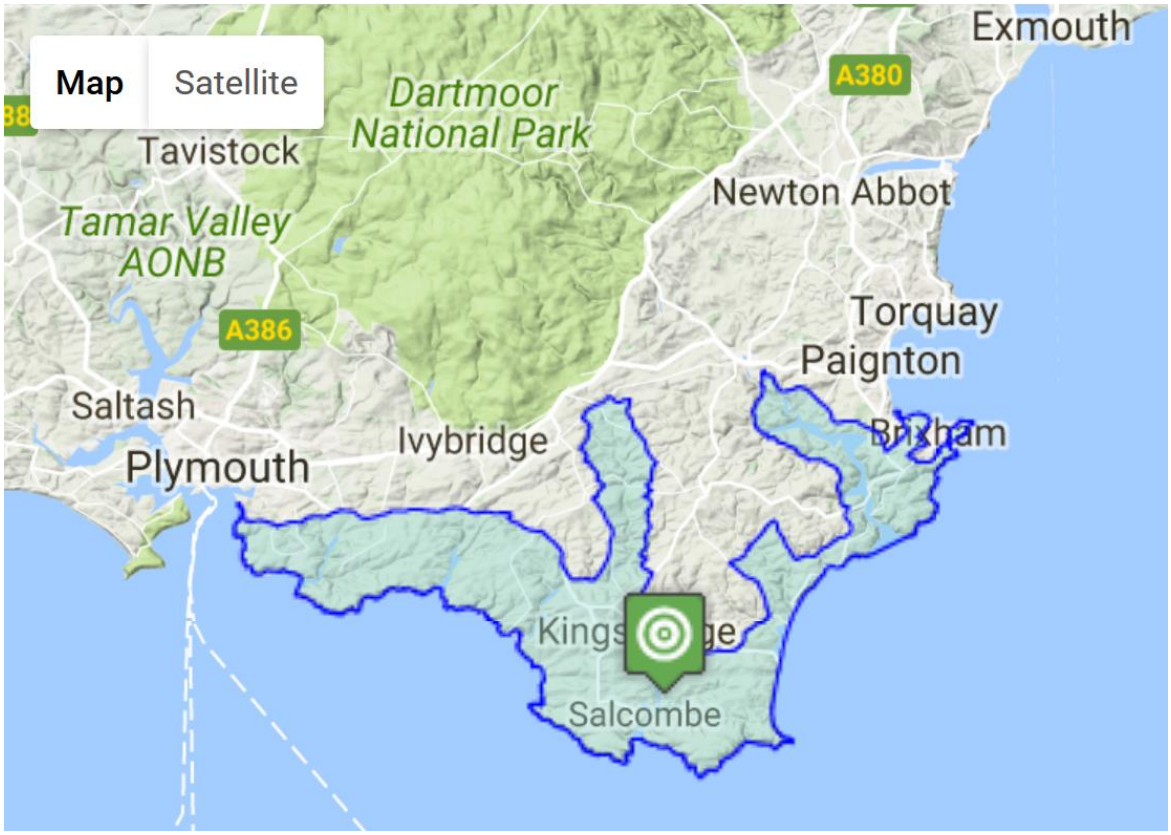


Figure F - Plan taken from South Devon AONB website. http://www.southdevonaonb.org.uk/about-the-aonb/map-of-south-devon-aonb

6.3.101 The development site is not in the AONB but will have some effect on views out from and into the AONB.

6.3.102 Views from the AONB are mainly concentrated in two areas of higher land, where the views are sequential:

- South of Dittisham, refer to RVs 5, 6, 7
- South of Galmpton, refer to RVs 8, 9

6.3.103 Views from the AONB are also possible from other locations

- Around Kingston, refer to RV 4a
- Glimpsed view over a gateway travelling from Cornworthy towards Dittisham, refer to RV3
- Glimpsed views are possible through some gateways on the lanes between Cornsworthy and Kingston.

6.3.104 Only a limited numbers of visual receptors have views that look over the site towards the AONB. These are a relatively small number of residents on the urban edge of Goodrington, and road users travelling south along the Brixham Road. Refer to RV 14.

Visual Receptor 5 (VR5) The Conservation Area of Waddeton as a whole as a visual receptor

6.3.105 For viewers in the residences, road users and walkers on the northeastern part of Waddeton CA, the change to the glimpsed views from limited locations will be low and further reduced by the site design and structure planting.

VR5 Residents on the eastern edge of the Waddeton Conservation Area (CA)

6.3.106 Although not publically accessible, a site visit confirmed that views, mostly filtered through vegetation, were possible from windows of one or two of the cottages, and from the road, through the gates of orchards, or through the trees in the garden curtilages on the Conservation Area boundary nearest the site, and from within the curtilage of Waddeton Court. The view is towards the southwestern part of the site as it falls to the Stoke Gabriel Road and across to Waddeton Lane. The residents' view would range from glimpsed views of fields 4, the top of field 2 and a partial view towards field 3, which slopes down to the south and west. Representative View (RV) 15 and RV16 were taken to represent these viewers with additional descriptions to describe the type of views available.

VR6 Residents in Galmpton Conservation Area (CA).

6.3.107 The residences and associated roads in the Galmpton Conservation are located south of the more recently built area of Galmpton, so are scoped out. The Conservation Area extends to the west of Galmpton and includes some of the Stoke Gabriel Road. It lies on a lower contour (at 50m AOD, which is lower than the site) and includes a private track through a wooded valley. The whole of the CA is therefore scoped out as views of the site are not available to viewers from either the residences or the roads.

Summary of Baseline Visual Amenity

6.3.108 Overall, the existing site lies on the side of an undulating plateau with an overall south and southwest facing slope. This faces the north and northeast facing slopes of the undulating AONB landscape. The undulations and intervening woods and hedgerows to some extent prevent views.

6.3.109 Viewers from the south of the River Dart, such as users of the PRoWs, on a limited area of the AONB, south and northeast of the River Dart will obtain sequential views.

6.3.110 Possible viewers on PRoWs from locations over 5km distance to the north (RV1) and west (RV2) have been scoped out due to distance and to landform. Views from Challeycroft, Brixham to the south east (RV10) are scoped out due to intervening built form and vegetation. Also to the east, the listed park and garden lies on lower land in woodland and so is also scoped out.

6.3.111 Residents such as those living in settlements in the AONB such as Dittisham will obtain oblique views of the site over the wooded sides of the Dart Estuary. Farmhouses on more elevated contours would obtain views but many of these are in dips in the landscape and surrounded by trees and other vegetation.

6.3.112 Residents outside the AONB include those living on the urban edges of Goodrington and Galmpton. These are near views and the site is a part of their view.

6.3.113 While views of the site from the residential part of the Galmpton Conservation Area are prevented by the intervening more recent residences in the rest of Galmpton, from a few residences in Waddeton, a few glimpsed views through the orchards may be available.

6.3.114 Road users with potential views of the site include those travelling along the local historic roads all of which feature in the pre-1900 OS map. The busy Brixham Road to the east of the site and the quiet single-lane Waddeton Lane to the west, lie outside the AONB. The Stoke Gabriel Road and Kennels Lane run along the AONB boundary and are both busier than Waddeton Lane, while in the more distant AONB locations south of the River Dart one or two roads and lanes run towards the site, affording the road users with views to the site.

Table 2 –Summary of Viewers/ Visual Receptors		
	Viewers/ Visual Receptors	View they receive
VR1	Residents	
VR1a	Residents on the urban edge of Goodrington to include the houses near the top of the site	RVs 12, 13, 14.
VR1b	Residents on the urban edge of Galmpton (outside the CA) south of the site and south of the car boot field	RV 11 (Windy Corner)
VR1c	Residents in the settlements (such as Dittisham) within the AONB and Residents in the scattered farmhouses in the AONB	RV5c –Dittisham, RV7e, going into Lower Dittisham RV5c –Cott Farm B and B,
VR1d	Residents in the scattered farmhouses outside the AONB	4b Kingston 5b Foxenhole
VR2	Road users such as motorists, cyclists, farm vehicle drivers, pedestrians	
VR2a-1	Users of the road network within the AONB –south of the River Dart	Glimpsed views RV 3, RV 4a, RV7a Sequential views From 5b outside the AONB to 5c within the AONB,
VR2a-2	Users of the road network outside the AONB –south of the River Dart	Sequential views 5a, 5b Foxenhole to 5c in AONB,
VR2b	Users of the road network within the AONB –north of the River Dart –Stoke Gabriel Road, Kennels Lane, Greenway Road	RV 16, RV17 Stoke Gabriel Road, Sequential views 9a -9b Kennels Lane; RV 19 Greenway Road
VR2c	Users of the roads outside the AONB – Brixham Road.	RV18, RV 14, 13, 12.
VR2d	Users of the roads outside the AONB – Waddeton Lane	RV15
VR3	Recreational and non-recreational users of the PRoWs	
VR3a	Users of the PRoWs outside the AONB south of the River Dart (the Landscape 'transition' into the AONB)	RV 4c-4b, sequential Transition into the AONB
VR3b	Users of the PRoWs within the AONB south of the River Dart.	Transition RV 4c-4a Sequential within AONB, 6b-6a, 7a-7e, 7d

VR3c	Users of the PRoWs within the AONB north/ east of the River Dart	Sequential 8a-8d - JMH trail Sequential views, 9a-9b – Galmpton Reservoir/ Kennels Lane views, RV19 Greenway,
VR3d	Users of the PRoWs outside the AONB north of the River Dart	Scoped out as none exist within the near visual envelope
VR4	The AONB	
	The AONB as a whole within the study area as a visual receptor	RV 3, RV 4, RVs 6, RVs7, RV 19, RV 16, RV17
~~VR5~~	~~Railway users~~	~~scoped out~~
VR5	Residents and road users in Waddeton Conservation Area (CA)	RV 16 (Stoke Gabriel Road)
VR6	Residents road users in Galmpton Conservation Area	RV17, (Stoke Gabriel Road)

Table 2:Summary of Viewers (Visual Receptors) and Representative Viewpoints (RVs). For location of the RVs, see Figure 8 in the LVIA Appendix 11- Figures

Value, Susceptibility and Visual Sensitivity

6.3.115 Value, Susceptibility and Visual Sensitivity are examined in the Assessment of Visual Effects, Section 8 of this report.

6.4. The development proposals and mitigation measures

Description of the Development

6.4.1 For a description of the development, please refer to chapter 2 of this ES.

Landscape and Visual Mitigation as Incorporated into the Design Process

6.4.2 The ongoing designs of the proposed scheme, and the associated works, have responded to the initial landscape and visual findings to reduce impacts on landscape receptors and viewers/ visual receptors. Landscape and visual considerations have been integrated into the design, woven in with the input from the other technical disciplines, to produce a co-ordinated masterplan.

Figure G - Stride Treglown Masterplan 15230_P_010_Rev A

Spatial mitigation

6.4.3 Various spatial considerations have been incorporated into the masterplan to reduce landscape and visual effects:

- For residents along Brixham Road with extensive rural views, a green area/ soft landscape area (allotments) is proposed opposite their houses;
- The low topography of the landscape in the southernmost field along Brixham Road has provided opportunities for increased height and density;
- Proposed road widening and the introduction of a roundabout would have meant removal of the whole of a large landscape element, namely a treed hedgerow on a hedge-bank along the site edge of Brixham Road as well as some vegetation on the opposite side of the road. However, the roundabout has been moved north so that hedgerow removal is reduced and the lower section of hedgerow is retained;
- The development footprint has been excluded from field 3, the lower part of field 2, and the southwestern edge of field 4, to provide a greater area of physical separation from the AONB boundary along the Stoke Gabriel Road and from the Waddeton Conservation Area, and from the Galmpton urban edge;
- Field 5 although more distant from both the AONB boundary and Waddeton, is more widely visible but development is only on the lower contours and mitigation has included trees in the public realm, which will filter views and assist in integrating the built form into the adjacent landscape; and,
- Long-term management of the new (mitigating) vegetation has been considered and a management plan (LEMP) has been submitted as part of this outline planning application and a management company will be appointed. This will assist in ensuring that the proposed woodland blocks, hedgerow strengthening with woodland planting bands, and internal planting within the site will thrive and grow to maturity. Advance planting to the south and west of the development within the site is planned to start when outline planning permission is received.

Landscape Works

Hard Works

6.4.4 The impact of the housing on both landscape character and visual amenity will be reduced by the following:

- The colours and materials of the development will be mid-tone and in recessive colours;
- Layout patterns within the field pattern structure; and,
- Building height, building and vegetation location parameters will be sensitively adjusted –e.g. heights across the site with greater height on the urban edge and lower land to the east and lower ridge heights on the rural edges to the east and south.

Soft Works

6.4.5 Soft works/ green spaces to assist in integrating the scheme into the landscape will include:

- Replacement planting to replace tree and hedgerow removals;
- New native planting as hedgerow reinforcement, reinstatement of field boundaries, woodland blocks, single and grouped trees, and strips of trees;
- Advance planting of the above where possible;
- New planting within the public realm within the development to include avenues and orchards;

- Some evergreen planting at key locations to reflect the surrounding landscape, but mostly native deciduous species; and,
- Areas of Public Open Space.

Construction and Operation

6.4.6 The residential development will occur in phases, each phase going through the construction, then the operation process as described below:

Construction works

- Demolitions to include unavoidable vegetation removal;
- Additional machinery traffic and noise involved in the demolition/ construction process;
- Construction of infrastructure and major road;
- Excavation of foundations and construction of residences;
- Hard landscaping; and,
- Soft landscaping.

6.4.7 Construction for each phase is temporary, anticipated to last 12 to 18 months.

Operation

6.4.8 Operation is considered to be permanent and starts when the final scheme has been fully implemented, i.e. when construction to include planting and seeding has been completed.

6.4.9 It will include any implementation of planting postponed due to seasonal requirements and the establishment period required for the other soft landscape elements such as:

- Grass seeding, in autumn of the year of construction or in spring the following year and which will establish in the season following the seeding; and,
- New planting, which will mature in the 2 to 5 year establishment maintenance phase and the woodland planting, which will take 15 – 20 years to make substantial growth.

6.4.10 Long-term management of the landscape will also begin in all elements of the green infrastructure.

6.5. Assessment of effects

The Process

6.5.1 The assessment of effects for landscape and visual receptors is carried out in separate sections. Both assessments follow a similar process as described below.

Nature of the Receptor / Sensitivity

6.5.2 The landscape and visual receptors are assessed for their sensitivity by consideration of their susceptibility to change from the type of development proposed on the site and adjacent road and the value of the landscape receptor or the value the visual receptor (viewer) places on the view. The sensitivity to change is assessed within a scale of High, Medium, Low.

Nature of Effect / Nature of Change

6.5.3 For each landscape receptor and each type of viewer/ visual receptor an assessment will also be made of the magnitude of effect (also referred to as nature of effect/ nature of the change/ magnitude of change) based on the scale of effect and the duration/ reversibility of effects resulting from the proposals. This is assessed on a scale of High, Medium Low, Negligible.

Level of Effect

6.5.4 Together, the Sensitivity to change and the Magnitude of Change will be used to make an assessment of the Level of Effect on each landscape receptor and each visual receptor and their view (Substantial, Moderate, Minor, Negligible) and whether this change would be beneficial or adverse. See the Methodology section of the LVIA Appendix for a more detailed description of these categories.

6.5.5 Construction Effects & Operational Effects

6.5.6 Construction, then operational effects, are assessed first on the landscape and then on the viewers and visibility.

6.6. Assessment of potential effects on landscape receptors

Landscape Effects

6.6.1 Landscape effects are now considered. This includes an evaluation of landscape sensitivity, of the magnitude of change to the landscape receptor and a judgement of the ensuing potential level of effect, given the magnitude of change and the sensitivity of the receptor.

6.6.2 For the Green Infrastructure Parameter Plan, refer to the appropriate Appendix of this ES. This plan details the vegetation framework of the development in terms of existing retained and proposed woodland, woodland belt, hedgerow reinforcement, avenue trees, parkland trees, and new hedgerows supporting existing landscape character and ecological requirements.

LR1 The agricultural land west of Goodrington

LR1a The Rolling Farmed Landscape

Sensitivity

6.6.3 The landscape is valued as a rural, undulating traditional farmed area, with narrow lanes and hedge banks, typical of Devon. To the east it lies adjacent to a main road and on the urban edge of Goodrington, where it is less tranquil.

6.6.4 The scheme involves the introduction of housing onto the urban edge of Goodrington. The type of development is compatible with the existing context and does not involve the introduction of new elements, but does involve the loss of some countryside. The sensitivity of this landscape receptor, which comprises the landscape from the Brixham Road to the wider landscape beyond the Waddeton Road, to this type of works is therefore judged to be medium.

Construction phase effects

6.6.5 During construction the nature of these changes will include:

- Construction effects will be reduced as construction will be in phases as the various areas of the development are built.

- Hedgerow and hedge-bank sections will be removed as part of the works to the Brixham Road.
- Within the development site, the field pattern and hedgerows will be kept largely intact with some removals to allow for circulation. (See hedgerow removals and retentions diagram on the masterplan.)
- Hedgerow strengthening and other advanced works will have occurred after receiving planning permission. Refer to Green Infrastructure Parameter Plan.
- There will be movement and disturbance from machinery on site.

6.6.6 The hedgerow removal will be combined with hedgerow restoration. Items found elsewhere in this landscape such as woodland blocks, single or small groups of trees and lines of trees will be introduced around the site. This will have a positive effect.

6.6.7 However, the excavations, road and house construction, and the machinery involved in these processes will be a change to the local landscape. The machinery involves an intensification of activity and a loss of tranquillity but this will be temporary, while the phased works occur. The magnitude of these changes is medium to high in the local landscape.

6.6.8 The effects of construction will be noticeable and disruptive but they are slightly moderated due to the introduction of some positive landscape elements. The level of effect on the local landscape character is considered to have a moderate adverse effect on the local landscape, LR1a Rolling Farmed Land, during each construction phase.

Operation effects

6.6.9 During operation, the new landscape around that particular phase of the residential development will be establishing and starting to integrate the development into the landscape.

6.6.10 Changes from the baseline condition will be that the urban edge will move westward. A new green infrastructure framework will be establishing to include the blocks of native deciduous woodland, lines of trees, small groups of trees, orchards, strengthened hedgerow, restored hedgerows and new hedgerows. Some hedgerow sections along field boundaries, which have been lost over the last hundred years, will have been replanted. The alignment of some short sections of the internal hedgerows will have been adjusted to accommodate circulation within the development. Other hedgerow boundaries will be reinforced with woodland planting. All the new planting will be establishing within a two to five year period. The advance planting will be more established. The magnitude of change is judged to be medium.

6.6.11 The level of effect on the local landscape character is considered to be moderate adverse.

LR1b The Valley Side Landscape

Sensitivity

6.6.12 As part of LR1, the agricultural land west of Goodrington, the Valley Side Landscape is valued as a rural, undulating traditional farmed area, with narrow lanes and hedge banks, typical of Devon. However, it is a more intimate landscape, relating to the more rural Stoke Gabriel Road area on the edge of the AONB and including the Waddeton Conservation Area, and Waddeton Court, rather than the more urban Brixham Road and Goodrington.

6.6.13 The introduction of additional housing onto this landscape would involve the introduction of new elements as well as loss of countryside with many traditional elements. The sensitivity of the landscape which falls to and faces the Stoke Gabriel Road, to this type of works is therefore judged to be high.

Construction phase effects

6.6.14 The proposed residential development has been drawn back from this landscape receptor and this landscape will be used for ecological mitigation and returned to pasture fields, for cattle grazing. Advance works will include woodland block planting at the top northern edge of this area, hedgerow reinstatement and hedgerows reinforced with woodland planting.

6.6.15 The additional landscape elements are in keeping with this landscape and the planned long-term management will continue the maintenance of this landscape. The magnitude of change will be low.

6.6.16 The effects of construction and implementation of the woodland blocks and strengthening of the hedgerow field patterns are in character with this agricultural landscape. The use of machinery will be intensified while the advance works are being carried out. For construction, the machinery will be larger than typically used agricultural machinery in this area. The level of effect on the local landscape character is considered to have a minor adverse effect on the local landscape.

Operation effects

6.6.17 Changes from the baseline condition will be that advance planting works and strengthened green infrastructure (comprising new blocks of native deciduous woodland, lines of trees, small groups of trees, strengthened hedgerow, restored hedgerows and new hedgerows) are now establishing and growing.

6.6.18 The changes are in keeping with this landscape and the planned long-term management of the planting will continue its maintenance. The magnitude of change is low. The effects of the adjacent works in field 2, as the last phase of the development is completed, will be considerably reduced as the woodland planting will have been establishing for about 5 years or more. As the planting establishes over time, the overall direct and indirect level of effect on this landscape will be minor adverse becoming negligible as the woodland planting matures.

LR2 The Brixham Road Corridor, (associated with the site)

Sensitivity

6.6.19 As the Brixham Road passes White Rock and moves south towards the top of the ridge, the road becomes tree-lined and narrows to two lanes. This character continues down the southern side of the ridge. On the western side of the two-lane road, there is a narrow grass verge with hedge-bank and increasingly treed hedgerow along the site boundary. On the eastern side, there are the Goodrington residences with a narrow pavement for a short length of the road. The eastern edge of the road is integrated with Goodrington by groups of trees. The road is shown as tree-lined on the 1880-1890 historic map with fields either side before Goodrington was built. The value of the road lies in its narrow tree lined character, giving it an enclosed feel as it near Hunters Tor Drive. The landscape character of this road is highly susceptible to road widening. The sensitivity of the landscape associated with the Brixham Road to this type of works is therefore judged to be medium.

Construction phase effects

6.6.20 Construction of the road infrastructure will occur at the beginning of the development. Several iterations of the road scheme have been tabled to meet highway safety and other requirements, whilst reducing loss of existing landscape features. For a description of these changes to the road, please refer to the relevant chapter of the ES.

6.6.21 During construction the nature of these changes will include tree and hedgerow removal, which will alter the character of the northern part of the historic road. This will temporarily be increased by the excavations and the machinery involved in these processes. However, the character on the lower part of the road will be largely retained approaching the junction near Windy Corner, Galmpton. The magnitude of these changes is medium to high on this landscape receptor.

6.6.22 The effects of construction are noticeable and out of character. The effect comes from the tree, hedgerow and hedge-bank loss and the permanent widening of stretches of the road. The level of effect on the local landscape character receptor is considered to have a moderate to substantial adverse effect during the construction phase.

Operation effects

6.6.23 During operation, the new alignments of the Brixham Road will be functioning and the new trees, hedgerows and grass verges will be establishing and blending in with the existing retained. At the start of operation, the magnitude of change is considered to be medium to high reducing to low as the vegetation establishes over the following 10 to 20 years, when the change will become less noticeable.

6.6.24 The level of effect on the local landscape character is considered to be moderate adverse reducing to minor adverse as the trees establish and mature but the narrow lane character of the road, a historic landscape feature will have been permanently changed.

LR3 Urban edge Goodrington/ Galmpton

Sensitivity

6.6.25 Part of the value of the urban edge adjacent to the Brixham road is its proximity to the countryside across the road. When this is developed, this part of its value will be lost. The sensitivity is medium to low. The Galmpton urban edge on the side nearest the site has a 'Green Wedge' between it and the site, so has a lower sensitivity to the development.

Construction phase effects

6.6.26 Construction of the road infrastructure and associated vegetation removal at the beginning of the development phases will be adjacent to the western edge of Goodrington, with the phased development construction works adjacent to the road. Some of the vegetation on the edge of the development will be removed for the road improvement works.

- Trees and hedgerows to be retained will be protected from being damaged by the works.
- There will be additional machinery on the road.

6.6.27 The change to the western edge of Goodrington will be medium and the level of effect is judged to be moderate to minor adverse.

6.6.28 The northern and western edges of Galmpton are not directly affected by either the road works or the development and only slightly indirectly affected. The magnitude of change is low and the level of effect is considered to be minor adverse.

Operation effects

6.6.29 During operation, the replaced trees and vegetation on both the Goodrington urban edge, the Brixham Road and the advance planting on the site, will be establishing. The construction machinery will have left and the road will be functioning once more. At the start of operation, the magnitude of change is considered to be medium, but over the following 10 to 20 years as the vegetation establishes the change will become less noticeable and for Galmpton low becoming negligible as the vegetation matures.

6.6.30 The level of effect on the local landscape character receptors, the Goodrington and the Galmpton urban edges facing the site, is considered to be minor adverse for Goodrington as the trees establish and mature but the indirect landscape effects from the road and the development will remain. The level of effect for Galmpton urban edge is judged to be minor adverse to negligible as the vegetation matures.

LR4 The AONB landscape as a whole within the study area.

6.6.31 The development is not within the AONB. Therefore, there are no direct landscape effects. However, there will be indirect landscape effects.

Sensitivity

6.6.32 The site does not lie within the AONB but it lies within the landscape between the urban area and the AONB. The residences and a road are part of this landscape, as are the rolling agricultural fields. From higher elevations in the AONB, the site is just a small element near the Torbay urban edge, which extends across the skyline.

6.6.33 The value of this area of the landscape is that it is seen from, and relates to, the AONB but only on a small part of its northeastern edge (compared to the size of the AONB and its surrounding landscape). As there are already two storey houses in this landscape, the susceptibility to the type of development (2 storey houses, with 3 storeys in selected locations) is reduced and the sensitivity is considered to be Medium to High.

Construction phase effects

6.6.34 Construction of the road infrastructure, the development and associated vegetation removal at the beginning of the development phases will all be in the landscape outside the AONB. However, it is adjacent to the urban edge and pulled away from the Valley Side Landscape and the AONB boundary.

6.6.35 The magnitude of change to the landscape on a comparatively short length along the north eastern edge of the AONB will be medium to low and the level of effect, which is an indirect landscape effect on the local AONB landscape, is judged to be moderate to minor adverse.

Operation effects

6.6.36 During operation, the replaced trees and vegetation on the Goodrington urban edge, the Brixham Road, and the advance planting on the site, will be establishing. The construction machinery will have left the site. At the start of operation, the magnitude of change is considered to be medium to low, but over the following 10 to 20 years as the vegetation establishes, the change will be low as the development become less noticeable from limited locations of the AONB.

6.6.37 Although some of the adverse indirect landscape effects from parts of the development will remain, they represent very minor elements in the landscape surrounding the AONB as a whole. Positive effects include the reinstated hedgerows along the site boundary, and new woodland and new orchard planting as shown in the Green Infrastructure Parameter Plan The level of effect on the AONB as a whole is indirect and is considered to be minor adverse to negligible as the establishes and matures.

LR5 - The Local Landscape Character Area as a whole - outside the AONB

6.6.38 The local area of the Devon / SHSDA LCT - 3B, Lower Rolling Farmed and Settled Valley Slopes outside the AONB, within the study area, is considered as a whole to include both that in the Torbay District and that in the South Hams District as it is one landscape. Similarly, it does not stop at the AONB boundary but runs across to meet the adjacent landscape character area within the AONB. However to avoid double counting when the AONB as a whole is assessed separately, the AONB area of this landscape character area is not included.

Sensitivity

6.6.39 The lower rolling farmed landscape to include the part of the Landscape Character Area 3b, which lies outside the AONB, and which lies either side of the South Hams/Torbay district boundary, was part of a previous AGLV, a local landscape designation applied by both authorities to this landscape. This landscape still has the same value but this is now reflected in the local Landscape Character Area descriptions. The site lies within the Torbay section of this landscape.

6.6.40 Torbay is more urban than the South Hams, but the landscape, apart from the proximity of the urban edge, shows no difference across the boundary. However, the way the landscape is interpreted might differ as Torbay is more urban and the South Hams rural and in places remote.

6.6.41 The local landscape merges seamlessly with the AONB, the part of the landscape to the north of the AONB (for both authorities) is farmed land, as in Rolling Farmed Land/ Rolling Farmland.

6.6.42 The SHSDA LCA describes this as follows:

- LCT 3B: Lower rolling farmed and settled valley slopes (Note: the LCT3B landscape type is also part of flows across into the AONB).

6.6.43 This landscape area is valued, both in its own right as the typical traditional South Devon landscape, and as the landscape surrounding the AONB. It comprises the rolling agricultural fields with high hedge-banks, which merge into the AONB landscape edge.

6.6.44 It is adjacent to a road and residences on its eastern and northern eastern urban edge, with Galmpton village a field away from the site boundary to the south. As there are already two storey houses in this landscape, the susceptibility to the type of development on the site (2 storey houses with some 3 storey in places) is reduced and the sensitivity is considered to be medium.

Construction phase effects

6.6.45 The landscape character area extends to the northwest and west. Construction of the road infrastructure, the development and associated vegetation removal at the beginning of the development phases will all be in a small part of this landscape. It will not be in the middle of it but adjacent to the urban edge.

6.6.46 The magnitude of change to the Landscape character area, 3B, Lower Rolling Farmed and Settled Valley Slopes outside the AONB, on a comparatively short length along the eastern edge will be medium to low and the level of effect is judged to be minor adverse.

Operation effects

6.6.47 During operation, the planting on the site and the replaced vegetation on the Goodrington urban edge and the Brixham Road will be establishing. The construction machinery will have left the site. At the start of operation, the magnitude of change on this local landscape 3B as a whole outside of the AONB is considered to be low, but over the following 10 to 20 years as the vegetation establishes, the change will be low to negligible as the woodland planting establishes and becomes more prominent in the landscape.

6.6.48 The level of effect on this local landscape 3B as a whole outside of the AONB is considered to be minor adverse becoming minor adverse to negligible as the trees establish and mature. The direct effects from parts of the development and the indirect landscape effects from the road will remain.

LR6 - The Conservation Area (CA) of Waddeton

Sensitivity

6.6.49 LR6. The Waddeton Conservation Area lies within LR1b the Valley Side landscape, which is valued as a more intimate landscape and part of the rural, undulating traditional farmed area, with narrow lanes and hedge banks typical of Devon. The rural Stoke Gabriel Road, marking the South Devon AONB boundary, runs through the village. The value of Waddeton village and orchards, recognised as an area worthy of Conservation Area status, lies partly in its traditional rural context.

6.6.50 Although the development is not in the CA, it is in close proximity and could affect the rural context and historic character of the village, by bringing housing closer. The sensitivity of the Waddeton CA to this type of works is therefore judged to be high.

Construction phase effects

6.6.51 As there are no works planned within the CA, effects will be limited to indirect effects.

6.6.52 The indirect landscape effects on the Waddeton CA arise from the works to the fields on the south western edge of the development: fields 3 and 4 and some of the inner fields, fields 5 and 1. The development edge has been pulled back from field 3 and 4, to, in part, maintain some distance between the CA and the site. Advance planting along the south western and western edge of the development is proposed, reducing the effects of the works in Field 4.

6.6.53 For Waddeton, when these works are under construction, the magnitude of change will be low as it will be reduced by the maturing woodland planting, planted in advance. The level of effect is judged to be minor adverse due its sensitivity to modern change and to nearby disruption caused by the construction process including excavation machinery, and a loss of tranquillity.

Operation effects

6.6.54 Changes from the baseline condition will be that not only the advance planting works but also the strengthened green infrastructure (comprising new blocks of native deciduous woodland, lines of trees, small groups of trees, strengthened hedgerow, restored hedgerows and new hedgerows) are now establishing and growing a few fields away.

6.6.55 The changes are in keeping with this sensitive landscape and the planned long-term management of the planting will continue its maintenance. The magnitude of change is low with some positive and some negative changes. As the planting establishes over time, the indirect level of effect on this landscape around and relating to the CA is judged to be minor adverse becoming negligible as the woodland planting matures.

6.6.56 This, combined with supporting structure planting in key locations, results in the landscape around the conservation area not being significantly changed and the designation of the conservation area will not be affected.

	Table 3 : Summary of Effects on Landscape Receptors							
	Landscape Receptor Group	LR1a	LR1b	LR2	LR3	LR4	LR5	LR6
		The Rolling Farmed Landscape	The Valley Side Landscape with Waddeton Conservation Area	The Brixham Road,	Urban edge Goodrington/ Galmpton	The local AONB landscape as a whole within the study area*	The local landscape 3B as a whole outside of the AONB	Waddeton CA/
	Sensitivity to Change from the proposals	Medium	High	Medium	Medium/ Low	Medium to High	Medium	High
Construction Phase	Magnitude of Effect	Medium to High	Low	Medium to High	Medium/ Low	Medium to Low	Medium to Low	Low
	Level of Effect	Moderate Adverse	Minor Adverse	Moderate to Substantial Adverse	Moderate to Minor Adverse/ Minor adverse	Moderate to Minor Adverse	Minor Adverse	Minor Adverse
Operation phase	Magnitude of Effect	Medium	Low	Medium to High becoming Low	Medium/ Low to Negligible	Medium to Low becoming low	Low becoming low to negligible	Low
	Level of Effect	Moderate Adverse	Minor Adverse to Negligible over time	Moderate becoming Minor adverse.as the vegetation establishes and grows	Minor Adverse/ Minor Adverse to Negligible	Minor Adverse becoming Negligible	Minor Adverse becoming Minor Adverse to Negligible as vegetation establishes	Minor Adverse becoming Negligible over time.
	* The development is not within the AONB. Therefore there are no direct landscape effects. However, there will be indirect landscape effects.							

* The development is not within the AONB. Therefore there are no direct landscape effects. However, there will be indirect landscape effects.

6.7. Assessment of potential effects on visual receptors

Assessment of Effects on the Visual Amenity of the VRs (Viewers).

6.7.1 The assessment of visual effects on viewers follows a similar process to the assessment of effects on landscape. Each VR (and the related RV- Representative View) is considered in turn. The sensitivity of the VR is assessed as a function of value of the view and susceptibility of the VR to the view. Then the magnitude of change resulting from the proposal, is assessed. Finally, the Level of Effect for the Construction Phase, followed by the Level of Effect for the Operation Phase, is assessed by considering the magnitude of change to the view/views and the sensitivity of the viewer. For the relevant RVs noted below, please refer to the LVIA Appendices, Appendix II RV Figures.

VR 1 Residents

6.7.2 The group VR1 is subdivided further into VR1a to VR1e as described below:

VR1a Residents on the urban edge of Goodrington to include the houses near the top of the site

Sensitivity of the viewers

6.7.3 The residents' views from the bungalows and gardens, to the north, is from near the top of the ridge. Its value is that, beyond the adjacent road, it is a rural view, over the fields of the site to the west, towards the undulating countryside. Part of the value lies in the oblique views towards the elevated AONB landscape in the distance to the southwest with the hills above and outside the AONB.

6.7.4 The bungalows face out onto the road over a low wall and the hedgerow on the opposite side is minimal. It is judged that they would be susceptible to changes to this countryside view, which they would value, and they would have a high sensitivity to the type of development proposed. RV14 and RV 13 represents these views.

6.7.5 The views from houses lower down the road (further south) are towards the higher area in the eastern part of the site as it drops down to the Brixham Road at the south eastern edge. Fewer houses and/ or windows face the site. The views are out to the west and less elevated and filtered by substantial trees either side of the road. The sensitivity to the type of development proposed is judged to be medium.

Construction Phase Effects

6.7.6 During construction, the works include the road improvement work and the phased development, which will occur over a period of time.

6.7.7 During this period, the residents' views from the bungalows, to the north near the top of the ridge, would be across the works being carried out to widen Brixham Road to accommodate the development, with nearby crossing, new roundabout and, located further into the site, bus stops. The construction of the residential development would follow the road construction and occur in phases, so the road improvement works would probably have finished before the first phase of development began. There would be a high magnitude of change to the view.

6.7.8 For houses near the proposed roundabout the mature trees from the site side of the road and some of the tree covering from the Goodrington side will have been removed to accommodate the roundabout and visibility splays. The view will have changed from a wooded scene to a wider road. As the phased development begins, the excavation and construction machinery and materials, and the new houses, will also become visible in the scene. The viewers, in the few residences that front onto the Brixham Road and the site, will experience a high magnitude of change.

6.7.9 From houses along the lower part of the Brixham Road opposite the site, glimpsed views through the retained substantial vegetation, to the road improvement works and development would be possible. The change to the viewer's experience would be medium to low.

6.7.10 The Level of Effect is considered to be substantial adverse, as the residents in the bungalows and those near the roundabout will experience a major change to their visual amenity. Nearer the Hunter's Tor Drive end the level of effect is judged to be moderate adverse, due to the reduced scope of the road widening and the retention of the trees.

6.7.11 These residents taken as a whole would experience a high magnitude of change to the view and the level of effect is judged to be substantial to moderate adverse.

Operation Phase Effects

6.7.12 Once the construction is of the road is completed, and then after the construction of each phase, the machinery will leave the site until the next phase begins. For the residents facing onto the Brixham Road, the road will be slightly wider in places than in the baseline. As the vegetation, where possible planted in advance, matures and the houses are built, the view of the wider landscape will be replaced by filtered views of housing in treed areas. The houses to the north of the new roundabout are set back from the Brixham Road reducing the impact. The area opposite the bungalows will not be built on but will comprise either orchards or allotments. The area round the roundabout will be planted with trees where visibility splays allow. The magnitude of change will be high to medium for the upper part of the road opposite the site and medium for the lower part, reducing as the vegetation establishes and grows.

6.7.13 The level of effect for operation is judged to be substantial to moderate adverse for the residents living adjacent to the upper part of the road and minor adverse for the residents living nearer Hunters Tor Drive.

VR1b Residents on the urban edge of Galmpton facing the site – directly or obliquely

Sensitivity of the viewers

6.7.14 From the north and northwest facing windows and back gardens of Galmpton, the residents obtain near to middle distance views towards the site. The north facing windows face the site, while the northwest to west facing windows have a more oblique view. The view is screened in most places and filtered in others by the continuous line of hedgerow trees marking the perimeter of the site. The view is over the car boot field towards Goodrington urban edge and/or to the rolling agricultural landscape beyond. The susceptibility of the viewers to the type of development proposed is reduced as the new residences will be of similar height and massing to the existing Goodrington residences. RV11 from the edge of the Galmpton Common just west of Windy Corner represents these views. The car boot field provides a valued 'Green Wedge' between Goodrington and Galmpton. It is judged that residents would have a medium sensitivity.

Construction Phase Effects

6.7.15 During construction, the works include the road improvement work and the phased development, which may occur over a period of time. The road improvement works will be in the middle distance and will involve vegetation removal before proposed vegetation has properly established and started to grow. However, the proposed road works, although they will be in some of the views from north facing properties, are several fields away and will be partially visually contained by the existing treed hedge-line. The houses are lower down the valley slope than the site, so the vegetation is effective in screening views

6.7.16 The phase of development in fields 1 and 2 will be nearer the Galmpton residences than the phases in fields 4 and 5. Fields 2 and 5 fall towards the south and therefore are on south and southwest facing slopes respectively and potentially more visible from this viewpoint. Earlier phases will be in field 1, 4 and 5. Field 4 falls away from Galmpton but field 5, although the most distant field, is on higher land, which faces Galmpton. Field 1 would be more visible at its northern end, which would be against the backdrop of Goodrington and the road works. The southern part of field 1 is less visible as it falls to the southeast behind the strengthened existing treed boundary hedgerow. These earlier phases will occur before the proposed woodland planting has established and matured.

6.7.17 The proposed final phase to be carried out is likely to be that in field 2, which falls towards the south and which relates most to the Galmpton edge. This means the proposed woodland planting, roughly along the 65m contour of field 2, will have established and be gaining some height, as will the reinforced woodland planting along the treed perimeter boundary. However, during construction, machinery will be visible over the top of this planting and the tops of the houses, as they are built.

6.7.18 As a whole, viewers in residences and gardens along the Galmpton northern and northwestern edge, would experience a medium magnitude of change, depending on the boundary vegetation to their gardens.

6.7.19 The Level of Effect during construction, allowing for advance planting, on Galmpton residents (VR1b) on the urban edge is considered to be moderate adverse.

Operation Phase Effects

6.7.20 Once the construction is of the road is completed, and then after the construction of each phase, the machinery will leave the site until the next phase begins.

6.7.21 As the vegetation matures and the houses are built, the view will have changed from glimpsed views of fields beyond the car boot field to filtered views of housing in treed areas. The receptors are viewing from ground floor locations that are lower than the site. As the planting matures over a period of about ten years, a treed area beyond the car boot field will replace ground floor level views of the tops of the new houses. When the woodland further matures, woodland will replace housing in first floor views. The magnitude of change will be medium reducing to low as the woodland planting grows and matures and over the following 20 years.

6.7.22 The level of effect for operation on residents is judged to be moderate adverse reducing to minor adverse and then to negligible as the woodland planting and trees belts mature.

VR1c Residents/ workers in the settlements (such as Dittisham) and in the scattered farmhouses within the AONB

Sensitivity of the viewers

6.7.23 Within the AONB within the 5km study area, although most views are limited by intervening landform or vegetation, views are available from some residences on the higher land around the edges of a settlement such as Dittisham and from a few scattered farmhouses on the slopes facing the site.

6.7.24 Views are available from Cott Farm B and B, on the upper eastern edge of lower Dittisham (RV 5c, a distant elevated view from 120m AOD, at about 4km from the middle of the site). The view is representative of viewers in the upper parts of lower Dittisham, which lies on the shores of the River Dart within the South Devon AONB.

6.7.25 Views are also possible, from this orientation at varying levels AOD, from residences in the upper southern edge of lower Dittisham, (see RV7e), where the nearest site boundary is about 2.5 km away with the AONB in the foreground and middle distance. (See RVs 5c, 7d and 7e in the LVIA Appendices, Appendix II Figures.)

6.7.26 Various landscape elements in the AONB would arrest the eye of the viewer taking it away from the site, a small element in the distance. The views are across Dittisham and the River Dart, the wooded slopes on the other side of the River Dart and across some agricultural fields where the site is obliquely visible against the backdrop of Goodrington, with the wider urban edge of Torbay on the skyline in the far distance.

6.7.27 In views such as 5c from 120m AOD, the viewers look down on the site over the hedge-banks, if viewed from upper windows. From lower windows the views can be obscured by intervening hedge-banks. For views such as 7d, (100m AOD), the view is panoramic and the site is seen more obliquely than for 5c. In view 7e, from a lower contour, at about 70m AOD, on approximately the same level as the site, the site is viewed at an even more oblique angle and is largely hidden behind the wooded slopes of the left bank of the River Dart. The local White Rock ridge is on the skyline and Torbay tucked behind this ridge is not visible.

6.7.28 The value of the views lie in the panoramas with a harmonious variety of elements. The panorama is over the agricultural landscape with Torbay urban area over a wide part of the skyline from higher elevations but Torbay is less apparent from lower elevations. The site is a small element between the lower urban edge and the agricultural fields, slightly reducing the susceptibility (as it is a small area and as it is near the urban edge).

6.7.29 The sensitivity is high for viewers on upper contours and medium from contours similar to that of the site, where views are more oblique.

Construction Phase Effects

6.7.30 During construction, from contours higher than that of the site, the works will be less screened and/or filtered by intervening vegetation. These views are from a distance of 2.5 km and seen against the backdrop of Goodrington and Torbay urban areas, on the northeastern skyline. For the more elevated views, the agricultural fields to the north of the AONB, between the wooded edge to the River Dart and the site, will be seen in the view. As the site is only a small element in the view for a very low number of farmhouses, and the road widening and development phases will occur consecutively rather than all at once, the magnitude of change is moderate to low.

6.7.31 The high sensitivity of the receptors weighed against the small number of receptors as most of Dittisham is on lower land and intervening vegetation on the banks of the River Dart obscure views and as the site is a small element set in fields against the urban area of Torbay in an otherwise potentially more sensitive view.

6.7.32 The Level of Effect is considered to be minor adverse.

Operation Phase Effects

6.7.33 During operation, the machinery will have left the site and the vegetation will be growing and although not completely screening the development for the more elevated viewers, will assist in integrating it into the distant landscape. The magnitude of change will be low as the site is a small element in a distant view with few visual receptors. For the less elevated views, this will reduce as the new and advance planting matures.

6.7.34 The level of effect for operation on residents and on viewers in residences in the upper part of lower Dittisham and for scattered farmhouses in the AONB is judged to be minor adverse as the site is a small element on the urban edge and only comparatively few residents obtain a view.

VR1d Residents in the scattered farmhouses outside the AONB

Sensitivity of the viewers

6.7.35 There are a few farmhouses in the elevated rural landscape above the AONB, at around 5km from the site. They lie within but on the edge of the study area. Most of their views of the site curtailed by intervening landform or vegetation.

6.7.36 Views are possible from the upper windows of the farm residence at Kingston (R4a, a distant elevated view of about 120m AOD at about 5km from the middle of the site) and potentially from residences in the Foxenhole area.

6.7.37 These views are from the South Hams Landscape, once locally designated as AGLV, and which functions as the landscape adjacent to the AONB. The views to the west, north and east are valued because they are panoramic over the rural rolling Devon landscape, which includes AONB countryside and the agricultural landscape beyond. The more elevated views include Dartmoor to the northwest and Torbay and the East Devon Coast to the northeast.

6.7.38 The sensitivity of Residents in the scattered farmhouses outside the AONB (VR1d) is high.

Construction Phase Effects and Operation Phase Effects

6.7.39 During Construction, the works will be visible in these elevated views but as a small element on the urban edge behind (north of) the agricultural fields beyond the AONB Dart Estuary. The magnitude of change will be low.

6.7.40 Similarly for Operation; due to the distance of the site and to the elevation, the magnitude of change will be low.

6.7.41 The Level of Effect is considered to be minor adverse to negligible for both construction and operation as the growth of vegetation will only make a small difference given the elevation and the distance of the site, assuming the residential development blends in with the existing dwellings and vegetation.

VR2 Road Users (Motorists, Cyclists, Farm-Vehicle Drivers, Pedestrians)

6.7.42 The group VR2 is subdivided further into VR2a to VR2d.

VR2a-1Users of the road network within the AONB –south of the River Dart

Sensitivity of the viewers

6.7.43 The road user travelling through the AONB south of the River Dart will view the site from the south west against the backdrop of Torquay on the skyline. Where landform, vegetation and built form permits, available views will be through gateways. The vegetated high hedge-banks generally preclude visibility.

6.7.44 Where roads run directly downhill from higher land towards the site, elevated views of part of the site are available. Field 2 and most of field 1 will be hidden behind Nords Wood. The roads tend to be quiet and winding so traffic moves more slowly.

6.7.45 A view is available to car drivers and walkers from a stopping point over a gap in the hedgerow to the far southwest of the study area. In the view, the River Dart lies in the middle distance with agricultural fields, the site and the urban edge of Torquay in the far distance. Generally, due to the rolling landform and vegetation, views are not available from this orientation. Refer to RV3.

6.7.46 To the far southwest of the study area at 5km from the site, glimpsed views are available to car drivers and walkers from the farm gateway opposite Kingston Farm buildings and other adjacent gateways/ stiles, which provide gaps in the hedgerow/ hedgebank near Kingston. In the view, the River Dart lies in the middle distance with agricultural fields, the site and the urban edge of Torquay in the far distance. Refer to RV4a in the AONB.

6.7.47 Views are available to the road user from the south and southwest. The sequential views are from a comparatively short stretch of road as it descends into the AONB from Foxenhole (outside the AONB) towards Dittisham, as the road descends towards Cott Farm. They are framed by hedge-bank either side and, as the road descends, the site is seen more obliquely until it is hidden behind vegetation. Refer to RV5c, which is about 3.5 km from the nearest site boundary.

6.7.48 A glimpsed view is possible through a gateway on the road leading from Bosomzeal Farm to Bosomzeal Cross. Refer to RV7a.

6.7.49 The value of the views lies in the beauty of the River Dart Estuary, where it forms part of the view. Otherwise the value lies in the typical South Devon rural panoramas. The road user, walker or driver, is likely to be aware of the view and to be susceptible to changes in the view, particularly when the road runs directly towards the site and affords sequential views. They are judged to have a high sensitivity as they are driving through the AONB.

Construction Phase Effects

6.7.50 There will be more machinery on site than in the baseline condition but in the transient views from distant roads, these will not be particularly noticeable as, in the wide vista, the site will be seen as a small treed housing element against Goodrington. The construction period is temporary and of short duration. Given the distance of the view and the limited number of locations, where views are available, the magnitude of change to the viewer's experience will be low. The Level of Effect, given the high sensitivity is considered to be minor adverse.

Operation Phase Effects

6.7.51 Once construction is completed, machinery will have left the site, the residences will be in place and the new vegetation establishing. As the views are elevated, the new houses will remain partially visible even as the planting matures but the massing will be broken up by the maturing planting. The change to the experience of the road users compared to the baseline will be low. The Level of Effect is considered to be minor adverse.

VR2a-2Users of the road network outside the AONB – south/ south west of the River Dart

Sensitivity of the viewers

6.7.52 The road user travelling through the higher plateau land outside and south of the AONB will find that where land form permits, available views will be through gateways, as the vegetated high hedge banks generally preclude visibility. However in some locations sequential views are available over certain sections of road.

6.7.53 Where roads run directly downhill from this higher land towards the site, elevated views of part of the site are available with Torquay residential areas on the skyline. Field 2 and most of field 1 are hidden behind Nords Wood.

6.7.54 Views are available to the road user from the southwest. The sequential views are along a stretch of road as it descends from Downton Cross with a break and then more sequential views from Foxenhole and on into the AONB towards Bosomzeal Cross and Cott Farm. Refer to RVs 5a and 5b respectively. The sequential views continue into and within the AONB along this stretch of road. See Visual Receptor, VR2a-1 and RV5c above

6.7.55 The value of the views lies in the extent of the panorama showing the distant townscapes within the South Hams rural landscape. The viewer, whether walker or driver, is likely to be aware of the view, and to be susceptible to changes in the view. This is both because of the nature of this elevated rural landscape with panoramic views and because this is the landscape with ridgelines that contains the 'viewshed' area to the north and leads into the AONB. The viewers are judged to have high sensitivity.

Construction Phase Effects

6.7.56 There will be more machinery on site than in the baseline condition and as the homes are built they and the machines will be just perceptible in treed vegetation against the backdrop of the Torbay urban edge and the wider panoramic views. Given the distance of the view, the magnitude of change to the viewer's experience will be low. The Level of Effect, given the high sensitivity is considered to be minor adverse.

Operation Phase Effects

6.7.57 Once construction is completed, machinery will have left the site, the residences will be in place. The new establishing vegetation will never fully screen site as the views are elevated. The change to the experience of the road users compared to the baseline will be low. The Level of Effect is considered to be minor adverse.

VR2b Users of the road network within the AONB –north of the River Dart

VR2b-1–Stoke Gabriel Road, VR2b-2 Greenway Road, VR2b-3 Kennels Lane near Galmpton Reservoir,

6.7.58 Near to middle-distance views are possible from some stretches of the road network to the southwest and south of the Site and north/ northeast of the River Dart.

VR2b-1–Stoke Gabriel Road,

Sensitivity of the viewers

6.7.59 The Stoke Gabriel Road defines the AONB northern boundary. From the southwest, when travelling east, views are possible, glimpsed through roadside vegetation, from approximately at the same level as the site, as the road approaches Waddeton. Travelling along this road, views are screened by the village buildings and filtered through the orchards to the northeast on leaving Waddeton. As the road descends to 45m AOD near and north of Waddeton Court, glimpsed views through intermittent vegetation are possible of the western part of the site, which is on higher land. The views are more apparent in winter after leaf fall. Although the site is partially visible, the urban edge is not, and the view seems very rural in spite of the proximity of the urban edges of Goodrington and Galmpton. Refer to RV16.

6.7.60 The value of the view lies in its rural qualities with cows in pasture fields, small woodlands, ancient field patterns and historic field banks, typical of the South Devon Area. Viewers would be susceptible to the introduction of a modern housing development, as it would involve the introduction of a new and discordant element into the view. They are judged to have a high sensitivity. Refer to RV16.

6.7.61 The road users become less sensitive to the type of development proposed as the road approaches Galmpton, where views of the Goodrington and Galmpton urban edges are possible, broken up by woodland strips and blocks and trees hedgerows. They are judged to have a medium sensitivity. Refer to RV17.

Construction Phase Effects

6.7.62 During construction, for users of the Waddeton end of Stoke Gabriel Road, only filtered views of the site several fields away will be possible. The development has been pulled back from field 3, from the edge of field 4 and trees planted on the high point of field 2.

6.7.63 Nearer Galmpton, views of the construction activities for the road improvement works and of fields 1 and 2 in the site will be possible. The urban edge of Goodrington will appear less integrated into the landscape, as the tree removal is needed to allow for the visibility spays for the roundabout, bus stops and pedestrian crossing point. The early phases such as the road works and construction of the homes in the northern part of field 1 will be slightly more visible, as they are on higher ground and will occur before the new woodland and hedgerow planting has fully established and grown. However, they take up less of the view, as they are further away than field 2. The part of field 1 with residential development, nearest the viewer, is on a lower contour behind an established treed hedgerow. In field 2, the homes will be less than 9m in height and this will be the last phase of the development, which will allow the new woodland planting to establish and grow, so that construction activities in the view in this the nearest field will be reduced and the magnitude of change further diminished as the construction period is temporary. The magnitude of change to the viewer's experience will be moderate to low as the views are transient. The Level of Effect is considered to be moderate to minor adverse.

Operation Phase Effects

6.7.64 Once construction is completed the machinery will leave the site, and the new woodland planting will continue growing until after 15 to 20 years the view will be of blocks of woodland and the homes will be hidden from these views. The change to the experience of these viewers will be medium reducing to low. The Level of Effect is considered to be moderate adverse to minor adverse, reducing to minor adverse to negligible after 15 to 20 years.

VR2b-2 Greenway Road

Sensitivity of the viewers

6.7.65 The Greenway Road is a narrower, less-used road leading to Greenway House and Garden and the foot ferry to Dittisham. Middle distance sequential views are possible, at around 2km from the site, along a stretch of the road from the permissive route stile, up to where the Greenway Walk Recreational Trail crosses the road. The views are over a low wall, looking over the Dart valley with the Dart estuary to the west, towards the site on rising higher land. Field 2 is visible to the east of Nords with the treed urban edge behind (northeast) integrating Goodrington into the landscape so it is barely discernible. The edge of field 4 to the west and the rest of the site is screened behind Nords. The value of the view lies in the rolling hills with small woodlands and the small stretch of water, while the distant urban edge lies behind groups of trees. The road users are considered to have a high sensitivity, as the view is rural with little urban influence.

Construction Phase Effects

6.7.66 The works are set against the urban edge of Torbay in the distant background on the skyline to the north with the wooded urban edge of Goodrington on the nearer skyline to the north east.

6.7.67 The road improvement works and associated tree removal, on both the Goodrington side and the site side, will be partially screened behind Nords woodland and trees in intervening field boundaries. Works to the northern end of field 1 and to the south eastern end of field 4, will be in the view, becoming partially filtered as the advance planting establishes. The works in the nearest and most visible field will occur much later when the woodland blocks are more established and maturing, so for this phase during construction, the views will be of filtered roof tops and cranes in the trees, replacing the baseline view of Goodrington urban edge in its wooded setting. The magnitude of the changes will be medium to low. Given the high sensitivity and that the viewers receive continuous sequential views for this short stretch of road, the level of effect is judged to be moderate to minor adverse.

Operation Phase Effects

6.7.68 During operation the advance planting will grow and the development will be increasing integrated into the landscape. As the road works and the various early phases are completed, the advance planting will be starting to grow and to have some value in partially filtering the views. The magnitude of change experienced by the viewer will be medium to low. The interim level of effect is judged to be moderate to minor adverse.

6.7.69 Once the final phase, in field 2, has been completed, woodland will be the main element in this location in the view. The magnitude of change experienced by the viewer will be low. The level of effect is considered to be minor adverse reducing to minor adverse to negligible.

VR2b-3 Kennels Lane near Galmpton Reservoir

Sensitivity of the viewers

6.7.70 The sequential view for the road user travelling north directly towards the site starts at around 115m AOD and at 2km from the site down a stretch of Kennels Lane near Galmpton Reservoir. It is elevated and views of the site are oblique aerial. Some of the slopes on the site face south, and Kennels Lane falls down to the north enabling the road users to see the site directly ahead. Views become more oblique and increasingly screened by intervening vegetation at the lower part of the Lane until the road user reaches the bridge over the steam railway line at about 70m AOD and 1.5 km from the site. Green fields are visible between the site and Galmpton and the AONB boundary. The value of the view lies in the rural interest provided by the rolling fields, woodlands with some elements of recent residential development, and the extent of the view. Susceptibility to this type of development is lower as there are urban residential elements in the views from the lane, both of Goodrington and Galmpton urban edges, with Torbay built up area on the skyline in the background. Viewers are judged to have a high sensitivity.

Construction Phase Effects

6.7.71 The road works and the construction works on the residential development will be visible in the middle to far distance with green fields to the south and west, seen against the backdrop of built up areas of Torquay to the north, on the far distant skyline. Galmpton is seen as a scalloped edge of homes, in the near middle distance, south of the site. A Green Wedge, the car boot field, separates Galmpton from both the development and from Goodrington.

6.7.72 The lane descends rapidly to about 70m AOD near the steam railway bridge. This is approximately the same level as the site. As the views become less aerial and more side on, they are increasingly screened by trees and other intervening elements.

6.7.73 The magnitude of change from the baseline is medium at the top of the Lane decreasing to low nearer the bridge. The Level of Effect is considered to be moderate to minor adverse.

Operation Phase Effects

6.7.74 Once construction is completed the machinery will leave the site, and the new woodland planting will continue growing. From the more distant elevated start of the sequential views, the planting will assist in integrating the development into the view and as the road user moves down the hill, the planting will be more effectual in filtering and then screening the views. The change to the experience of these viewers will be medium to low reducing to low to negligible. The Level of Effect is considered to be moderate adverse to minor adverse reducing to minor adverse to negligible after a hypothetical 20 years.

VR2c Users of the roads outside the AONB – Brixham Road.

Sensitivity of the viewers

6.7.75 Road users within the study area will be driving south towards the site along the four-lane road with additional widening at the White Rock entrance off the Brixham Road. The Brixham Road reduces to a narrow two-lane road with trees either side and continues up the hill to the ridge. A separate footway cycleway runs parallel to the east, separated from the road by roadside vegetation.

6.7.76 The road continues over the ridge and the footway-cycleway joins the road once more as a short stretch of pavement, which soon separates from the road again. Views are available to the southwest out over a low hedge-bank with few trees. The view is over the rolling agricultural fields of the site towards the distant hills, the higher land and skyline. To the south, the skyline lies partly within the AONB. Within the AONB, to the southeast the wooded grounds of Lupton Park Registered Park and Garden can be observed on the skyline in the distance, screening the listed parkland buildings near the western urban edge of Brixham. The skyline around Fire Beacon Hill to the southwest, west of Nords in the view, is outside the AONB and is part of the rural South Hams landscape, once designated as AGLV.

6.7.77 As the road descends towards the lower part of the site, the road is more contained with well-established mainly native deciduous trees either side of the road. The trees are on hedge-banks. The site and the landscape beyond are less noticeable.

6.7.78 As the road passes the southeastern end of the site, and approaches Hunters Tor Drive and the car boot field, the trees give way to a wider grassy verge with the development on the urban edge of Goodrington more visible to the east and the car boot field to the west.

6.7.79 The value of the view is the panorama that becomes available on coming over the ridge. Road users may or may not be focusing on the views, which are transient and sequential. They are judged to have a medium sensitivity to views. The sensitivity of road users is judged to be lower in views from the four-lane section of the road by the White Rock junction. RV19 represents this sequence of the view. As the ridge is approached and crossed, the road narrows and becomes more typical of the rural roads of South Devon, with distant views available across the landscape. It is judged that they would have a higher sensitivity to the type of development and road works proposed. RV14 represents this part of the sequential view. Overall, the sensitivity of the road users is considered to be medium.

Construction Phase Effects

6.7.80 During construction, the impact of the works as well as the phased development includes the road widening to allow for the increased volume of traffic brought about by the development.

6.7.81 Road users might notice the following changes in the sequential view due to the road widening and the residential development:

- Tree and vegetation removal to allow for excavation of the eastern bank of the road leading up to the ridge.
- Lowering of the ridge.
- Partial removal of the hedge-bank to field 5 in the vicinity of the roundabout, removal of trees and hedge-bank possibly both sides of the road at the north eastern end of Field 1 to allow for the construction of the roundabout, and pedestrian crossing point leading to the school and associated visibility splays.
- Where tree and hedge-bank removal has occurred more of the site and the construction works being carried out on site will be visible.

- A few of the Goodrington residences will be visible in one or two locations, where trees/ shrubs have been removed.
- The road works will involve signage with the carriageway width reduced to one lane to allow the works to occur.

6.7.82 The road users and users of the short stretch of pavement could experience a high magnitude of change in the views, which are sequential.

6.7.83 As the road descends beyond the new roundabout, the trees on both sides of the road will be retained. This has been made possible by careful design of the new pedestrian crossing point, so it is positioned to allow for visibility spays without tree and hedge-bank removal. The magnitude of change to this sequence of the view would be low.

6.7.84 The level of effect is described in three parts as it changes in the sequential views travelling south and in one part travelling north.

6.7.85 On the approach from the north, the sensitivity is low but the change is high, and the impact on the road users is moderate adverse in travelling in either direction along this section.

6.7.86 On the section, descending from the ridge to the end of the roundabout, the sensitivity of the viewer is judged to be high as the baseline views are of the AONB and South Hams rural landscape on higher land in the distance with rolling farmland in the foreground. Even though the distant hills will be in the view the foreground will be urban. The change is high, the level of effect is judged to be substantial adverse, as the road users will experience a major change to their visual amenity.

6.7.87 Once past the roundabout, approaching Hunter's Tor Drive the change is very low, the sensitivity medium. The reduced scope of the road widening and the retention of the trees mean the character of that section of the road, typical of older South Devon roads, is not changed. The development is glimpsed behind the trees. The level of effect is judged to be minor adverse to negligible.

6.7.88 When travelling north, that is in the opposite direction, the works around the roundabout and to the ridge will be in the view, but not AONB and the hills beyond, so the change is judged to be moderate adverse.

6.7.89 For road users experiencing sequential transient views along this stretch of Brixham road as a whole, the level of effect is judged to be substantial to moderate adverse.

Operation Phase Effects

6.7.90 Once the construction is of the road is completed and then after the construction of each phase, the machinery will leave the site until the next phase begins. For the road users travelling along the Brixham Road, the road will be noticeably wider in places than in the baseline. As the vegetation, where possible planted in advance, matures and the houses are built, the distant view will be replaced by filtered views of housing in treed areas. The area round the roundabout will be planted with trees where visibility splays allow. Some trees will be planted in the middle of the roundabout without affecting visibility. The magnitude of change will be high to medium for the approach to the ridge and for the northern upper part of the road opposite the site and low for the lower part.

6.7.91 The level of effect for operation is judged to be substantial to moderate adverse for the road users along the approach to the ridge and the upper part of the road. This will reduce as the proposed new/ replacement vegetation establishes to moderate adverse and for road users on the lower section approaching Hunters Tor Drive, and those driving in the opposite direction, minor adverse.

VR2d Users of the roads outside the AONB – Waddeton Lane/Waddeton Road

Sensitivity of the viewers

6.7.92 Waddeton Lane is single-laned and runs between high hedge-banks. It lies within the South Hams but given the closeness to Torbay is surprisingly rural. The views are glimpsed through gateway openings from approximately at the same level as the site. Road users will include car drivers, walkers, and cyclists. The value of the views, where available, lies in the rolling, traditional, agricultural fields with the trees along the Brixham Road in the distance and glimpses of the residences on the Goodrington urban edge through the trees. Viewers, whether walkers, cyclists, horse riders or car users, are judged to have a high sensitivity.

Construction Phase Effects

6.7.93 The machinery and construction works on site will be noisy and will be audible from the quiet rural lane and clearly visible through gateway views, as it is only a few fields away. The Goodrington urban edge, well integrated into the landscape in the baseline view, will have trees removed as part of the road improvement works and then the homes will be built on site in phases. Advance planting along the western and southern edges of the development will have started to establish and grow, partially integrating the site into the wider landscape. If the development in field 4 occurs early, before the planting has started to grow, it will be less integrated and the housing will be more visible, than when the previous urban edge in the baseline was along the treed Brixham Road. The urban edge will be nearer in the views. It will be less tranquil. The construction period is temporary. The magnitude of change to the viewer's experience will be medium to high. The Level of Effect is considered to be substantial to moderate adverse.

Operation Phase Effects

6.7.94 Once construction is completed, the noise on the site will have lessened but will still be more than in the baseline, so the original level of tranquillity will not have been restored.

6.7.95 As the planting, matures the new houses will become more integrated into the landscape. The new strategic planting in the public realm within the site will be particularly valuable in breaking up the housing mass. The views are glimpsed through gateways reducing their impact on the road users. The magnitude of change to the experience of these viewers will be medium. The level of effect is considered to be moderate adverse reducing to minor adverse after 10 years as the planting within the site (whether inside or outside the development) matures.

VR3 Recreational & Non-Recreational Users of the PROWS

6.7.96 The group VR3 is subdivided further into VR3a to VR3d. VR3d is scoped out as there are no relevant PRoWs outside the AONB, north of the River Dart within the ZTV and study area. VR3a, 3b and 3c are described below:

6.7.97 VR3a Users of the PRoWs outside the AONB south of the River Dart (the 'transition' landscape into the AONB, south of the AONB)

Sensitivity of the viewers

6.7.98 VR3a is included for completeness, although it is on the boundary of the study area and is over 5km from the site, as it is the landscape adjacent to and within the same viewshed as the AONB. The sequential views continue into the AONB. The views are available to the walker, cyclist or horse rider along the final stretch of the bridleway leading north from Capton village to Kingston. Refer to RVs 4c and 4b.

6.7.99 The value of the views lies in the sequential panoramic views are over the AONB and River Dart, over the agricultural fields and the site north of the Dart looking towards Dartmoor, the urban edge of Torbay and the East Devon Coast on the far distant skyline. The views of the site are elevated, oblique, aerial, being from 160m to 120m, which is approximately twice the elevation of the site. The value of the views lies in their rural nature, tranquillity, beauty (even though technically outside the AONB) and the extent of the views. The view is remarkable.

6.7.100 The site is a small element in a valued rural panoramic view, reducing the susceptibility of the viewers to the type of development (proposed residences mostly 2 storey i.e. less than 9m ridge height but with some in less obtrusive locations of up to 11.9m height and in recessive colours). Modern residential development is already an element already in this view. The sensitivity is judged to be medium.

Construction Phase Effects

6.7.101 Although there will be road works and tree removals adjacent to the site and more machinery on site than in the baseline condition, these will be barely perceptible in the overall panorama. The magnitude of change to the experience of viewers using the PRoW outside the AONB south of the River Dart will be Low. The Level of Effect is considered to be minor adverse to negligible.

Operation Phase Effects

6.7.102 Once construction is completed, the change to the experience of these viewers will be low.

6.7.103 The Level of Effect is considered to be minor adverse to negligible, similar to construction where the very slight change to the landscape will be barely perceptible, assuming recessive colours are used.

VR3b Users of the PRoWs within the AONB south of the River Dart.

Sensitivity of the viewers

6.7.104 A network of PRoWs lie within the study area and ZTV in the AONB to the south west of the site. Sequential views are available from this orientation with elevated views (160m AOD) dropping down to views at a similar level to the site (70m AOD). Refer to views from Recreational Trails, RVs 6a, 6b, 7a and 7b to 7e inclusive. (Views are unavailable between 7a and 7b due to the footpath running along a high hedgerow). See also 5d from the PRoW across Bosomzeal Cross triangular field.

6.7.105 Panoramic views are available at the higher elevations, becoming more framed by surrounding hedgerow field boundaries and by intervening layers of vegetation as the walker moves down the PRoW. The views are sequential and as they become nearer the site they become less elevated. The more elevated views are from about 3.7 km from the site and about 3 km for the views on a similar level to the site.

6.7.106 In the elevated, panoramic views, the urban edge of Torquay, Torbay, the sea, and the East Devon Coast are visible over the agricultural fields beyond the AONB and River Dart. The value of the panoramic view lies in the variety with rural landscape, and distant seascape and townscape elements adding interest.

6.7.107 The Torbay urban edge according to the AONB Management Plan is one of the Distinctive Characteristics of the transition landscape of the AONB;

6.7.108 ‘Plymouth and Torbay form important components of the South Devon AONB setting at the western and eastern ends of the area and contrast strongly with the deeply rural nature of the AONB itself.’

6.7.109 The susceptibility of the viewer to changes is reduced given that the urban edge is already part of the landscape surrounding the AONB described in the AONB management plan as ‘the South Devon AONB setting’. The sensitivity of the viewer is judged to be high.

Construction Phase Effects

6.7.110 During construction, the road works and tree removals adjacent to the site, and more machinery on site than in the baseline condition, will be perceptible but not a point of focus in the rich panorama of landscape elements, which will attract the attention of the viewer. From lower elevations, the views become sequentially less panoramic and intervening vegetation plays a greater role in screening the development. The magnitude of change afforded by the road works and residential development of the site to the experience of viewers using the PRoW outside the AONB south of the River Dart will be low. The Level of Effect is considered to be minor adverse.

Operation Phase Effects

6.7.111 Once construction is completed, the change to the experience of these viewers will be low as the site is a small urban addition to the existing urban edge defining the edge of the AONB transition landscape. The Level of Effect is considered to be minor adverse as the slight change to the landscape will be only just perceptible.

VR3c Users of the PRoWs within the AONB north of the River Dart

Sensitivity of the viewers

6.7.112 The PRoW, the John Musgrave Heritage (JMH) Trail, a long distance recreational path runs across a small hill, which lies to the south of the site and faces it. Sequential views are available from this trail, which runs along contours between about 110m to 120m AOD, at about twice the elevation of the site. The view from the side of the hill is to the north. In this view, the site lies behind Galmpton and the green car boot field with Goodrington residences and trees to the east. The sea contained by Torbay is visible behind (north of) Goodrington. The built up area of Torquay lies on the north eastern skyline. Farther away on the north western skyline lies Dartmoor. The panoramic view is partially framed by the rolling pastoral landscape in the immediate foreground.

6.7.113 The walker in this rural location would enjoy the interest in the view and their susceptibility to a slight extension to the urban edge where no new types of element are introduced is lowered. However as they are viewing from within the AONB, their sensitivity is judged to be high.

Construction Phase Effects

6.7.114 As for VR3b above, the road works and tree removals adjacent to the site and more machinery on site, than in the baseline condition, will be noticeable particularly as it will be moving around, and the new residential area will appear as a scalloped area behind Galmpton and its 'Green Wedge', the car boot field. However, the works will not be the sole point of focus in the rich panorama of landscape elements. The magnitude of change to the experience of viewers using the PRoW within the AONB north of the River Dart will be medium. The Level of Effect is considered to be moderate adverse.

Operation Phase Effects

6.7.115 Once construction is completed, the change to the experience of these viewers will be medium to low. The Level of Effect is considered to be moderate to minor adverse as the change to the landscape will be perceptible and all the sequential views are elevated, so the advance planting as it continues to establish and grow will integrate (as opposed to screen) the houses into the interim landscape between the urban edge and the countryside.

VR4 The AONB within the study area as a whole as a visual receptor

Sensitivity of the visual receptor

6.7.116 The AONB within the study area as a visual receptor includes residents in the settlements, such as Dittisham and the scattered farmhouses, road users, and ProW users over the whole of the AONB. The value lies in the beauty of the AONB, arising from the River Dart estuary and its wooded sides/ shores, within the rolling farmed landscape, and in higher altitudes, the panoramic views over the adjacent landscape in the extensive views, which include the urban edges of Torquay and Plymouth.

6.7.117 Private residences and farmed land, as well as publically accessible places, are included in the overarching visual receptor, the AONB. The susceptibility of the AONB to the type of development proposed is slightly reduced by the existing housing on the urban edge of the surrounding landscape, as the urban edge of Torbay is one of the distinctive characteristics of the 'setting', as described in the AONB Management Plan. Its sensitivity is high to the type of development proposed.

Construction Phase Effects

6.7.118 Construction will be more evident in the limited locations where nearer views from the AONB are possible. Such as RVs 19, 8, 9, and RV17, but more limited for the nearest view, R16, as the site itself is less visible due to landform and vegetation.

6.7.119 However, limited views of the site are available within the study area and these are from only a comparatively small area of the AONB, as shown in the ZTV, to include publically accessible places but also private residences and farmed land. Given the large size of the AONB, and the comparatively small number of locations where views of the site are available, the magnitude of change on this receptor is low. The site represents a slight extension to the urban edge of Torbay, which is described in the AONB management plan as part of the broader 'setting' of the AONB. Even though higher in near views, this is moderated to minor adverse on views from the local AONB as a whole. The level of effect is minor adverse.

Operation Phase Effects

6.7.120 Once construction is completed, once the vegetation has established and started to grow, the magnitude of change to the experience of the local AONB as a visual receptor will be low.

6.7.121 The Level of Effect is considered to be minor adverse.

VR5 Waddeton Conservation Area as a whole as a visual receptor

6.7.122 For more information on the Conservation Areas, please refer to the Cultural Heritage Assessment Chapter of this ES.

Sensitivity of the visual receptor

6.7.123 The value of the views, afforded to viewers, from the Conservation Area arises from the context of thatched cottages, orchards in the gardens, and the village street layout, providing a very traditional Devon scene, built in a previous century. Although it seems remote, the village lies a few agricultural fields away from the Torbay-South Hams District boundary and the Goodrington urban edge. The limited views available are filtered through vegetation. High-banked, single-laned Waddeton Road leads into Waddeton from the north, and from the east and west, the Stoke Gabriel Road on lower land along the AONB boundary.

6.7.124 From very limited locations on the roads and from residences or orchards/ gardens on the north eastern edge of the CA, the Goodrington residences and the tree lined Brixham road with the tops of the Goodrington residences are just discernible, filtered through orchard vegetation. From Waddeton Court field 3 and the edge of field 4 are visible beyond the intervening wooded fields.

6.7.125 The residents of and road users in Waddeton Conservation Area are considered to have a potentially high sensitivity to elements which are out of character in this traditional picturesque rural landscape, in spite of its proximity to Torbay.

6.7.126 Note: There are no relevant PRoWs in this area so these are scoped out for the CA.

Construction Phase Effects

6.7.127 No development occurs within the CA itself, as the proposals are several fields away.

6.7.128 As part of design iteration, the development footprint has been drawn back from the southwest site boundary and higher density and 3 storey/ higher built form dwellings are nearer the existing urban edge. Advance woodland block planting, which will have established and grown, will afford some partial screening, within the filtered views, where available, of construction and of the development in field 4. There will be more machinery on site than in the baseline condition.

6.7.129 The changes to the site during construction will be a middle distance element in the view, filtered through intervening vegetation such as Waddeton orchard trees and advance woodland block planting on site. Views are only available from a few locations. The construction period is temporary and of very short duration. The magnitude of change to the viewer's experience will be low.

6.7.130 For viewers in the residences and road users on the north eastern part of Waddeton CA, the change to the glimpsed, filtered views from very limited locations will be low and further reduced by the site design and structure planting in advance of the development. The magnitude of change will be low.

6.7.131 Given the high sensitivity, the Level of Effect is considered to be minor adverse.

Operation Phase Effects

6.7.132 Once construction is completed, the tranquillity of the various elements in the view will be restored but the tops of some of the dwellings will likely be visible over the top of the establishing new woodland, even though development in the south of the site is planned as the final phase. However, the views are only from very limited locations and are filtered. The change to the experience of these viewers will low, reducing as the vegetation on site grows.

6.7.133 The Level of Effect is considered to be minor adverse to negligible, as the planting establishes over a ten year period.

6.7.134 Note: Residents in Galmpton Conservation Area as visual receptors are –scoped out

6.7.135 Views would not be available from the buildings in the Galmpton Conservation Area due to landform, intervening modern buildings in the village, and vegetation. The north west of the Conservation area lies within a wooded area across a valley, so it is unlikely that views are possible from the conservation area. The CA as a visual receptor is scoped out.

Summary of Effects on Visual Receptors

	Table 4a	Residents VR1			
	Visual Receptor Group	VR1a Residents on the urban edge of Goodrington1) upper & 2) lower Brixham Road	VR1b Residents on the urban edge of Galmpton facing the site (& CA northern landscape)	VR1c Residents in settlements (such as Dittisham) in scattered farmhouses within the AONB	VR1d Residents in scattered farmhouses outside the AONB
	RV number	RV14, RV 12, R11	RV11	RV5c, RV7d, RV7e	
	Sensitivity to Change	High & Medium	Medium	High and Medium	High
Construction Phase	Magnitude of Effect	High & Medium	Medium	Moderate to Low	Low
	Level of Effect	Substantial Adverse & Moderate Adverse	Moderate Adverse	Minor Adverse	Minor Adverse to Negligible
Operation phase	Magnitude of Effect	High to medium & medium	Medium reducing to Low	Low	low
	Level of Effect	Substantial to Moderate Adverse & Minor Adverse	Moderate Adverse reducing to Minor Adverse and then **to Negligible** as the woodland planting matures.	Minor Adverse	Minor Adverse to Negligible

Table 4a: Summary of Effects on Visual Receptors- VR1 Residents

	Table 4b	Roads Users - VR2						
		VR2a South of the River Dart		VR2b In the AONB north/ north east of the River Dart			VR2c & VR2d outside AONB	
	Visual Receptor Group	VR2a-1 Road Users - AONB - south of River Dart	VR2a-2 Road Users – outside of/ in the transition to the AONB - south of River Dart	VR2b-1 Road Users - AONB– Stoke Gabriel Rd,	VR2b-2 Road Users - AONB Greenway Rd	VR2b-3 Road Users - AONB Kennels Lane	VR2c Road users outside AONB – Brixham Road.	VR2d Road users outside AONB – Waddeton Lane
	RV number	RV3, RV4a, RRV5c, RV7a	RVs 5a nd 5b	RV16, RV17	Sequential Views at the same elevation RV19	elevated to oblique Sequential Views RV9a, RV9b	Sequential Views RV18, RV14, RV13, RV12	RV 15
	Sensitivity to Change	High	High	High and medium	High	High	High to Medium	Medium
Construction Phase	Magnitude of Effect	Low	Low	Medium to Low	Medium to Low	Medium to Low	Medium to Low	High/ Low
	Level of Effect	Minor Adverse	Minor Adverse	Moderate to Minor Adverse	Moderate to Minor Adverse	Moderate to Minor Adverse	Moderate/ substantial adverse to Minor Adverse	Substantial/Moderate Adverse
Operation Phase	Magnitude of Effect	Low	Low	Medium to low	Low reducing to low to negligible	Low	High to medium/ low	Medium
	Level of Effect	Minor Adverse	Minor Adverse	Minor Adverse reducing to Minor Adverse to Negligible	Moderate to Minor Adverse reducing to Minor Adverse to Negligible	Minor Adverse reducing to Minor Adverse	Moderate/ Substantial adverse reducing to Moderate Adverse driving south, Minor adverse travelling north	Moderate reducing to Minor Adverse

Table 4b Summary of Effects on Viewers/ Visual Receptors, -Road users –VR2

	Table 4c	Public Rights of Way Users **VR3**			The AONB **VR4**	Waddeton CA VR5
	Visual Receptor Group	VR3a PRoW Users outside AONB, south of River Dart ('transition' landscape into AONB and south of the AONB)	VR3b PRoW Users within AONB, south of River Dart	VR3c PRoW Users within AONB, north/ east River Dart	The AONB as whole as a visual receptor	Waddeton CA, as a whole, as a visual receptor. (This includes VR1 and VR2 for the CA as a whole)
	RV number	Sequential views RV4c, RV4b	Sequential views RVs 6a, 6b, 7a and 7b to 7e inclusive. 5d	Sequential views RVs 8a to 8c, and RV 8d	RVs 3,4,5,6,7, Nearer views 8,9,16,17, 19	n/a
	Sensitivity to Change	Medium	High	High	High	High
Construction Phase	Magnitude of Effect	Low	Low	Medium	Low	Low
	Level of Effect	Minor Adverse to Negligible.	Minor Adverse	Moderate Adverse	Minor Adverse	Minor Adverse
Operation Phase	Magnitude of Effect	Low	Low	Medium reducing to low	Low	Low
	Level of Effect	Minor Adverse to Negligible	Minor Adverse	Moderate to minor adverse	Minor Adverse	Minor Adverse to Negligible as the vegetation matures

Table 4c Summary of Effects on Viewers/ Visual Receptors, - Users of the ProWs and the AONB as a whole

6.8. Night time effects

Landscape and Visual Night Time Effects

6.8.1 Night-time lighting will have an effect on both the landscape and viewers.

6.8.2 The change brought about by lighting will be reduced by the following measures:

- Downward directed and or directional lighting, pointing east.
- Limited hours of operation.
- Screening by intervening vegetation.

6.8.3 The effects of the proposed lighting generated by the scheme will be less noticeable as the site lies adjacent to a road and near the residences on the urban edge of Torbay, which provide a lit backdrop to the site. This reduces the sensitivity of both the landscape and visual receptors.

Landscape Effects

6.8.4 The night-time landscape character of the site will become more like the adjacent Goodrington urban edge with trees filtering the lights from the houses and streets. The adjacent fields to the development site will be nearer this lit edge. The change on the local landscape will be medium to low. The level of effect is judged to be minor adverse.

Visual Effects

6.8.5 Light travels and is easily visible over long distances if no objects intervene. However, the size of the shape of the development and its group of pinpoints of light emitted from the homes and streets of the site will become smaller with distance. With increased elevation, more of the lights of Torbay will be seen on the distant skyline.

6.8.6 Three of the RVs, all from within the AONB have been selected as night time views:

- RV3 represents the view, in the few locations where available, from the west southwest.
- RV7a is an elevated view from the near Bosomzeal farm to the south west.
- RV9a is an elevated view from the south from near the Galmpton Reservoir.

6.8.7 From the west southwest, in RV3, the lights are filtered by intervening vegetation combined with the rolling landform. From elevated locations, the lights of Torbay stretching across the skyline behind White Rock and Goodrington would become more visible.

6.8.8 At night, from the southwest in RV7a, the sparkling lights of Torbay form the backdrop to the site to the north and east. The lights of the site are seen against the lit Torbay skyline, behind the local ridges, with the lights of White Rock and Goodrington filtered through adjacent trees.

6.8.9 From the south In RV9a, the lights of the site are seen only in the eastern part of the view, as a lit scallop behind Galmpton, which is another lit scalloped shape in the view. The lights of Torbay are visible to the northeast of the view.

6.8.10 Visual receptors include road users, residents (from outside the site), and the AONB as a whole. The sensitivity of the viewer/ visual receptor is reduced as the site is seen against the existing lit backdrop of Torquay and Paignton. The sensitivity is medium.

6.8.11 For RV3, in which the site lies behind intervening vegetation, the magnitude of change to the already lit scene is low, as the site will add a very small area of light to this already lit background, and the level of effect is judged to be minor adverse to negligible.

6.8.12 For RV7, from this view the lights of Torbay and the site are more visible, but the change brought about to this lit horizon will be low, and the level of effect is judged to be minor adverse to negligible.

6.8.13 For RV9, there is an additional scallop of lighted houses on the urban edge in the far middle distance behind and echoing the scalloped edge of Galmpton in the middle distance. The change will be medium. There will be a noticeable difference to the view but it is on the urban edge and seen in the context of urban lighting. The level of effect is judged to be to minor adverse.

6.9. Overall Significance of (Residual) Effects

Landscape and Visual Significance

6.9.1 A final judgement is made about whether or not the overall landscape and visual effects of the development, residual after mitigation, are likely to be significant. Significant effects, in general, would be where there is a major change or irreversible effect, over an extensive area/ proportion of views, on elements and/ or aesthetic and perceptual aspects that are key to the character/ visual amenity of nationally valued landscapes/views. Not-significant effects, in general, would be reversible effects of short duration, over a restricted area/proportion of views, on elements and/or aesthetic and perceptual aspects that contribute to but are not key characteristics of the landscape/views of community value. Effects may be either adverse or beneficial.

6.9.2 Refer to the methodology for the criteria used for determining whether the overall effect on landscape character or views is significant or not significant.

Landscape Effects

6.9.3 The proposed development, in the medium to long term, incorporates components that would integrate with landscape elements/ features, such that overall the proposed development would not be of detriment to landscape condition and/or would respect contextual landscape character. Any temporary disruption to landscape elements/ features and/or character would not outweigh long term mitigation or enhancement measures associated with the design and would not adversely affect the integrity (as defined by criteria for policy or designation) of any relevant area of recognised landscape value.

6.9.4 During construction or immediately following construction, the effects would be noticeable. The land use of four fields will have changed from agriculture to residential. The Brixham Road will remain two-laned, but the introduced roundabout and bus stops will entail some road widening and tree and hedge-bank loss. The trees will be replaced where possible and new woodland blocks and hedgerow planting will establish and grow. This will assist in integrating the development into the wider landscape.

6.9.5 Although the character of the Brixham Road and the four fields will be changed, with additional lighting at night, the development would not be detrimental to the wider character of the local landscape or the 'transition' landscape into the AONB from the urban edge.

6.9.6 The development is not in the Conservation Areas so there are no direct landscape effects. However, there is limited intervisibility between the Waddeton Conservation Area and the site so limited indirect landscape effects are possible but these are filtered and from very limited locations. The essential landscape character of the CA will not be changed.

6.9.7 The landscape effects are judged to be not significant.

Visual Effects

6.9.8 The proposed development in the medium to long term would avoid being visually intrusive and would not cause an obvious deterioration or improvement of existing views afforded to visual receptors.

6.9.9 During construction or immediately following construction and the early stages of operation, any temporary disruption to views afforded to visual receptors would not outweigh long-term mitigation of such views.

6.9.10 The residential development is in the transition landscape into the AONB; in the long term, the effects on the visual receptors in the AONB and on the AONB as a whole as a visual receptor are judged to be not significant.

6.9.11 The effects on viewers from the Conservation Areas, in the long term, are judged to be not significant.

6.9.12 For viewers outside the AONB, in the long term, the level of effect is considered to be not significant.

6.10. Cumulative Effects

Landscape and Visual Cumulative Effects (CLVIA)

6.10.1 This section summarises the cumulative effects. For further details of the assessment refer to LVIA Appendices Appendix VII – Cumulative Effects. Site location maps and lists of scoped out sites are also included in the same Appendix.

6.10.2 Cumulative effects are defined here as the landscape and visual effects of the proposed Inglewood scheme, in combination with other proposed or committed developments in the local area.

6.10.3 However it is not known what landscape plans will be made to soften all of the various developments or exactly what form these some of these developments will take.

6.10.4 The initial scope of potential additional developments to be included in this assessment has been agreed with the Local Planning Authorities and the South Devon AONB.

6.10.5 The geographic extent of the study area for assessment of cumulative impacts is extended to a 6km zone. (Note : 5km was used for the main LVIA with a ZTV covering up to 9km.)

6.10.6 The CLVIA is based upon the following criteria:

- Landscape Character – Limited to additional developments within the same locally defined Landscape Character Area (LCA) and the South Devon Area of Outstanding Natural Beauty (AONB).
- Visual Context – Limited to additional developments seen from within the ZTV of the main development and within the South Devon AONB.

6.10.7 Landscape and visual cumulative effects are identified where the combined impact from the additional developments and the Inglewood scheme are considered to be different from the effects of the main development alone.

6.10.8 In the case of visual effects, the nature of cumulative effects will also be described either as:

- In combination effects, where more than one development is seen at one time within a single view;
- In succession effects, where more than one development is seen at one time from the same viewpoint but at different orientations; or
- In sequence, where multiple developments can be seen along a route.

6.10.9 Criteria for judging the levels of cumulative effects on landscape and visual receptors are the same as those used and identified in the main assessment.

List of additional development sites identified within a 6km study area

6.10.10 Potential additional development sites in planning system and within the 6km study area, were initially selected by Torbay Local Planning Authority, the South Devon AONB Manager and confirmed by the Shared Authority Torbay and Teignmouth Landscape Officer. The initial study area was 5km but this was increased to 6km to the south for cumulative effects, as some of the requested sites fall within this wider area.

6.10.11 However, following review, many of these have been scoped out as they are not in the same landscape area and/or not visible in sequence, in succession or in combination. Only those listed below have been identified as likely to give rise to potentially significant effects in the cumulative effects assessment.

6.10.12 Maps of the additional development site locations (including the sites that have been scoped out) are found in the LVIA Appendices Appendix VII– Cumulative Effects site locations and scoped out sites.

6.10.13 The following sites (which are grouped according to the location and local planning area they relate to) are included in the cumulative effects assessment for landscape or visibility or both:

Torbay sites

- P/2009/1287 Park Bay, Brixham Road, Paignton
- P/2015/0124 Yannons Farm, Brixham Road, Paignton
- P/2015/0124 Land At Brixham Road, Yannons Farm (Areas C And D), Paignton
- P/2015/0162 Land At Brixham Road ,Yannons Farm (Areas C And D), Paignton
- P/2014/0983 Awaiting decision Land South of Yalberton Road, Paignton
- P/2011/0197 Whiterock I, Brixham Road, Paignton
- P/2016/0188 Whiterock I Sport Pavilion, Pitches and Floodlighting

BPNP sites

6.10.14 All the committed sites and the identified sites have been scoped out except for the following, which are not scoped out as these are all within the AONB and on the edge of Brixham and the countryside and therefore have a landscape effect on the AONB:

- H3 – C1 (Local plan CDSB3) Wall Park Holiday Camp.
- H3 – C2 (Local plan CDSB7) – Sharkham Village.
- H3 – C5 (Local plan CDSB6) – Douglas Avenue.
- H3– C10 (no local plan reference given) - Broadsands House is only included for visibility as it will appear as part of a sequential view for Road users VR 2c Road users Brixham Road.
- St Mary's/ Old Dairy an identified site has been scoped out as although partly within the AONB it is brownfield land and visually screened by a line of trees.

Plymouth & South West Devon - South Hams District Council rural sites with planning permission

- RA23: Land opposite Rowes Farm, for 50 homes.
- RA24 :Land at Paignton Road, for 55 homes plus 0.1Ha employment.
- RA25: Land south of Coombe Shute for 10 homes.

6.10.15 All the above are sited on the edge of Stoke Gabriel on lower land, so do not share intervisibility with the site, but both they and the site are potentially visible from the AONB.

Cumulative Effects

6.10.16 This section summarises the cumulative effects (during operation) and judges whether these are significant or not. For more details on the approach to assessment which has been followed, please refer to the Cumulative Effects section in the LVIA Appendices Appendix I Methodology.

Summary of Residual Landscape Cumulative Effects

6.10.17 The cumulative landscape effects are considered first both on the local landscape as a receptor and then on the local AONB.

Effects on Local Landscape Character

6.10.18 The following additional developments have been assessed in combination with the Inglewood Proposal for their in combination effects within the wider Local Landscape Character Area 3B Lower Rolling Farmed and Settled Slopes:

Torbay sites

- P/2009/1287 Park Bay, Brixham Road, Paignton
- P/2015/0124 Yannons Farm, Brixham Road, Paignton
- P/2015/0124 Land At Brixham Road, Yannons Farm (Areas C And D), Paignton
- P/2015/0162 Land At Brixham Road, Yannons Farm (Areas C And D)' Paignton
- P/2014/0983 Awaiting decision Land South of Yalberton Road, Paignton
- P/2011/0197 Whiterock I, Brixham Road, Paignton
- P/2016/0188 Whiterock I Sport Pavilion, Pitches and Floodlighting

Plymouth & South West Devon - South Hams District Council sites with planning permission/ under construction

- RA23: Land opposite Rowes Farm, for 50 homes
- RA24: Land at Paignton Road, for 55 homes plus 0.1Ha employment
- RA25 :Land south of Coombe Shute for 10 homes

6.10.19 In summary, although the area of traditional agricultural South Devon countryside would be reduced and the urban edge extended further into this landscape, the essential character of the remaining landscape remains largely unaltered. The additional cumulative level of effect on the 3B Lower Rolling Farmed and Settled Slopes Local Landscape Character is therefore judged to be minor adverse.

6.10.20 The Inglewood site contributes only a small additional part of the cumulative landscape effect as most of the impact on this local landscape character area, mentioned above, arises, from the three sites north of Whiterock 1 development.

Effects on the Local AONB landscape receptor within the extended study area (6km)

6.10.21 The AONB landscape is of high sensitivity.

6.10.22 Landscape effects on the Local AONB within the 6km study area include both direct and indirect cumulative effects.

6.10.23 Direct effects on the AONB landscape occur when development occurs within the AONB boundary. Relevant sites for the cumulative assessment include the three sites at Stoke Gabriel and sites on the edge of Brixham, in particular the three sites (Wall Park, Sharpham Village and to a lesser extent Douglas Avenue), which lie adjacent to and relate to the AONB countryside.

6.10.24 Indirect effects arise from sites within the landscape surrounding the AONB, which have with intervisibility with the AONB. This landscape is also of high sensitivity. Relevant sites include Inglewood, parts of Whiterock 1 and the sports pitch, Whiterock I Sport Pavilion, (Pitches and Floodlighting). The magnitude of change is medium on the landscape character.

6.10.25 The magnitude of change includes all the sites within the AONB boundary, within the study area and the sites within the landscape surrounding the AONB within the study area. The magnitude of change on the Local AONB as a whole is medium.

6.10.26 It is judged that the local AONB as a whole will only be slightly adversely affected. The cumulative direct and indirect effects on the local South Devon AONB landscape within the 6km study area from these sites (with the addition of the Inglewood scheme) are therefore judged to be minor to moderate adverse.

6.10.27 The site does not contribute much to this, as it is not within the AONB and within the landscape surrounding the AONB represents a small addition to the urban edge.

Summary of Residual Cumulative Effects on Visual Receptors

6.10.28 The cumulative visual effects are considered first both on viewers such as residents, road users and users of the PRoWs as receptors and then on the local AONB as a visual receptor.

Cumulative Visual Effects

6.10.29 The following are scoped out:

- Residents with near views, such as those living on the Goodrington and Galmpton urban edge, most of the sites, which are in the same view as Inglewood, would be masked by the development at Inglewood. Therefore, they do not contribute to the cumulative effects by day or by night.
- Users of the Stoke Gabriel Road are on the AONB boundary and highly sensitive but unlikely to receive cumulative views as the views are from low contours so the Inglewood development will be barely perceptible and Whiterock developments not at all.
- By night, as the PRoWs are not usually used during the hours of darkness, views from users of the PRoWs by night have been scoped out.

6.10.30 Some general comments

6.10.31 In general, where the sites are viewed from the southwest they are seen against the urban backdrop and the night lights of Torquay, on the skyline. Where the sites are viewed from the south, they are viewed against a rural dark sky backdrop increasing the level of effect on viewers/ visual receptors as outlined above. From within the AONB, this would include road users along Kennels Road.

6.10.32 In general, by night, while the lights of Inglewood roads and residences would be barely perceptible, the lights of the sports pitch (Whiterock I Sport Pavilion, Pitches and Floodlighting) would be noticeable when in use, slightly increasing the night-time impact of the existing urban development on some residents and road users, identified above.

Visual Receptors within the AONB or on the elevated land south of the AONB

6.10.33 In views from the west-southwest, within the AONB, where available, such as from RV3, road user visual receptors would obtain views of Stoke Gabriel developments in succession in combination with Inglewood, the ongoing development at Whiterock 1 and would notice the lighting from the floodlit pitch to the west of Whiterock 1 at night.

6.10.34 Visual receptors such as residents, road users, and users of the PRoWs with more distant views, some of which are sequential, obtain views in limited locations from higher elevations to the southwest. These receptors are within either the AONB or the more remote rural landscape adjacent to and south of the AONB and as such are all highly sensitive. In these views the Whiterock 1 sports pitch and Whiterock 1 development would be viewed in combination with each other and with Inglewood. They would be seen against the backdrop of Torquay on the skyline and would only add marginally to views of the development by day and the changes would not be enough to alter the level of effect produced by Inglewood.

6.10.35 Road users and users of the PRoWs with more elevated middle distance views from the south are within the AONB and therefore highly sensitive. During the day time, they would view the Inglewood site and the sports pitch, which is further west, against a more rural backdrop. By day, the cumulative effects are judged to have barely increased compared to by night; when the floodlighting is in use, the sport pitch lights will be visible against the dark landscape causing additional cumulative effects. The visual effect on the road users will have increased by night from that from Inglewood alone which will blend in with the existing lighting.

Visual receptors within the study area outside the AONB

6.10.36 Visual receptors, using local roads outside the AONB, as described below, would experience views of the sites, when in operation, in sequence. These would include, road users travelling south along the Brixham Road with a medium sensitivity to change.

6.10.37 First, the site at Park Bay, Brixham Road, Paignton with associated road adjustment would occupy the view, then the Inglewood site and associated road improvement would appear, with views out above the houses to the South Devon AONB and subsequently the BPNP Broadsands Homes site for six homes would be experienced in this sequential view as Galmpton Common is approached. The level of effect is considered to be substantial to moderate adverse, reducing to moderate to minor adverse as roadside vegetation along the roadside and within the developments, establish. The judged cumulative level of visual effect reflects only a slight increase over the previously established effect for Inglewood alone.

6.10.38 Users of the Waddeton Road are highly sensitive as the views travelling along the road are typical of the South Devon countryside. They will experience views, in succession, of the sport pitch to the west and Inglewood to the east. By day the sports pitch will be less noticeable than by night. The cumulative level of effect of the sites on the receptor is judged to be moderate to minor adverse by day and moderate adverse by night, the increased effect being due to the floodlighting when it is turned on.

The AONB as a whole as a visual receptor

6.10.39 For the AONB as whole as a visual receptor, views of Inglewood from the south west and south are combined with views of the sports pitch with night time floodlighting and partial views of the ongoing development at Whiterock 1.

6.10.40 For views obtained from the south, in which the proposals are seen against a more rural (and for night-time receptors) dark sky background, such as from the RV8 day time sequence for PRoW users and RV9 for road users by day and night, the combined developments would be more noticeable than Inglewood alone, particularly at night, when the sports pitch floodlights are in use.

6.10.41 For views from the west-southwest, where available, such as from RV3, road users may obtain views of Stoke Gabriel developments in succession with the combined views of Inglewood, and the residential development and sports pitches at Whiterock 1. They would notice the lighting from the floodlit pitch to the west of Whiterock.

6.10.42 It is judged that the cumulative visual effects on the local AONB as a whole within the 6km study area afforded by relevant emerging development sites is minor to moderate adverse. It is judged that Inglewood only contributes slightly to this effect.

Significance of effects

6.10.43 Following the assessment above, the Cumulative effects on the following landscape receptors are judged to be not significant on:

- The local landscape character 3B Lower Rolling Farmed and Settled Slopes.
- The local South Devon AONB landscape within a 6km study area of the site.

6.10.44 Also, the following cumulative effects on visual receptors are judged to be not significant in the day time and at night, on:

- Residents, road users and users of the PRoWs. The latter by day only, as visual receptors, although there are some substantial impacts in near views.
- The local South Devon AONB as a visual receptor within a 6km study area of the site.

6.10.45 Note: it is not known exactly what form some of these developments and their landscapes with potential road infrastructure changes will take.

6.11. Conclusion

Landscape Effects

6.11.1 The proposed residential development will have some minor and a few substantial local adverse effects but as a whole it is judged that these will not alter the wider landscape character.

Visual Effects

Residents, Road Users and Users of the PRoWs as visual receptors

6.11.2 As for landscape, although there are some substantial adverse impacts on visual receptors local to the site, for receptors in the wider visual envelope, the effects although adverse are slight and do not change the nature of the view.

The Local AONB within the study area as a whole as a visual receptor

6.11.3 The site does not lie within the AONB.

6.11.4 It lies within the landscape between the AONB and the urban edge of Torbay. This urban edge is a recognised part of the wider landscape of the AONB in the AONB Management Plan. The site represents a comparatively small addition to this edge. Substantial new planting, (as detailed in the Green Infrastructure Parameter Plan and managed by a management company) will integrate the new urban edge into the surrounding rural landscape.

6.11.5 Only a small area of the South Devon AONB lies within the study area and even less within the visual envelope. Views from the AONB, in which the site is visible, are middle distant to distant.

6.11.6 It is judged that the development, with the substantial new planting, will not significantly affect the visual context of the AONB nor the views available from the AONB.

Cumulative Effects

6.11.7 Although there are cumulative effects on both the local landscape including the AONB as a landscape receptor and on some local views and the AONB as a visual receptor, it is judged that they would not be significant.

Overall Conclusion

6.11.8 During construction or immediately following construction and the early stages of operation, any temporary disruption to views afforded to landscape and visual receptors in the wider study area would not outweigh long-term mitigation of such views.

6.11.9 During operation, there will be some landscape and visual effects that cannot be fully mitigated. However these are very local to the site.

6.11.10 On the whole, after the establishment of the scheme green infrastructure, although there would be some residual adverse landscape and visual effects, from the proposed development, these would decrease with time and are judged to be not significant.

7. Lighting

7.1. Introduction – scope of the chapter and nature of the impacts to be considered

7.1.1 The Inglewood site is currently a vacant Greenfield site located south of Paignton and adjacent to an Area of Outstanding Natural Beauty. To the south, the site is bordered by the villages of Waddleton and Galmpton. The scheme proposes to build up to 400 residential dwellings, a 2 form entry primary school and a public house to the north of the site. The land is currently being used for agricultural purposes and is bounded almost entirely by hedgerows along Brixham Road and between land parcels.

7.1.2 The external lighting scheme has been designed to create a safe external environment by providing artificial lighting in the hours of darkness, whilst ensuring the lighting does not affect the neighbouring buildings. Also of vital importance is the visual impact perspective upon the adjacent Area of Outstanding Natural Beauty. In addition, the proposed development falls within a Greater Horseshoe Bat sustenance zone and has been recognised as a Cirl Bunting breeding and potential wintering area. The external lighting scheme focuses on the street lighting required for the development and satisfying the strict lighting parameters necessary for the area and ecology.

7.2. Relevant policy and legislative context

7.2.1 The external lighting scheme has been in accordance with the following guidance documents:

- ILE Guidance Notes for the Reduction of Obtrusive Light GN01:2011;
- CIBSE Lighting Guide 6 (LG6) – Outdoor Environment.
- CIBSE Lighting Guide 9 (LG9) – Lighting for Communal Residential Buildings;
- CIBSE SLL Code for Lighting 2012;
- BS 5489-1:2013 – Code of Practice for Design of Road Lighting;
- CEN/TR 13201-1: Road Lighting – Part 1: Selection of Lighting Classes;
- CIE – Guidelines for minimising Sky Glow; and,
- Royal Commission on Environmental Pollution – Artificial Light in the Environment.

7.2.2 The ILE Guide for the Reduction of Obtrusive Light is the primary document used by most local councils and planning departments to categorise the provision of external lighting. External lighting shall be compliant to Dark Sky requirements and to Lighting Environmental Zone CIE E2 .

Local Planning Policy

7.2.3 The local policies are summarised in various documents produced by Torbay Council. Section 5.3.3 of the Strategic Delivery Areas – a policy framework for Neighbourhood Plans details the following policies:

7.2.4 Policy NC1, Biodiversity and Geodiversity:

- The Local Plan seeks to conserve and enhance Torbay's biodiversity and geodiversity, through the protection and improvement of the terrestrial and marine environments and fauna and flora.
- Developments should not result in the loss or deterioration of irreplaceable habitats or wildlife corridors. Where development in sensitive locations cannot be located elsewhere, the biodiversity and geodiversity of areas will be conserved and enhanced through planning conditions or obligations.

- Policy SDP3, Paignton North and Western Area: Development in these locations should provide resilience to the effects of climate change, particularly through the provision of green infrastructure, and adhere to planning guidance on Greater Horseshoe Bats within the South Hams SAC, as well as other species such as cirl buntings, in accordance with Policy NC1.

Legislation & Guidance for Lighting Effects on Bats

7.2.5 In the United Kingdom, all bats are protected by law. The following documents form the legislative framework for the protection of bats:

- The Wildlife and Countryside Act 1981
- The Conservation of Habitats and Species Regulations (2010)
- According to the above mentioned documents, it is illegal to:
- Intentionally or recklessly disturb a bat while it is occupying a structure of place of shelter or protection;
- Intentionally or recklessly obstruct access to a structure or place used by a bat for protection or shelter.
- The Bat Conservation Trust has published documents that offer guidance on artificial lighting for new or existing developments around bat sensitive areas. Landscape and Urban Design for Bats & Biodiversity make the following recommendations:
- No bat roost should be directly illuminated;
- The type of lamp specified does not have an adverse impact on bats foraging and commuting patterns;
- The height of the lighting columns should be as low as possible;
- The light should be as low as guidelines permit;
- The lighting operational times should provide switch off intervals;
- Road and trackways in areas important for bat foraging and commuting areas should provide stretches left unlit to avoid isolations of bat colonies.

Environmental Impact Assessment Scoping Opinion

7.2.6 The EIA Scope of Opinion has been produced by Torbay Council and provides guidance on the lighting design for the Ingle Wood development:

- Lighting assessments and subsequent sensitive lighting design will be required in situations where Greater Horseshoe Bats are known to be present on site (or on adjacent land where they could be affected) and using specific features to roost, commute or forage and existing ambient light levels will increase as a result of new artificial lighting being introduced as a part of the proposed development. Lighting design should also look to avoid further light pollution in to the night sky especially when viewed from the AONB.
- The site is located within the sustenance zone for Greater Horseshoe Bats and previous surveys have identified the use of the site by foraging Greater Horseshoe Bats. Adequate information must be submitted to demonstrate that all land proposed for mitigation for Greater Horseshoe Bats will be subject to minimal artificial light spill no greater than 0.5 lux.
- The site is within an area where cirl bunting breeding activity has been recorded and is a potential wintering area.

7.3. Methodology and Assessment Criteria

7.3.1 Before designing the scheme, it was imperative to consider the baseline conditions of the site. A site survey to assess these lighting conditions was undertaken on Tuesday 6th December 2016 between 5:00 pm and 9:00 pm. Using the information gathered at the survey, Hydrock were able to design the external lighting scheme to merge into the nearby residential estates whilst minimising light pollution and the effect on nearby fauna.

7.4. Description of the baseline (existing) conditions;

Baseline light survey

7.4.1 The proposal of the survey was to review any existing artificial lighting on site, the illumination of the adjacent roads and the street and external lighting of the nearby villages / residential suburbs. As the site is currently being used for agricultural use, it has no existing artificial lighting. The lighting available on site is from adjacent street lighting. Following the survey, the site was assessed as being Environmental Zone E2 – Rural.

- The site existing lighting levels have been recorded and the most important surroundings areas have been identified. The maximum lighting levels recorded within the Ingle wood were 18 lux. Around 100 meters inland from Brixham Road the illumination levels reduce to zero lux.
- The site and the areas analysed have been categorised according to the environmental indices mentioned above. The Inglewood site has been assessed as being Environmental Zone E2 – Rural.
- Based on the client's information the potential bat sensitive areas have been identified.
- The new development will inevitably change the existing lighting levels of the areas analysed but careful lighting design considerations can keep the light pollution below the levels specific to each Environmental Zone of each area mentioned.

7.4.2 The whole site has been lit with the following methods:

- Local Distributor Road – Brixham Road: The majority of Brixham Road is currently lit with a mixture of SON and metal halide column luminaires. The road layout will be modified to include roundabout access to the development. The roundabout will be lit with 6m column luminaires to provide the higher lux levels and illumination spread across the roundabout to provide high visibility for motorists and cyclists.
- Major Access Roads: A major access road runs through the site in a figure eight, as shown in Figure 16. These roads have been modelled with 4m high column luminaires to provide the higher lux levels and uniformity required for this area.
- Minor Access Roads: A few minor access roads branch from the main major access road and have a lower illuminance requirement. Minor access roads within the centre of the site have been modelled with 3m high column luminaires. Minor access roads towards the exterior of the site, which could be seen more easily from the Area of Outstanding Natural Beauty, have been modelled with 1m high bollard luminaires to reduce night time light pollution.
- Home Zones and Shared Surfaces: There are various home zones and shared surfaces located within the development. These zones are designed as shared surfaces for motorised vehicles, cyclists and pedestrians with a maximum speed to 10mph. These areas have been modelled with 1m high bollards.

- Lighting Control: The external lighting controls as a minimum will consist of photocell and time clock arrangements. Passive Infrared Sensors (PIR) are recommended for this development as both an energy saving feature and a strategy to reduce light spill on bat sensitive areas. A dimming profile would also be recommended, typically luminaires are either dimmed or every second luminaire is switched off past a designated curfew time. This reduces the overall light pollution of the development.

7.5. Proposed Mitigation

7.5.1 The site has been modelled with a mixture of low height, directional column luminaires and 1 metre tall bollards to provide sufficient illuminance on roads whilst also being sensitive to the roosting bats and adjacent Area of Outstanding Natural Beauty. Where possible, luminaires will be positioned to face away from the Area of Outstanding Natural Beauty.

7.5.2 To integrate the site into the nearby residential areas, warm white LEDs which have a colour temperature of 3000K have been chosen for the site. The lighting model does not take into account the vegetation of the site.

Special Measures Undertaken to Protect Roosting Bats

7.5.3 Unlit areas to provide bat corridors: Certain stretches of the road have been left unlit to provide corridors for the existing bats to migrate through the site. These stretches follow the original hedge lines, providing areas of < 0.5 lux for bats to travel through.

7.5.4 Home zones: Three home zones lie adjacent to hedges which are used by commuting bats. Extensive modelling has been undertaken in these areas to provide illuminance on the roadway whilst making sure that the hedges are not illuminated to more than 0.5 lux at any height. As Greater Horseshoe Bats fly at an approximate height of 1 metre, it is important that vertical testing was undertaken as well as recording the horizontal lux levels. The southern hedge reaches a maximum of 0.23 lux, the western hedge reaches a maximum of 0.46 lux and the central hedge reaches a maximum of 0.26 lux. Some of these roads stretches do not reach the recommended illuminance levels in CEN/TR 13201-1: Road Lighting – Part 1: Selection of Lighting Classes due to this.

7.6. Residual Effects

7.6.1 Implementing these measures will have the following effects:

- Reduction of light pollution: the site will be visible from land to the west of the Dart Estuary that lies within the AONB so it was important for the site to visually merge with the nearby residential developments and limit the light pollution from the site as much as possible.
- Maintaining habitats for commuting bats: by providing sections of road that are < 0.5 lux and reducing the illuminance on hedges to < 0.5 lux, bats are able to commute throughout the site as before construction.
- Providing a safe environment for residents: all lighting has been designed to CEN/TR 13201-1: Road Lighting – Part 1: Selection of Lighting Classes standards.

7.6.2 To reduce the lighting levels of the development further, residents could be educated about the flora and fauna in their local area and encouraged to reduce the illuminance from their own homes. This could include installing low lumen security lighting to reduce the lux levels falling on nearby hedges, being careful to not shine vehicle lights at

7.7. Conclusion

7.7.1 The above methods of lighting and control are proven methods for reducing light spill over the site boundary onto neigbouring areas and also to reduce sky glow from upward light distribution.

7.7.2 The purpose of the lighting scheme is iltimately to provide a safe and secure environment for the residents and also to minimue or eliminate any negative impact on the existing environment and ensure that the new development blends in the surrounding area.

7.7.3 The proposed scheme will be developed in conjunction with Stride Treglown, Nicholas Pearson Associates and any recommendations arising during consideration of the planning application.

8. Transport and Access

8.1. Purpose of the Assessment

8.1.1 This chapter sets out the traffic and transportation effects of the proposed development of up to 400 homes, a new two-form entry Primary School and a new public house on the Inglewood site, located to the west of the A3022 Brixham Road, Paignton.

8.1.2 This chapter focuses on the transport impacts of both the construction and operational stages of the proposed development. A full description of the development is set out in Chapter 2 of the ES.

8.1.3 This chapter has been informed by the Transport Assessment (TA) which has been undertaken for the proposed development and is included as an Appendix. The TA should therefore be read to obtain a detailed consideration of the transport and access issues associated with the development.

8.1.4 This chapter has been written in the context of the scoping opinion provided by Torbay Council (TC) dated 16 February 2017. The scoping opinion agreed that the impacts on severance, driver delay, pedestrian delay, pedestrian amenity and fear and intimidation be assessed in terms of sensitivity, magnitude and significance.

8.2. Legislative and Policy Framework

8.2.1 The ES has been undertaken with reference to the relevant policy guidance on the traffic and transportation assessment. This includes:

- Guidelines on the Environmental Assessment of Road Traffic, Guidance Notes No. 1 published in 1993 by the Institute of Environmental Management and Assessment (IEMA);
- The Department for Transport (DfT) Design Manual for Roads and Bridges (DMRB) Volume 11 and Volume 5 TA 79/99.

8.2.2 The TA sets out the policy context.

8.3. Consultation

8.3.1 Consultation has taken place with TC transport officers including meetings in January and March 2017, a workshop in July and a series of emails from January 2017 onwards. Consultation has included a wide variety of transport matters. A TA scoping note dated May 2017 was provided to TC transport officers prior to the provision of the TA.

8.4. Study Area

8.4.1 The ES study area includes the proposed development located within the red line planning application boundary and extends beyond to take into account the adjacent existing highway network and any key local receptors. The study area includes the following roads:

- A3022 Brixham Road along the site frontage;
- A3022 Brixham Road/Goodrington Road/Long Road junction;
- A3022 Brixham Road/White Rock/Kingsway Avenue junction;
- A3022 Brixham Road/Hunters Tor Drive junction;

- A3022 Brixham Road/A379 Dartmouth Road/Langdon Lane, Windy Corner junction.

8.5. Scope and Methodology

Guidance

8.5.1 The assessment methodology is based on the IEMA document *Guidelines on the Environmental Assessment of Road Traffic (1993)*. This includes a screening process and assessment criteria as set out below.

8.5.2 The IEMA document suggests a screening process to determine the scale and extent of an assessment. It sets out two thresholds that would normally apply before the environmental effects of increases in traffic on highway links need to be looked at in more detail as summarised below:

- The "*Rule 1*" threshold states that a 30% increase in traffic or heavy goods vehicles (HGVs) should be used in normal circumstances.
- The "*Rule 2*" threshold of a 10% increase in traffic is used in sensitive areas such as accident black spots, Conservation Areas, hospitals and links with high pedestrian flows (i.e. sensitive receptors). This broadly corresponds to the level at which increases in traffic are imperceptible in terms of the day to day variation in traffic flows which occur in any event. Normally it would not be appropriate to consider links where traffic flows have changed by less than 10% unless there are significant changes in the composition of traffic, such as a large increase in the number of HGVs.

8.5.3 The percentage change in traffic flows arising from a development is a direct function of the level of initial baseline flows. Trigger levels in terms of the total expected 18 hour post-development traffic flows can, therefore, be considered to prevent very minor changes on links with low baseline flows from being considered more significant. For the purposes of this assessment, it is considered that where the resultant 18 hour flows in the post-development scenario are less than 600 vehicles, the impact will be considered negligible.

Assessment of Significance

8.5.4 In particular, the IEMA document identifies a number of categories of potential environmental effects which need to be considered as part of a robust ES. For each category, an assessment of the magnitude of any environmental impact will be cross referenced against the sensitivity of the area in question to changes in traffic flow to provide a robust assessment of the significance of any impacts. The key IEMA environmental categories for transport are listed below and are examined in more detail overleaf:

- Severance;
- Driver Delay;
- Pedestrian Delay;
- Pedestrian Amenity;
- Fear and Intimidation;
- Accidents and Safety.

Severance

8.5.5 For severance, the IEMA document sets out the DfT indicators for determining the significant of the relief from severance. Changes in traffic flow of 30%, 60% and 90% are regarded as producing slight, moderate and substantial effects respectively. The figures have been derived from studies of major changes in traffic flow and therefore should be used cautiously in any environmental assessment. The assessment of severance should pay full regard to specific local conditions, for example whether crossing facilities are provided or not, traffic signal settings etc.

Driver Delay

8.5.6 Values for driver delay at junctions can be derived from industry standard junction capacity software such as ARCADY, PICADY and LINSIG.

Pedestrian Delay

8.5.7 With regard to pedestrian delay a number of factors may affect the ability of people to cross roads. In general increases in traffic levels are likely to lead to greater increases in delay. No thresholds are set in the IEMA guidance and it is suggested that assessors use professional judgement.

Pedestrian Amenity

8.5.8 The IEMA document refers to a tentative threshold for judging the significance of changes in pedestrian amenity. Pedestrian amenity is broadly defined as the relative pleasantness of a journey and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic. The IEMA documents suggest that a significant change in pedestrian amenity would be where traffic flow (or lorry component) is halved or doubled.

Fear and Intimidation

8.5.9 The IEMA document also sets out thresholds that could be used as an approximation of the likelihood of pedestrian fear and intimidation. These thresholds are assumed to relate to changes in the baseline traffic flow and are shown in Table 8.1 below. Other factors such as proximity to traffic and pavement width need to be considered.

Degree of Hazard	Average Traffic Flow over 18 hour day (veh/hour)	Total 18 hour HGV flow	Average speed over 18 hour day (mph)
Extreme	1,800 +	3,000 +	20 +
Great	1,200 – 1,800	2,000 – 3,000	15 – 20
Moderate	600 – 1,200	1,000 – 2,000	10 – 15

Table 8.1: Thresholds for Fear and Intimidation

8.5.10 The IEMA document includes a section on accidents and safety where it suggests that an assessment of the likely increase or decrease in the number of accidents resulting from the changes in traffic flow and composition can be undertaken. Professional judgement will be needed to assess the implications of local circumstances.

Receptor Sensitivity

8.5.11 Although the IEMA document does not specifically define different grades or levels of sensitivity for key environmental receptors, the normally adopted levels of sensitivity, which are proposed for this ES, are set out below in Table 8.2.

Receptor sensitivity / importance	Definition
Very High	Schools, colleges, accident black spots, roads without footways that are well used by pedestrians.
High	Congested junctions, health facilities, shopping areas with road frontage, roads with narrow footways and un-segregated cycleways.
Medium	Places of worship, community centres, residential roads with adequate footways, listed buildings, tourist attractions.
Low	Low sensitivity to traffic flows, sufficiently distant from affected roads.
Very Low	Not sensitive

Table 8.2: Sensitivity / Importance of the Environment

Magnitude of Environmental Impact

8.5.12 Having regard to the assessment methodology outlined above, a set of simplified criteria have been developed to help identify and communicate the magnitude of transport effect on local highway links and key receptors related to the development scheme. These are set out in Table 8.3 below.

Magnitude	Definition
Very High	Percentage increase in traffic or HGV flow greater than 30% or 10% in sensitive locations. Weekday 18 hour average hour traffic flows would be 1,800+ vehicles per hour or total 18 hour HGV flows would be 3,000+.
High	Percentage increase in traffic or HGV flow greater than 30% or 10% in sensitive locations. Weekday 18 hour average hour traffic flows would be between 1,200 and 1,800 vehicles per hour or resultant 18 hour total HGV flows would be between 2,000 and 3,000 HGVs.
Medium	Percentage increase in traffic or HGV flows greater than 30% and greater than 10% in sensitive locations. Weekday 18 hour average hourly flow would be between 600 and 1,200 vehicles per hour or resultant total 18 hour HGV flows would be between 1,000 to 2,000 HGVs.
Low	Percentage increase in traffic or HGV flows less than 30% and less than 10% in sensitive locations or resultant traffic flows are less than 600 vehicles (weekday 18 hour average hourly flow). Resultant total 18 hour HGV flows would be less than 1,000 vehicles.
Very Low	No material effects.

Table 8.3: Magnitude of Impact

Significance

8.5.13 The IMEA guidance states (page 30):

"*Having quantified the magnitude of the impact (i.e. the level of change) there are various ways on interpreting whether or not this is considered significant. For many effects there are no simple rules for formulae which define thresholds of significance and there is, therefore a need for interpretation and judgement on the part of the assessor, backed up by data or quantified information wherever possible.*"

8.5.14 In view of this, the significance of any transport associated environmental impacts is directly related to both the magnitude of said impact and the sensitivity of any nearby environmental receptors.

8.5.15 The criteria for assessing the significant of effects in relation to the traffic and transport impacts of the development are set out in Table 8.4 below.

	Magnitude of Impact					
Receptor Sensitivity		Very High	High	Medium	Low	Very Low
	Very High	Major	Major	Moderate	Minor	Minor
	High	Major	Moderate	Minor	Minor	Negligible
	Medium	Moderate	Minor	Minor	Negligible	Negligible
	Low	Minor	Minor	Negligible	Negligible	Negligible
	Very Low	Minor	Negligible	Negligible	Negligible	Negligible

Table 8.4: Significance of Potential Effects

8.5.16 In view of the criteria outlined above, it should be noted that significant traffic and transport effects are only those considered to be classed as either 'major' or 'moderate' impacts.

8.6. Cumulative Impacts

8.6.1 To ensure that the ES provides a robust assessment of the traffic impacts, a review of proposed or possible future third party development projects, which may have a greater cumulative impact in conjunction with the Inglewood development proposals, has been undertaken to inform this ES.

8.6.2 Committed development has been taken into consideration by including trips associated with the White Rock, Yannon's Farm, Devonshire Park and Yalberton Road developments, as agreed with TC for the traffic impact analysis work.

8.6.3 For the assessment of construction traffic impacts, the forecast 2019 flows include base flows and the traffic associated with the two previously consented developments at White Rock and Yannons Farm. The flows from these two sites are derived from from the full levels specified in their respective Transport Assessments and then reduced to account for the 94 residential units on the White Rock site and the 98 units on the Yannons Farm site that are already constructed and occupied. This information is based upon the completions records held by Torbay Council. The forecast 2024 flows include base flows and the traffic associated with the above White Rock and Yannons Farm consented sites (adjusted to account for completions) plus the full traffic levels associated with two committed development sites at Devonshire Park and Yalberton Road. In allowing for the traffic forecast to be generated by these developments, the cumulative impact has been assessed in this chapter.

8.7. Existing Baseline Conditions

Site Location

8.7.1 The proposed site is located to the south west of Paignton and is currently in agricultural use. The site is bounded to the north by mitigation planting as part of the new White Rock residential development, to the east by A3022 Brixham Road and to the south and west by field boundaries of other agricultural fields.

Local Road Network

8.7.2 This section provides a summary of the characteristics of the local highway network in the vicinity of the development site.

8.7.3 The A3022 Brixham Road along the site frontage measures approximately 6.7m, is lit in the vicinity of the existing residential dwellings to the northeast of Brixham Road and is subject to a 40mph speed restriction. The A3022 Brixham Road forms a section of what is referred to locally as the 'Western Corridor'. The Western Corridor stretches from Churscombe Cross roundabout in the north to Windy Corner junction to the south.

8.7.4 Approximately 100m to the north of the site frontage with Brixham Road is a pair of semi-detached residential dwellings located directly to the west of the Brixham Road. At this location, the carriageway narrows to approximately 6.0m on the straight section directly to the north and approximately 6.7m on the adjacent bend, and also includes a slight crest of a hill and tall hedgerows which limits forward visibility at this location to around 50m.

8.7.5 The site frontage along A3022 Brixham Road is approximately 500m in length. Along the northern 100m of site frontage, existing residential dwellings with direct access from Brixham Road are located to the northeast of Brixham Road. Continuing in a southerly direction, the following 65m consists of a number of trees and an established hedgerow. The subsequent 50m of frontage consists of another existing residential dwelling with direct access onto Brixham Road. South of this dwelling, the remaining length of site frontage is tree lined on either side, apart from an existing gas governor to the northeast of Brixham Road located approximately 165m south of the residential dwelling. Approximately 65m north of the southern boundary of the site a wide verge opens out on the north east side and continues through to Hunters Tor Drive.

8.7.6 Hunters Tor Drive forms the minor arm at a ghost island right turn junction with A3022 Brixham Road, with the centre of the junction located approximately 60m south of the southern boundary of the site. Hunters Tor Drive provides access to the residential area of Galmpton Warborough and to Hookhills Road, a north-south connector road, to the east. Approximately 390m north of its junction with Hunters Tor Drive, Hookhills Road forms the major arm at a simple priority junction with Gibson Road. Gibson Road provides the main vehicular route to White Rock Primary School.

8.7.7 Approximately 125m south of the ghost island right turn of A3022 Brixham Road with Hunters Tor Drive, the speed restriction on A3022 Brixham Road reduces from 40mph to 30mph.

8.7.8 Approximately 430m south of the change in speed restriction A3022 Brixham Road forms one arm of a three-arm signal controlled junction with A379 Dartmouth Road. At Windy Corner Brixham Road has one lane in either direction. The northern of the two A379 Dartmouth Road arms consists of three lanes, one northbound and two southbound. One of the southbound lanes is marked as a right turn lane to allow for the large number of right turning traffic into A3022 Brixham Road. Immediately south of the signal control junction the southern of the two A379 Dartmouth Road arms consists of four lanes: one southbound lane; a ghost island right turn lane to provide queueing space for traffic turning right to Langdon Lane; and two northbound lanes, one of which directs traffic to A3022 Brixham Road and the other to the northern arm of A379 Dartmouth Road.

8.7.9 Langdon Lane joins A379 Dartmouth Road as the minor arm of the ghost island junction. Yellow box markings are present across the entrance to Langdon Lane to allow vehicles turning in and out of Langdon Lane to turn even when traffic is queuing back on the A379 Dartmouth Road approach to the traffic signals. Langdon lane connects Windy Corner junction at its northern end to the residential settlement of Galmpton at its southern end.

8.7.10 Approximately 575m to the north of the site, A3022 Brixham Road forms two arms of a signal control junction with Kingsway Avenue and the new White Rock housing development. On both of the A3022 Brixham Road arms of the junction there are two lanes in both directions. There are also separately signalled right-turn lanes from either direction. Kingsway Avenue to the east, has one lane in either direction and provides access to the residential area between White Rock and Goodrington. The access into the White Rock development, 'White Rock Way', located to the west of the junction consists of one lane in either direction. The eastbound approach to the junction widens out to two lanes over a distance of approximately three car lengths.

8.7.11 Approximately 230m further north, the A3022 Brixham Road again forms two arms of a signal controlled junction with Goodrington Road and Long Road. Goodrington Road connects the A3022 Brixham Road with A379 Dartmouth Road to the east, via the residential area of Goodrington. Long Road provides access to South Devon College, along with Torbay Business Park.

8.7.12 A further 1,800m north, A3022 Brixham Road forms one arm of a signal controlled junction known as Tweenaway Cross. From this junction, the A3022 continues in an easterly direction towards Paignton as the A3022 Totnes Road, the A385 Totnes Road continues in a westerly direction from the junction towards Totnes, and the A380 Kings Ash Road continues in a northerly direction. TC has recently undertaken highway improvements along the A380 Kings Ash Road to allow widening from two (one lane in either direction) to three lanes along certain sections of road.

8.7.13 The A380 Kings Ash Road provides the main link from the site to the new South Devon Highway, which connects Torbay to Newton Abbot, bypassing Kingskerswell. North of Newton Abbot, the A380 joins the A38 Devon Expressway and subsequently the M5, providing access to Exeter and the employment opportunities there.

Pedestrian and Cycle Facilities

8.7.14 Within the immediate vicinity of the site there are limited existing pedestrian and cycle facilities. A shared footway/cycleway of varying width is present on the eastern side of A3022 Brixham Road adjacent to a small number of private residential dwellings with direct access from A3022 Brixham Road.

8.7.15 To the north, the shared footway/cycleway diverges away from the edge of the carriageway and becomes a segregated footway/cycleway as it climbs over the crest of a hill within the area of the horizontal bend on the main A3022 carriageway. The segregated footway/cycleway follows the boundary of and provides access to White Rock Primary School. The path then continues north until it meets the Toucan crossing across the Kingsway Avenue arm of the new White Rock signal controlled junction.

8.7.16 To the south of the section fronting Brixham Road, the shared footway/cycleway also runs away from the road and passes through open space alongside the rear gardens of the properties facing onto Steed Close. This off-road section of footway/cycleway continues as far south as Hunters Tor Drive, at which point the footway continues along the edge of the carriageway. There is no provision for cyclists after this point, and it is assumed that they would continue on carriageway from this location.

8.7.17 The pedestrian/cycle route to the local shops at Churston would be via Hunters Tor Drive. Following this route, there are currently no dropped kerbs or tactile paving across Hunters Tor Drive in the vicinity of the end of the shared footway/cycleway, or the junctions of Hunters Tor Drive with Steed Close, Hunters Tor Close or Bridle Close. At the junction of Hunters Tor Drive with Hookhills Road there are dropped kerbs on either side of the Hunters Tor Drive arm of the junction.

8.7.18 To the south of the junction there are footways on both sides of Hookhills Road for approximately 185m, after which point the western footway terminates. Although there is no official crossing location along Hookhills Road, there are frequent dropped kerbs on either side of the carriageway in the form of driveway entrances. The eastern footway continues for an additional 35m, after which there are no footways and the remaining length of Hookhills Road to the south effectively serves as shared space for the remaining 230m.

8.7.19 There is a turning head at the southern end of Hookhills Road which has ramps connecting to the shared footway/cycleway along the western side of the A379 Dartmouth Road. Approximately 20m north of the point at which the ramps join A379 Dartmouth Road there is a zebra crossing across A379 Dartmouth Road which provides a link to the shops at Churston on the eastern side. This route is shown as an Advisory Cycle Route on the Torbay Cycle Map.

Public Transport

8.7.20 The closest existing bus stops to the site are located on Hunters Tor Drive, approximately 490m to the southeast of the site from the proposed site access junction location. These are served by the Stagecoach South West 13 and the MS5 services. The eastbound bus stop is marked by a bus stop flag. The westbound bus stop is marked with a bus stop flag and timetable information.

8.7.21 Additional bus services are available from the bus stops located on A379 Dartmouth Road, north of the Windy Corner signalised junction. The bus stops are approximately 1,100m from the proposed site access location via Hunters Tor Drive and Hookhills Drive. These stops are served by the Stagecoach South West services 12, 30 and 120, the Country Bus service 14 and the Dartmouth Steam Railway and River Boat Company service 100. The southbound bus stop has on-carriageway bus stop markings, bus boarder kerbs, a bus shelter with seating, a bus stop flag and timetable information. The northbound bus stop is located within a layby. It is marked with on-carriageway bus stop markings, a bus stop flag, bus boarder kerbs, a bus shelter and timetable information.

8.7.22 Further services are available from the bus stops in the vicinity of the new signal controlled junction to the north of the site, which provides access to the new White Rock residential development. These bus stops are approximately 620m north of the proposed site access location and both stops are served by the Stagecoach South West 120 service. Both bus stops are located within laybys adjacent to the main carriageway. Both have on-carriageway bus stop markings, bus shelters with seating and timetable information.

Recorded Injury Accidents

8.7.23 The details of recorded injury accidents have been obtained from TC for the five year period from 1st January 2012 to 31st May 2017 (65 months). The study area stretched south from, and included, the Tweenaway Cross junction to the north and included the length of A3022 Brixham Road south as far as, and including, the Windy Corner A379/A3022 junction. The study area also included the entire length of Goodrington Road and Hunters Tor Drive.

8.7.24 Rear end shunts at traffic signal controlled junctions and accidents involving cyclists are relatively common amongst the reported injury accidents. These are best addressed through driver education programmes such as those already being pursued by TC through its Road Safety Strategy 2013 – 2020. There is no particular trend or pattern in the type or distribution of the accidents that suggests that intervention through amendment of the highway layouts is likely to be appropriate or beneficial.

Sensitive Receptors

8.7.25 In order to identify the sensitive receptors within the vicinity of, and on routes to and from the Inglewood site, a desktop study was undertaken using Googlemaps, Google Streetview and local knowledge gained from site visits.

8.7.26 As outlined above in Table 8.2, a variety of sensitive receptors may be identified in an ES. In the context of the proposed development it is considered that the existing White Rock Primary School is a sensitive receptor. It is debatable whether the primary school should be considered as a receptor with very high sensitivity as the school buildings are located some 70m distance from the A3022 Brixham Road. The pedestrian/cycle access alongside Brixham Road is separated from the road by a hedge over much of the site frontage. Also, the proposed development includes a primary school, which it is assumed will be attended by the majority of pupils who live in the proposed development but some may come from outside the proposed development. Similarly, some pupils living in the proposed development may go to White Rock Primary School rather the proposed new school. The number of pupils wishing to cross Brixham Road in the vicinity of the existing White Rock Primary School is difficult to predict but may be relatively low. In order to provide a robust analysis the frontage of the existing school site with Brixham Road is considered here to be a receptor with high sensitivity.

8.7.27 As indicated in Table 8.2 congested junctions can be considered as a receptor with high sensitivity. Some of the junctions near the site experience traffic congestion at peak times and this matter is considered in this chapter.

8.7.28 Although there may be additional sensitive receptors further to the north, including Paignton Community & Sports Academy, the impact at these sites is likely to be significantly less than directly adjacent to the site due to dilution of the levels of site vehicles with increasing distance from the site.

Limitations

8.7.29 A potential limitation of the TA, which sets out the forecast traffic flows used in this chapter, is that there were minor road works ongoing on the A380 Kings Ash Road at the time the traffic surveys were undertaken. The surveys were delayed to avoid the period between the 13th of February and the 14th of April 2017 when Kings Ash Road was completely closed but could not avoid the presence of road works altogether. It was considered that the road works were limited at the time of the surveys and that they would not have affected traffic flows significantly. The dates that the traffic surveys were undertaken, during the week of 9th to 15th May 2017, were considered to be acceptable by TC.

8.8. Proposed Mitigation Measures

8.8.1 This section provides a summary of the various measures proposed to mitigate any identified negative impacts of the Inglewood Development proposals for both the construction and operational phases of the scheme.

Mitigation of Construction Impacts

8.8.2 During the active construction phases of the proposed development, a Construction Environmental Management Plan (CEMP) will be prepared and implemented in order to minimise the risk of potential environmental impacts and to mitigate against the potential impacts associated with construction vehicles.

8.8.3 The CEMP will define preferred routes for HGVs and other site traffic to protect local residential areas from the effects of construction traffic movements. The CEMP will also outline the hours of operation of the site, any restrictions on delivery times, it may identify key sources of building materials within the area, and will provide details of safe routes to access the local and regional highway network.

8.8.4 The requirements of the CEMP will be implemented and monitored in accordance with best practice construction management processes. These will include:

8.8.5 The main site contractor will operate the site in accordance with the Construction Phase Health and Safety Plan as agreed with the CDM Coordinator, contractor and the HSE. The contents of the Health and Safety Plan will be in accordance with the HSE publication *Managing Health and Safety in Construction: Construction (Design and Management) Regulations* (2015);

8.8.6 The main contractor will organise local press releases and residents' meetings as deemed necessary in order to keep local residents informed of progress and provide advance warning of any key construction stages;

8.8.7 The main contractor and/or developer will be required to register for the Considerate Contractors scheme prior to commencement of the development;

8.8.8 The site will be secured with appropriate fencing or hoarding to ensure site security to and from the development;

8.8.9 Measures to manage and mitigate the impact of dust nuisance and prevent displacement of soil or other construction materials onto the public highway or surrounding area. This may include the covering of HGVs using the site in dry weather as required, the watering of access roads especially in dry weather, and the introduction of wheel washes at the site exit to avoid depositing soil on the local roads.

Mitigation of Operational Impacts

8.8.10 Mitigation measures relating to the operational stages of the development are designed and incorporated into the development proposals. In terms of the transport impacts of the proposals on the key environmental categories defined by the IEMA, the following operational mitigation measures are proposed.

8.8.11 The proposed site access junction will include uncontrolled crossing points on the triangular splitter islands of each arm of the junction, each equipped with tactile paving and dropped kerbs.

8.8.12 Two additional crossing points on Brixham Road are proposed. One is a signal controlled Toucan crossing to the north of the proposed site access roundabout, while the other is an uncontrolled pedestrian crossing south of the new site access roundabout junction and north of Hunters Tor Drive. These crossings would act to mitigate any significant negative impacts related to pedestrian and cycle delays, pedestrian amenity, and fear and intimidation.

8.8.13 As outlined in the TA, off-site highway improvements are proposed at three locations: the A3022 Brixham Road/Long Road/Goodrington Road traffic signal controlled junction; the Windy Corner A379/A3022 traffic signal controlled junction; and carriageway widening on the A3022 Brixham Road to the north of the site, as part of the development. Each of these improvements will help mitigate the impact of the additional traffic generated by the Inglewood development.

8.8.14 The Framework Travel Plan (FTP) associated with this development scheme incorporates various measures designed to promote the use of sustainable travel to and from the site with a target of reducing Single Occupancy Vehicle (SOV) trips by to and from the site by 10% from baseline levels, The TP aims to further reduce any negative impacts related to the increase in traffic movements on the local highway network associated with the development proposals. This will be reviewed annually with the aim of reducing the traffic impact of the development.

8.8.15 The proposed FTP measures are summarised below.

8.8.16 During construction, a number of physical measures will be incorporated into the scheme including: providing adequate car parking in line with policy requirements; the provision of Electric Vehicle Charging Points (EVCP); appropriate cycle parking within the curtilage of each dwelling; the inclusion of on-site and off-site pedestrian and cycle infrastructure improvements; the provision of bus stops; and the siting of information boards and signage.

8.8.17 Prior to occupation, a TP Coordinator (TPC) will be appointed for a period of five years after opening. The TPC will be responsible for liaising with residents and managing digital media communications resources. In addition, an appropriate location for a car club space will be designed into the site Masterplan.

8.8.18 Upon occupation, the TPC will be responsible for providing new residents with a Travel Information Pack which will include a walking route map, cycle maps, bus route and timetable information; details of the proposed car share scheme; and details of the car club costs, location and membership details. The TPC will also manage the day-to-day operation of the site which will help them to develop newsletters, coordinate a steering group, and issue bus/cycle vouchers where appropriate.

8.8.19 After occupation of the site, discussions to secure bus route improvements will be developed with the bus operator. The TPC will also be responsible for liaising with residents and undertaking Personalised Travel Planning (PTP) on any new residents who request assistance in identifying their ideal travel options.

8.8.20 Annually after first occupation, the TPC will design, circulate and manage an annual resident's travel survey questionnaire to be issued to all residents. This will help to monitor the progress of the TP against its initial mode share targets. The TPC will be responsible for producing an Annual Monitoring Report (AMR) outlining the various survey results, the progress towards targets and any actions to be undertaken. Finally, the TP itself will be updated at the end of the five year monitoring period to provide residents with the latest travel information for the site.

8.9. Identification and Evaluation of Key Impacts

Background and Key Receptors

8.9.1 The proposed development is described in Chapter 2 of this ES and in more detail within the associated TA. To recap, the proposals are for up to 400 residential units, a new two-form entry Primary School and a public house. These will be served by a new four-arm roundabout junction located on the A3022 Brixham Road, with the two arms on the western side of Brixham Road providing direct access to the site. The proposals also include other off-site works in the form of pedestrian and cycle facilities to aid movements across Brixham Road. In addition, the FTP proposes that the developer will subsidise improvements to bus services along the Brixham Road corridor in the early operational stages of the scheme to encourage bus use and will provide two new bus stops near to the site access junction.

8.9.2 As identified above, the only local receptor that might be classed as being of very high sensitivity is considered to be White Rock Primary School located to the east of A3022 Brixham Road and north of the proposed site access roundabout, although as the school buildings are some 70m from the road, its classification as a very high sensitivity receptor is arguable. Also, a new signal controlled Toucan crossing is proposed on Brixham Road which will include a new 3.5m wide shared footway/cycleway to link the site to the existing footway and cycle network located on the eastern side of Brixham Road. This crossing is deliberately positioned to provide pupils and parents with a safe and direct route to cross Brixham Road, both for cyclists and pedestrians, whether crossing from homes in the Inglewood development to reach White Rock Primary School, or from the Steed Close/Hookhills Road area to reach the new school at Inglewood..

8.9.3 Also as indicated above, congested junctions can be considered as a receptor with high sensitivity. In particular, both the A3022 Brixham Road/Goodrington Road/Long Road traffic signals junction and Windy Corner traffic signals junction have been noted as junctions near the site that experience traffic congestion at peak times.

Increase in Traffic Flows

8.9.4 The forecast increases in base 2024 traffic flows, including committed development flows, associated with the proposed development are shown in Table 8.5 below.

8.9.5 It can be seen from the forecast changes in total traffic flows in Table 8.5 that the majority of the highest percentage increases in traffic flows would occur on the A3022 north of the proposed site access junction. No percentage increases in flow are forecast to exceed 30%. The increase in flow past the sensitive receptor of White Rock Primary School just exceeds 10%.

8.9.6 Table 8.5 does not show the number of HGVs although these are contained within the total flows. The proposed development would generally generate very few HGVs and the proportion of HGVs in the total forecast flows would be unlikely to change significantly.

Link	Period	2024 Base + Committed Development Total Vehicles	2024 + Committed Development + Inglewood Total Vehicles	Change Total Vehicles	Change %
A3022 Brixham Rd (N. of Goodrington Rd)	Daily 18-hr*	32,742	34,540	1,798	5.5%
	08.00-09.00	2,495	2,630	135	5.4%
	17:00-18.00	2,842	3,000	158	5.6%
Goodrington Rd	Daily 18-hr	9,233	9,356	123	1.3%
	08.00-09.00	717	726	9	1.3%
	17:00-18.00	788	799	11	1.4%
A3022 Brixham Rd (N. of Kingsway Ave)	Daily 18-hr	19,908	21,871	1,963	9.9%
	08.00-09.00	1,474	1,617	143	9.7%
	17:00-18.00	1,771	1,948	177	10%
A3022 Brixham Rd (N. of Site Access Junction)	Daily 18-hr	19,454	21,534	2,080	10.7%
	08.00-09.00	1,525	1,691	166	10.9%
	17:00-18.00	1,646	1,819	173	10.5%
	Daily 18-hr	19,454	20,626	1,172	6%

A3022 Brixham Rd (S. of Site Access Junction)	08.00-09.00	1,525	1,643	118	7.7%
	17:00-18.00	1,646	1,719	73	4.4%
Hunters Tor Drive	Daily 18-hr	3,687	4,098	411	11.1%
	08.00-09.00	243	290	47	19.3%
	17:00-18.00	358	378	20	5.6%
A3022 Brixham Rd (S. of Hunters Tor Drive)	Daily 18-hr	18,920	19,699	779	4.1%
	08.00-09.00	1,565	1,637	72	4.6%
	17:00-18.00	1,519	1,574	55	3.6%
A379 Dartmouth Rd (N. of A3022 Brixham Rd)	Daily 18-hr	15,301	15,405	104	0.7%
	08.00-09.00	1,325	1,334	9	0.7%
	17:00-18.00	1,169	1,177	8	0.7%
A379 Dartmouth Rd (S. of Langdon Lane)	Daily 18-hr	31,503	32,104	601	1.9%
	08.00-09.00	2,561	2,614	53	2.1%
	17:00-18.00	2,574	2,619	45	1.7%

Table 8.5 Forecast Changes in 2024 Traffic Flows (Two Way)

*The 18 hour traffic flows were calculated using two-weeks of bi-directional weekday ATC data from May 2017. An average of the weekday peak hour flows was taken and a factor was calculated to uplift this to the average (10-day ATC) 18 hour flows. The calculated factor is 12.27 and has

been applied to peak flows on all links for consistency.

Safety

8.9.7 Safety for users of all transport modes is a common theme within the policy context. A review of the personal injury accident data undertaken within the TA finds that there is currently a very low rate of accidents on Brixham Road along the site frontage. The review also finds that rear end shunts at traffic signal controlled junctions and accidents involving cyclists are relatively common amongst the reported injury accidents. These are best addressed through driver education programmes such as those already being pursued by TC through its Road Safety Strategy 2013 – 2020. There is no particular trend or pattern in the type or distribution of the accidents that suggests that intervention through amendment of the highway layouts is likely to be appropriate or beneficial.

8.9.8 The provision of a new roundabout junction to access the site and the addition of new crossing facilities on Brixham Road will be designed in line with best practice and will be subject to a formal Road Safety Audit (RSA) prior to construction.

8.9.9 Given the low level of recent accidents on the site frontage and the high quality of the proposed designs of the infrastructure improvements, coupled with the limited increase in traffic movements associated with the proposed development, indicates that the proposed development would be unlikely to make a significant residual safety detriment to the operation of the existing highway network within the vicinity of the site.

Construction Traffic Impacts

8.9.10 At this stage, it is difficult to be precise about the likely construction traffic flows, particularly as the development is programmed to be phased, with construction of the later phases likely to be determined at the time by the level of market interest. Details of the proposed construction phasing are provided within the associated TA.

8.9.11 The construction programme for the proposed development is currently assumed to be completed over the course of 44 months, commencing in September 2018. Current expectations are that the development will be implemented as a phased scheme with two main residential phases. Infrastructure provision is programmed during the initial nine months, with the primary school phase starting in month five for a 12-month period. The first residential phase is programmed from month ten to month 34 (i.e. 24 months) directly after the completion of the infrastructure works. The final residential phase could commence in month 21 and be completed in month 44.

8.9.12 The proposed construction working hours are 07:30 to 17:30 on weekdays and 08:00 to 13:00 on Saturdays with no works on Sundays or Bank Holidays. For the purposes of this assessment, this equates to a nine-hour working weekday (plus one hour for breaks) and a 4.5 hour working Saturday.

8.9.13 Given the location of the site, HGV construction traffic plus the majority of construction staff vehicles are likely to approach the site from the north on the A3022 Brixham Road, as this provides the shortest route to the main road network including the M5.

8.9.14 Once at the site, the construction vehicles will be directed to use one of the two site entrances. Given the phased programme of these works, the storage compound locations and routes used within the site may vary over the course of the development. On the external road network, construction routes are unlikely to vary.

8.9.15 For the off-site highway works at the three locations along the A3022 where mitigation works are proposed, discussions with Torbay Council identified that the majority of these works could be undertaken without the need for a road closure. For most of the works, one-way operation using temporary traffic signals are likely to be sufficient.

8.9.16 It is noted that Torbay impose an embargo on on-street highway works during the summer months (mid-June to mid-September) with only off-line works being permitted, although these too should be programmed for non-summer months where possible.

8.9.17 It is understood that Torbay Council is aiming to undertake its own highway works south of Windy Corner starting in September/October 2018 with completion expected by April 2019. Given that the proposed Windy Corner works associated with the Inglewood planning application are directly adjacent to the Torbay proposals, it would be sensible to combine or co-ordinate these two packages of work to reduce the overall requirement for roadworks in this area.

8.9.18 The proposed on-street works to widen the carriageway on Brixham Road to the north of the site to a minimum of 7.3m would be programmed to be undertaken to avoid coinciding with work at Windy Corner and also avoiding any school holidays. This would ensure that two sets of roadworks are not in progress on the same stretch of road simultaneously, which could cause unnecessarily long journey times for drivers. The precise timing of these works is yet to be agreed with Torbay Highways.

8.9.19 Off-site works to the Brixham Road/Long Road junction consist of localised widening to the west of Brixham Road south of Long Road, and to the south side of Goodrington Road. These are relatively minor works and would cause limited disruption. These can be programmed at a convenient time to be agreed with Torbay Highways.

8.9.20 Much of the construction of the site access roundabout junction can be undertaken off-line and without causing significant disruption to through traffic on Brixham Road. Once the western side of the roundabout is constructed, two-way through traffic would pass around the western side of the roundabout, while the east side of the roundabout is constructed within the existing footprint of Brixham Road. The scope and duration of these roadworks would be relatively modest and would be undertaken early in the construction phase to provide access to the site, while being timed not to coincide with the rest of the work on Brixham Road and at Windy Corner, and to avoid the highway works embargo periods. The precise timing of the site access junction construction has not yet been agreed with Torbay.

8.9.21 Although the highway works would have various impacts, including increased delay and reduced pedestrian amenity, the effects would be temporary during the construction works. The construction vehicle movements associated with the off-site works are already factored into the Infrastructure construction phase of the development, details of which are outlined within the TA, and as such, have already been assessed for environmental impacts.

8.9.22 The estimation of the number of construction vehicle movements generated by the proposed development has been undertaken using two separate methods to provide a check on the accuracy of any traffic generation assumptions.

8.9.23 The first method is based on the TRICS Research Report *Construction Traffic* dated February 2008. This report includes a ready reckoner for the estimation of construction vehicle movements of 29.4 one-way HGV trips per £100,000 of project value. Although inflationary pressures since may have caused the number of vehicle movements per £100,000 to reduce, this level is adopted for the purposes of this assessment to provide a robust examination of the likely construction traffic impacts.

8.9.24 The overall project costs of the Inglewood development proposals are estimated to be in the region of £54 million. When divided by £100,000 per project value and multiplied by the 29.4 vehicle factor, this gives a total number of two-way vehicle movements of 15,876.

8.9.25 The second method uses construction vehicle trip rates obtained from previous project work on mixed use sites such as Inglewood. This suggests two-way trip rates of 1.24 vehicle movements per m^2 for infrastructure construction (i.e. road length), 21.2 per unit for residential builds and 100.8 movements for the school per $100m^2$. When these are multiplied by the 4,242m proposed access road lengths (approx.), the 400 residential units, and the $2,492m^2$ school it gives a total two-way vehicle movements of 16,252.

8.9.26 Given the negligible difference between the two calculations of only 376 vehicles across the 44 month programme, it is considered that these values are robust and are, therefore, appropriate for assessment against the IEMA criteria. The higher figure has been used to estimate construction flows.

8.9.27 The peak period for construction vehicle generation would be during the winter of 2019 where high levels of infrastructure and school construction would coincide. At this time a total two-way HGV generation of 36 HGV movements is estimated over the 9-hour working day. An average of some 4 HGVs movements (in one direction or the other) are forecast each in the morning and evening peak hours.

8.9.28 Construction staff movements need to be allowed for although, given the expected site hours of work, a significant majority are expected to travel outside the traditional highway peak hours. Although these movements may vary slightly throughout the development phases, and are likely to only be private and light goods vehicles, as a worst case it is assumed that there would be 30 inbound car or van movements in the morning peak hour and 30 outbound car or van movements in the evening peak hour, or 60 vehicles per day in total.

8.9.29 Overall, the total peak traffic generation of the construction phase is forecast at 97 vehicles two way over the day, including 37 HGVs. In both the morning and evening peak hours the peak forecast flows are 34 vehicles two way, including 4 HGVs.

8.9.30 As indicated above, it is assumed that all construction traffic would use the A3022 Brixham Road north of the site, and the main road network to the north, to gain access to the site. It is assumed that no construction vehicles from the Inglewood development would use the road network south of the Inglewood site access roundabout on Brixham Road. This is consistent with the approach taken for the routing of the White Rock construction traffic whereby all of the movements originate from the A3022 Brixham Road north.

8.9.31 For the assessment of construction traffic impacts, the forecast 2019 flows include base flows and the traffic associated with the two previously consented developments at White Rock and Yannons Farm. The flows from these two sites are derived from from the full levels specified in their respective Transport Assessments and then reduced to account for the 94 residential units on the White Rock site and the 98 units on the Yannons Farm site that are already constructed and occupied. This information is based upon the completions records held by Torbay Council. Allowing for this level of committed development is considered to provide a robust analysis. Table 8.6 below shows 2019 flows with the addition of the peak period of Inglewood construction traffic. No construction traffic is assumed to use the road network south of the site and so 2019 flows here are not shown.

Link	Period	2019 Base + Consented Development: Total Vehs	HGVs	2019 + Consented Development + Inglewood: Total Vehs	HGVs	Change: Total Vehs	HGVs	% Total Vehs	% HGVs
A3022 Brixham Rd (N. of Goodrington Rd)	Daily 18-hr*	30,822	417	30,918	453	96	36	0.31%	8.63%
	08.00-09.00	2,361	40	2,395	44	34	4	1.44%	10.00%
	17:00-18.00	2,663	28	2,697	32	34	4	1.28%	14.29%
A3022 Brixham Rd (N. of Kingsway Ave)	Daily 18-hr	19,239	282	19,336	318	97	36	0.50%	12.77%
	08.00-09.00	1,428	29	1,462	33	34	4	2.38%	13.79%
	17:00-18.00	1,708	17	1,742	21	34	4	1.99%	23.53%
A3022 Brixham Rd (N. of Site Access Junction)	Daily 18-hr	18,405	301	18,502	337	97	36	0.53%	12%
	08.00-09.00	1,455	31	1,489	35	34	4	2.34%	12.90%
	17:00-18.00	1,545	18	1,579	22	34	4	2.20%	22.22%

Table 8.6: Increases in 2019 Two-Way Traffic Flows as a Result of Construction Traffic

Notes: *The 18 hour traffic flows were calculated using two-weeks of bi-directional weekday ATC data from May 2017. An average of the weekday peak hour flows was taken and a factor was calculated to uplift this to the average (10-day ATC) 18 hour flows. The calculated factor is 12.27 and

has been applied to peak flows on all links for consistency.

8.9.32 Based on the IEMA Rule 1 threshold, the environmental effects of increases in traffic on highway links need to be looked at in more detail where a 30% increase in traffic or HGVs is forecast. All of the increases in total traffic or HGVs are forecast to be significantly less than 30%. The Rule 2 threshold of a 10% increase in traffic in sensitive areas is relevant here only in respect of the potentially sensitive receptor of White Rock Primary School.

Severance

8.9.33 The IEMA guidance states that traffic increases of 30%, 60% and 90% represent an environmental impact of 'slight', 'moderate' and 'substantial'. As shown in Table 8.6, increases in flow are all less than 30% and so the impact of severance need not be considered further, other than at the potentially high sensitivity receptor.

8.9.34 At the sensitive receptor of White Rock Primary School total flows are forecast to increase by a maximum of 2.34% but the proportion of HGVs is forecast to increase by more than 10% at 12% over the day and by 22.22% in the evening peak hour. It is noted that activity at the school in the evening peak hour 17.00 to 18.00 would be limited in comparison with the end of the school day. Whilst these increases exceed the 10% threshold, they arise from the addition of only a low number of HGVs, at around four per hour, and because the number of existing HGVs is low. Overall, it is considered that the magnitude of impact is either low or very low on a receptor which may be of high sensitivity. Therefore, with reference to Table X.4, the significance of the effects is considered to be, at worst, minor adverse and temporary.

Driver Delay

8.9.35 During on-site construction works, the addition of one HGV movement every 15 minutes throughout the day and one additional car or light van every two minutes in the peak hours is unlikely to lead to a significant change in the operation of junctions within the vicinity of the site and will not cause any significant increase in delays for drivers.

8.9.36 In terms of off-site highway improvement works linked to the development, full details of the works programme are not yet known and any restrictions will need to be agreed with TC closer to the time. However, it is considered that the scale of impact on driver delay will vary depending on the location and scale of the works required as outlined below.

8.9.37 At Windy Corner, if possible, proposed improvement works will be co-ordinated with the adjacent junction improvement works programmed by TC. As both the TC works and Inglewood proposed improvement scheme could be undertaken concurrently, the actual impact on driver delay at this location as a result of the Inglewood proposals in isolation would be, at worst, minor adverse and temporary.

8.9.38 At Long Road, the scale of the works is minimal and could be completed in a short period of time, thus limiting any impacts on driver delay to minor adverse and temporary.

8.9.39 At the proposed site access junction, much of the work can be undertaken off-line or using temporary traffic signals, and as such, any impacts on driver delay to minor adverse and temporary.

8.9.40 The proposed works to widen Brixham Road to 7.3m minimum to the north of the application site are located relatively near to a receptor of high sensitivity, White Rock Primary School. Although much of the proposed works can be undertaken using temporary traffic signals, there may be a need for periods of road closures given the scope of the works. To limit the effects on driver delay, closures will be kept to a minimum and, where possible, will be programmed to be undertaken overnight, or at off-peak times to be agreed in advance with TC, with suitable diversion routes identified and sign posted. As such, it is considered that the magnitude of impact on driver delay at this location as a result of the Inglewood proposals would be medium, so the significance of the effects is considered to be minor adverse and temporary.

8.9.41 To ensure that impacts on driver delays are kept to a minimum and do not exceed the levels outlined above, it is expected that Torbay would require a detailed Construction Traffic Management Plan (CTMP) to be secured by condition. This will be prepared once more details of the construction programme are fixed and any additional timing or other constraints that Torbay wish to impose can be discussed, identified and implemented, such as avoiding programming works whilst improvements to Windy Corner are being undertaken.

8.9.42 Overall, it is considered that the magnitude of impact is low on a receptor which may be of very high sensitivity. Therefore, the significance of the effect is considered to be minor adverse and temporary.

Pedestrian Delay

8.9.43 The number of pedestrians generated by the site during the construction phase is considered likely to be low and there will be limited need for pedestrians to cross Brixham Road along the site frontage. The generation of pedestrian movements in the vicinity of White Rock Primary School is likely to be very low. Overall, it is considered that the magnitude of impact is likely to be very low on a receptor which may be of high sensitivity. Therefore, the significance of the effect is considered to be negligible adverse and temporary.

Pedestrian Amenity

8.9.44 The area currently has a good level of pedestrian amenity with the footpath on the eastern side of Brixham Road being set well back from the edge of the carriageway. The addition of the Inglewood construction traffic is unlikely to cause any noticeable reduction in pedestrian amenity.

8.9.45 The IEMA documents suggest that a significant change in pedestrian amenity would be where traffic flow (or lorry component) is halved or doubled. The percentage increases in total traffic and HGVs, including on the frontage with White Rock Primary School, are forecast to be very low. Overall the significance of the effect on pedestrian amenity are considered to be negligible adverse and temporary.

Fear and Intimidation

8.9.46 None of the forecast increases in traffic exceed 30%, so the focus here is on the potential high sensitivity receptor of White Rock Primary School. Total traffic flows past the school are forecast to increase by significantly less than 10%. The increases in the percentage of HGVs are forecast to be more than 10%, at 12% over the day and by 22.22% in the evening peak hour. As noted above, activity at the school in the evening peak hour would be limited in comparison with the end of the school day. As also noted above, whilst these increases exceed the 10% threshold, they arise from the addition of a low number of HGVs, at around three per hour, and because the number of existing HGVs is low.

8.9.47 It is noted, with reference to Table 8.3, that the total number of HGVs falls into the low, or more likely, the very low magnitude of impact category. Overall, it is considered that the magnitude of impact is very low on a receptor which is of high sensitivity. The significance of the effects is considered to be negligible adverse and temporary.

Accidents and Safety

8.9.48 Given the low level of recent accidents on the site frontage and the limited increase in traffic movements associated with the peak construction stage of the proposed development, it is considered that the proposed development would be unlikely to make a significant residual safety detriment to the operation of the existing highway network within the vicinity of the site. The significance of the effects on accidents and safety are considered to be minor adverse and temporary.

Operational Impacts

8.9.49 Based on the IEMA Rule 1 threshold, the environmental effects of increases in traffic on highway links need to be looked at in more detail where a 30% increase in traffic or HGVs is forecast. All of the increases in traffic or HGVs are forecast to be significantly less than 30%. The Rule 2 threshold of a 10% increase in traffic in sensitive areas is relevant here in respect of the identified potential high sensitivity receptor of White Rock Primary School.

Severance

8.9.50 The IEMA guidance states that traffic increases of 30%, 60% and 90% represent an environmental impact of 'slight', 'moderate' and 'substantial'. As shown in Table 8.5 increases in flow are all less than 30%, so the impact of severance need not be considered further, other than at the sensitive receptor.

8.9.51 At the sensitive receptor of White Rock Primary School, where flows on Brixham Road are forecast to increase by just over 10%, severance is not considered to be significant. The proposed signal controlled Toucan crossing on Brixham Road will include a new 3.5m wide shared footway/cycleway to link the site to the existing footway and cycle network located on the eastern side of Brixham Road. This crossing is deliberately positioned between the existing and proposed school sites to provide pupils and parents, both cyclists and pedestrians, with a safe and direct route to access either the proposed new school or the existing primary school. The impact of severance is considered to be mitigated. Overall it is considered that the magnitude of impact is low on a receptor which may be of high sensitivity. Consequently, the significance of the effect is considered to be minor adverse and permanent.

Driver Delay

8.9.52 The TA sets out the findings of the traffic impact analysis at local junctions. In summary, the proposed roundabout junction on Brixham Road would have ample capacity to cater for the forecast flows and the addition of development traffic is not forecast to make a significant difference to the operation of the A3022 Brixham Road/Kingsway Avenue/White Rock Way traffic signals junction.

8.9.53 The A3022 Brixham Road/Goodrington Road/Long Road traffic signals junction currently experiences delays and queues in the morning peak hour. With highway improvements and the addition of development traffic, the junction is forecast to operate as well as it does without the proposed development traffic. A similar situation is forecast at the Windy Corner junction where there are currently queues and delays in both the morning and evening peak hours. With improvements proposed by TC and by the development, the Windy Corner junction is forecast to operate better than it would without the development and its associated improvements in terms of queues and capacity. A summary of the LINSIG total driver delay output for the Windy Corner and Long Road junction is provided below.

Junction	Junction Layout	AM Peak	PM Peak
Long Road	Existing Layout	71.42	**48.75**
	KTC Proposed Layout	75.00	**49.18**
Windy Corner	Existing Layout	35.03	**47.28**
	TC Proposed Layout	18.19	**24.54**
	KTC Proposed Layout	16.82	**19.58**

Table 8.7: Driver Delay in PCU's per Hour

8.9.54 Overall it is considered that the magnitude of impact is low on receptors of high sensitivity. Overall, the significance of the effect on driver delay is considered to be minor adverse on Brixham Road, negligible at the Long Road junction and minor beneficial at Windy Corner, and permanent.

Pedestrian Delay

8.9.55 Uncontrolled crossing points are proposed on each arm of the proposed site access roundabout, with the central triangular islands providing adequate and appropriate pedestrian refuges. This means that pedestrians can cross Brixham Road by crossing one stream of traffic at a time, reducing potential pedestrian delay and assisting road safety. The proposed development includes a new signal controlled Toucan crossing on Brixham Road, which will give priority to pedestrians over vehicular traffic when demand is registered. There will also be an uncontrolled crossing located to the south east of the site on Brixham Road, near to the junction with Hunters Tor Drive, which will include a central refuge island enabling pedestrians to cross one stream of traffic at a time, reducing potential pedestrian delay and assisting road safety.

8.9.56 There are pedestrian crossing facilities at the two traffic-signal controlled junctions to the north of the site on the A3022 and at Windy Corner.

8.9.57 Overall, the proposed development is considered to cater well for pedestrians. The additional number of pedestrians using the existing crossing facilities is considered unlikely to make a significant difference to the operation of the crossings. Overall, the significance of the effect on pedestrian delay is considered to be minor adverse and permanent.

Pedestrian Amenity

8.9.58 The area currently has a good level of pedestrian amenity with most of the footpath on the eastern side of Brixham Road being set well back from the edge of the carriageway.

8.9.59 The addition of the Inglewood development traffic is unlikely to cause any noticeable reduction in pedestrian amenity. The provision of new crossing facilities on Brixham Road and the inclusion of lightly trafficked pedestrian routes through the site and into the adjacent green spaces to the west will provide new walking opportunities and access to the countryside serving both new residents of the development and existing residents living east of Brixham Road.

8.9.60 The IEMA documents suggest that a significant change in pedestrian amenity would be where traffic flow (or lorry component) is halved or doubled. The percentage increases in total traffic are forecast to be low and the HGV content is considered to change by only a small amount.

8.9.61 Overall the significance of the effect on pedestrian amenity is considered to be minor, neutral and permanent.

Fear and Intimidation

8.9.62 None of the forecast increases in traffic exceed 30%, so the focus here is on the potential high sensitivity receptor of White Rock Primary School. The traffic flows past the school are forecast to increase by just over 10% in the morning and evening peak hours and over the 18 hour day.

8.9.63 The average weekday traffic flow over the 18 hour day (vehs/hour) on Brixham Road past White Rock Primary School is forecast at 1,196 vehicles with the proposed development. With reference to Table8.3, this would be considered a medium magnitude of impact. However, it is noted that without the proposed development the average weekday traffic flow over the 18 hour day is forecast at 1,081 vehicles which would also be considered a medium magnitude of impact, so the proposed development does not give rise to a step change in magnitude of impact.

8.9.64 As indicated above, the proposed signal controlled Toucan crossing on Brixham Road will include a new 3.5m wide shared footway/cycleway to link the site to the existing footway and cycle network located on the eastern side of Brixham Road. This crossing is purposely positioned between the proposed school site and the existing primary school to enable pupils and parents a safe and direct route to access either of the schools, both as cyclists and pedestrians. Overall it is considered that the magnitude of impact is low on a receptor which may be of high sensitivity. Therefore, the significance of the effect is considered to be minor adverse and permanent.

Accidents and Safety

8.9.65 Given the low level of accidents on the site frontage, the high quality of the proposed designs of the infrastructure improvements, and the limited increase in traffic movements associated with the proposed development, it is considered that the proposed development would be unlikely to make a significant residual safety detriment to the operation of the existing highway network within the vicinity of the site. So the significance of the effect on accidents and safety is considered to be minor adverse and permanent.

8.10. Cumulative Effects

8.10.1 As indicated above, committed development has been taken into consideration by including trips associated with the White Rock, Yannon's Farm, Devonshire Park and Yalberton Road developments, as agreed with TC for the traffic impact analysis work. In allowing for the traffic forecast to be generated by these developments, the cumulative impact has been assessed in this ES Chapter.

8.11. Mitigation & Monitoring

8.11.1 The above assessment has not identified any 'significant' adverse effects arising from the proposed development. Therefore, no mitigation and associated monitoring measures are considered necessary.

8.11.2 As indicated above, a CEMP will be prepared and implemented during the active construction phases of the proposed development in order to minimise the risk of potential environmental impacts and to mitigate against the potential impacts associated with construction vehicles.

8.11.3 The FTP associated with the Inglewood development scheme incorporates various measures designed to promote the use of sustainable travel to and from the site, which are aimed at further reducing any negative impacts related to the increase in traffic movements on the local highway network associated with the development proposals. This will be reviewed annually with the aim of reducing the traffic impact of the development.

8.12. Summary of Residual Effects

8.12.1 Table 8.7 below sets out a summary of the effects of the construction and operation phases of the proposed development. Mitigation measures have been included as part of the development proposals and a CEMP and FTP will be provided. The effects of adverse significance include minor or negligible effects in the construction phase and minor effects in the operational phases. No effects of major or moderate adverse significance are forecast. Therefore, no mitigation measures are considered necessary to mitigate the adverse effects predicted.

Table 8.7 Summary of Residual Effects

Phase	Effect	Magnitude of Impact	Significance of Impact	Duration	Nature
Construction	Severance	Low	Minor	Temporary	Adverse
	Driver Delay	Medium	Minor	Temporary	Adverse
	Pedestrian Delay	Very Low	Negligible	Temporary	Adverse
	Pedestrian Amenity	Very Low	Negligible	Temporary	Adverse
	Fear and Intimidation	Very Low	Negligible	Temporary	Adverse
	Accidents and Safety	Low	Minor	Temporary	Adverse
Operation	Severance	Low	Minor	Permanent	Adverse
	Driver Delay	Low	Minor	Permanent	Adverse

	Pedestrian Delay	Low	Minor	Permanent	Adverse
	Pedestrian Amenity	Low	Minor	Permanent	Neutral
	Fear and Intimidation	Low	Minor	Permanent	Adverse
	Accidents and Safety	Low	Minor	Permanent	Adverse

9. Agricultural Land and Soils

9.1. Introduction

9.1.1 This Chapter identifies the potential environmental effects of the construction and operational phases of the proposed development in Inglewood on local and regional agricultural lands and soils. It explains the assessment and methodology and sets out the evaluation criteria. The format follows a pattern summarising the relevant planning policy, describing the baseline conditions, describing the relevant design features and then assessing the likely significant effects.

9.1.2 This Chapter should be read in conjunction with the standalone Agricultural Land Classification Report, Inglewood, Paignton, Devon. June 2017.

9.2. Descriptive overview of site

9.2.1 The majority of the site, excluding hedgerow boundaries, is in current agricultural use, mainly grass and kale production for beef cattle. There is also an arable field and a field planted with tree screening from the development to the north. Agriculture will be a receptor of potential effects arising from this Project.

9.2.2 The soil within the subject area is largely undisturbed and will act to attenuate and immobilise substances falling on it, regulate rainfall movement to surface water and groundwater and will also support ecological habitats and biodiversity. The sustainable management of soil and land is a central to sustainable development and any effects on soil will be of importance.

9.3. Overview of proposal

9.3.1 The proposed development is set out in Chapter 2.

Regulatory/Policy Framework

9.3.2 The environmental impact assessment presented in this Chapter has given due consideration to relevant environmental and planning requirements together with legislation concerning the EIA process.

9.3.3 There are several European and National Level legislations which regulate the protection of agricultural lands and the soils environment in the UK. The key European and UK legislations are listed below:

National

9.3.4 National planning policy guidance relating to agriculture and soils is in National Planning Policy Framework (2012) which states at paragraph 109 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;

9.3.5 Paragraph 112 of the NPPF states 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' and '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*".

9.3.6 A 2007 Environment Agency document has complementary aims, including encouraging the construction industry to re-use soils to reduce the amount disposed of as waste, and reducing flood risk and pressures on urban drainage.

Local

9.3.7 The Torbay Council Local Plan (Torbay Local Plan, Landscape for Success, The Plan for Torbay 2012-2030, Adopted December 2015) includes the following provision for Agriculture and soils.

9.3.8 Policy SC4 Sustainable Food Production

"Development which would result in the detriment to or loss of the best and most versatile agricultural land (Grades 1, 2 or 3a) will only be permitted where there is an overriding need for the development and it is demonstrated by the applicant that it cannot be accommodated on lower grade land. Where development is proposed and there is a choice between sites of different grades, development should take place on land of the lowest grade feasible, subject to other polices in the plan"

9.3.9 Paragraph 6.4.3.24 states;

"Development and changes of use which result in the loss of high grade agricultural land will need to establish that alternative, previously developed site within existing developed areas have been investigated. Where there is an overriding need to develop agricultural land of Grades 1, 2 or 3a and there is a choice between sites of different grades, land of lowest grade should be developed, unless the lower grade land has an environmental value in terms of its landscape, nature conservation and historic or archaeological status which outweighs its agricultural significance"

9.4. Methodology

General

9.4.1 Details of the agricultural businesses that would be affected by the proposed development have been identified from representatives of the tenant farmers. This covers issues such as land tenure, stocking and cropping practices, entry of land into schemes such as environmental stewardship, and the use of land outside of the proposed development area.

Assessment Approach

9.4.2 The assessment approach comprises the following activities:

- Establishment of baseline conditions;
- Review of secondary information, previous environmental studies and publicly-available information and databases;
- Consultation with statutory and non-statutory bodies;
- Consideration of relevant local, regional and national planning policies, guidelines and legislation relevant to EIA;

- Consideration of relevant regulatory objectives and targets established for the sustainable management of the water environment;
- Application of relevant assessment methods such as those in Construction Industry Research and Information Assessment (CIRIA) guidance, Design Manual for Roads and Bridges (DMRB), UK Technical Advisory Group (UKTAG) Environmental Standards and Conditions, UKTAG Surface Water Standards and Conditions, Institute of Ecology and Environmental Management (UK) guidelines, and Institute of Environmental Management and Assessment (IEMA) Guidelines for EIA, 2004.
- Application of technical standards and criteria (from the assessment methods identified) for assessing the significance and magnitude of impacts;
- Analysis of the results of existing physical surveys and monitoring;
- Expert opinion (where applicable).

9.4.3 Agricultural land quality and soil resources were assessed by means of a desk study of agricultural climate and a survey involving observations of soil and land characteristics. This work is described more fully in a separate technical report. Using the Revised Guidelines and Criteria for Grading the Quality of Agricultural Land, published by MAFF in 1988, each observation point was assigned a land grade and the classification of land at each location was then translated into maps of land grades and soil resources with the help of ground observations during the survey. It is noted that some areas have not been accessible and further analyses may be required. Conservative assumptions have been used for those areas not accessed.

Assessment method

9.4.4 The method employed comprised the following key steps:

- Identify all plans /programmes/ projects which might act in combination with the proposed development to impact agricultural lands and soils;
- Impact identification: identify the types of impacts that are likely to affect aspects of the structure and functions of the site vulnerable to change;
- Define boundaries for assessment;
- Pathway identification: identify potential cumulative pathways (e.g. via water, air etc.; accumulation of the effects in time or space). Examine site conditions to identify where vulnerable aspects of the structure and function of the site are at risk;
- Prediction: prediction of the magnitude/extent of identified likely cumulative effects;
- Assessment: comment on whether or not the potential cumulative impacts are likely to be significant.

Significance criteria

9.4.5 There is no nationally agreed scheme for classifying the impacts of development on agriculture or soils. Impacts of a project can be adverse, causing significant negative effects to a receptor, or beneficial, resulting in advantageous or positive impacts to a receptor, or negligible. The significance of any impact can be assessed as either 'substantial or 'moderate' (i.e. significant)', or 'minor'(slight) according to the magnitude of the impact of the proposed development and the sensitivity of the receptor, as set out in Table 9.1 below.

Magnitude of impact	Sensitivity of Receptor		
	High	**Medium**	**Low**
High	Substantial	Substantial	Moderate
Medium	Substantial	Moderate	Moderate
Low	Moderate	Minor	Minor
Very low	Minor	Negligible	Negligible

Table 9.1 Significance of effects

9.4.6 Under current planning policy, both local farm businesses and soil are considered to be of 'medium' sensitivity in terms of the national interest. Best and most versatile agricultural land (i.e. grades 1, 2 & 3a on MAFF's 1988 Agricultural Land Classification system) is considered to be a finite national resource. It is given special consideration in national policy, and can be considered to be of higher sensitivity than land in Grades 3b, 4 and 5. The actual sensitivity category will vary regionally and locally. In areas where best and most versatile land is not uncommon, grade 1 and 2 land can be considered to be of high sensitivity, sub-grade 3a of medium sensitivity, sub-grade 3b and grades 4 and 5 of low sensitivity. In areas of the country with little best and most versatile land, sub-grade 3a might be of high sensitivity and sub-grade 3b of moderate sensitivity.

9.4.7 The magnitude of impact on best and most versatile land will depend on the amount to be taken by the Project. Article 16, Schedule 5 of the Town and Country Planning (Development Management Procedure) (England) Order 2010 only requires Natural England to be consulted (on behalf of the Secretary of State for the Environment, Food and Rural Affairs) on development that involves the loss of not less than 20 ha of grades 1, 2 or 3a agricultural land. Consequently, the loss of areas smaller than this threshold is considered to have very low magnitude impact on the national stock of best and most versatile land. Losses of over 80 ha of best and most versatile land are equivalent to the size of a medium farm and are considered to be of high impact. The judgement-based classification adopted for impact on best and most versatile land is given in table 9.2 below:

Magnitude of impact	Area of best and most versatile land
High	>80 ha
Medium	40-80 ha
Low	20-40 ha
Very low	<20 ha

Table 9.2 Magnitude of impact on best and most versatile land

9.4.8 In considering the impact on farm businesses it is necessary to consider if change in use from agricultural to non-agricultural is of economic benefit to the business. For example, a farmer working in partnership with a developer in relation to a proposed development may mean the existing farm ceases to be viable as an independent agricultural holding but financial benefits could enable the owner to retire from farming or buy a larger farm elsewhere. In that instance the impact on the occupant (as opposed to the agricultural holding) would be beneficial. Adverse effects will mainly arise through removal of all or part of land rented by a farm business or by removal of small parts of an owner-occupied farm where the financial gain is insufficient to allow restructuring. Table 9.3 gives examples of adverse effects of different magnitude.

Magnitude of adverse impact	Effect on an individual farm business (including any diversification enterprises)
High	Effect that renders an existing full-time farm business unworkable and unviable in its current form. The farmer will have to seek alternative means of income.
Medium	Effect on the operation of a full time farm business whereby net farm income will be reduced and strategic management will need modifying.
Low	Small effect on the operation and economic performance of a full-time farm unit or a larger effect on (or loss of) a part-time farm business where income is derived mainly from non-agricultural means.

Table 9.3 Magnitude of impact on individual farm businesses

9.4.9 Where land is tenant-farmed or farmed without long-term security of tenure and without a long-term history of occupying that land, then the significance of the impact on a farm business is deemed to be slight, because the right of the tenant or contractor to farm the land could cease, with agreed notice, at any time.

9.4.10 Soil is a multi-functional resource and can be part of a wide range of ecosystems. These include physical support and nutrient cycling for plants, moderation within the hydrological cycle, providing multiple habitats and providing the base for the breaking down of wastes and dead organic matter. A provisional impact classification is given in Table 9.4 below.

Magnitude of impact	Impact examples
High	Loss or irreversible damage to topsoil resource. Capping of the soils of more than 75% of the proposed development
Medium	Loss or irreversible damage to at least 50% of topsoil resource. Capping of the soils of 50-75% of the proposed development
Low	Protection from irreversible damage and beneficial re-use within the proposed development (or off-site) of all or nearly all good quality topsoil resources. Capping of the soils of <50% of the proposed development.
Very low	Only minor disturbance of soils and with minimal surface capping.

Table 9.4 Magnitude of impact on soil functions

9.5. Baseline Conditions

Agricultural use

9.5.1 The proposed development land is predominantly grassland used for animal grazing and land used for animal food production. The farmers are free to use the field as required but all use a rotation system.

9.5.2 The farmers are both Tenants to the current landowners with a long term tenancy.

Soils

9.5.3 The Defra Soil Strategy points out that soils deliver a range of vital functions for human activities including food and fibre production support for ecosystems and habitats, and environmental services in the global carbon cycle, stabilising and degrading contaminants and providing clean water. One of the strategy's objectives is to ensure that soil functions are fully accounted in the planning process.

9.5.4 A soil resource and agricultural quality survey was carried out in May 2017. During the survey soils were examined by a trial pits to a maximum depth of 1.2 m. Trial pit logs and an exploratory hole location plan is included in the standalone report.

9.5.5 The survey identified a range of soils most with medium loam topsoils, but with a range of subsoils from stony to clayey.

Soils with stony subsoils

9.5.6 The topsoil is variable across the site most commonly sandy or silty clay loams loam with less than 6% stones, however, the southern field appears very stoney visually and had 27% stones above 2cm.

9.5.7 The soils are not generally freely draining (Wetness class 3 & 4), apart from the eastern field (Wetness Class 1). This suggests that in generally the soils would not have a good capacity to absorb excess winter rainfall and this can be seen particularly in parts of field C where the soils are waterlogged.

Agricultural Quality

9.5.8 To assist in assessing land quality, the Ministry of Agriculture, Fisheries and Food (MAFF) developed a method for classifying agricultural land by grade according to the extent to which physical or chemical characteristics impose long-term limitations on agricultural use for food production. The MAFF Agricultural Land Classification (ALC) system classifies land into five grades numbered 1 to 5, with grade 3 divided into two sub-grades (3a and 3b). The system was devised and introduced in the 1960s and revised in 1988.

Sub-grade 2

9.5.9 Field D classifies as Grade 2, testing has not been completed in Fields A & B, although Field B is used for arable farming and it is understood field A was until taken over by planting, so for current purposes it is assumed that these field will both classify as Grade 2.

9.5.10 This equates to 13.5ha of sub-grade 2 land.

Sub-grade 3a

9.5.11 The 10.9ha of sub-grade 3a land occurs on two soil types. On freely draining soils over the limestone areas. Some of these soils also have very stony topsoils which cause difficulties in cultivation and wear in farm machinery.

Sub-grade 3b

9.5.12 There are 6.8ha of sub-grade 3b land where slowly permeable layers are closer to the surface increasing the workability limitations caused by winter wetness.

Other land

9.5.13 This report assumes the whole site is works, however, there are thick Devon hedgerows as field boundaries, but these are not accounted in the areas in Table 9.5.

Grade areas

9.5.14 The boundaries between the different grades of land are shown on Map 2 and the areas occupied by each are shown in Table 9.5 below.

Agricultural quality	Area (ha)	Proportion of agricultural land (%)
Sub-grade 2	13.66	43.5
Sub-grade 3a	10.94	34.8
Sub-grade 3b	6.81	21.7
Other land	--	--
Total	31.4	100

Table 9.5 Quality of the agricultural land within the Project Area

9.6. Assessment without Mitigation

General

9.6.1 The development will likely be phased and consequently the potential effects on agriculture and soils will be gradual and progressive over the life of the Project.

Construction effects

9.6.2 Construction will involve the progressive stripping of top soils as phases proceed. The topsoils will be stored for future use, and using them to create structural landscaping and amenity areas. As the phased development proceeds there will be a subsequent loss of agricultural use of the land.

9.6.3 Loss of soil resources would occur if topsoils were not first stripped from areas to be disturbed. Retained topsoil quality will also deteriorate if moved when wet.

9.6.4 Over-compaction of subsoil as a result of construction vehicles over ground to be used for gardens or landscaping not only affects the performance and visual quality of vegetated areas but also affects hydrology. Most of the Project Area has permeable topsoil and subsoil but over-compaction by construction vehicles can severely reduce the permeability of these layers and their capacity to absorb excess rainfall. The consequence can be increased run-off.

9.6.5 Over-compaction restricts the depth to which plant roots can proliferate. This reduces soil moisture deficits in summer so that moisture repletion occurs sooner in autumn, further exacerbating the soil's ability to absorb excess rainfall. The consequence is increased hydraulic and sediment loadings to watercourses and an increased risk of flooding.

Operational effects

9.6.6 The completed project will result in loss of land to agricultural production, and there will have been losses of best and most versatile land. Large areas of land in the built development area will have the soils sealed under hard layers, and there is potential for soils in green spaces and garden to have been damaged during reinstatement, thereby losing their beneficial qualities.

Project Design

9.6.7 The Project design cannot mitigate against permanent loss of agricultural land or sealing of soils by buildings, but the effects on continuing agricultural use during construction and on soil functions in landscape and amenity areas and gardens can be mitigated against, as described below.

Agriculture

9.6.8 Agriculture will be able to continue on the land as the phased development proceeds. To ensure that it can, new accesses will be provided to replace any severed by development. In the southern area (approximately 8 hectares) will be retained as a conservation ground and grazing land.

Soil functions

9.6.9 The Defra Construction *Code of Practice for Sustainable Use of Soils on Construction Sites* (2009) ii provides guidance on good practice in soil handling as part of a Materials Management Plan and Site Waste Management Plan. Soil management to be employed on the project will include:

1) Avoidance of traffic in areas that do not need to be disturbed.
2) Careful stripping of topsoils (using suitable soil-handling equipment) from areas to be disturbed, ensuring no mixing with the subsoils.
3) Storing soils in temporary low stockpiles, protected from contamination by other materials and sown with grass if being stored for more than 6 months.
4) Spreading topsoils only onto subsoil that has been de-compacted.
5) Using any surplus topsoil beneficially elsewhere.

Agricultural land quality

9.6.10 Hard development and woodland effectively sterilizes the land for agricultural use, but softer end uses like open greenspace have some potential to retain the land's agricultural quality provided that disturbance is minimalized. Table 9.6 summarizes the Project design measures to avoid or reduce the main effects of construction on soil and land functions.

Soil/land function	Design measure
Landscape support	Retention of stripped topsoil. Minimising soil compaction in landscaped areas. Avoidance of traffic on undisturbed areas.
Food and fibre production	Retention of land for conservation areas and animal grazing.
Transformation and buffering	Maximising use of porous surfaces. Minimising soil compaction.
Supporting habitats/biodiversity	Minimising soil compaction in landscaped areas. Avoidance of traffic on undisturbed areas. Provision of a range of biodiversity features with landscape areas.
Storing and transmitting Water	Maximising use of porous surfaces. Minimising soil compaction in landscaped areas.

Table 9.6 Project design measures to avoid or reduce the main effects of construction on soil and land functions

9.7. Assessment of Effects

Soils and land

9.7.1 The likely significant effects of the Project on soil functions are summarised in Table 9.7 below.

Soil or land function	Potential effect on the proposed soil and land function of:	
	Built environment	**Landscape and amenity land**
Landscape support	Moderate adverse	Beneficial
Food and fibre production	Moderate adverse	Moderate adverse
Transformation and buffering	Moderate adverse	Minor adverse
Supporting habitats/biodiversity	Moderate adverse	Beneficial

Storing and transmitting water	Moderate adverse	Minor adverse

Table 9.7. Likely significant effects of development on soil functions

9.7.2 These are all long term effects.

Agricultural land quality

9.7.3 The Project will remove from agriculture approximately 31 ha of best and most versatile land in sub-grade 2-3b, producing a minor adverse effect.

Farm businesses

9.7.4 The development will removed approximately 23ha from the two current tenant farmers. The land lost to the current development is only part of what they farm and the lost land whilst not discontinuing farming will require adaptation to their businesses.

9.8. Mitigation

9.8.1 In order to reduce the impact of the Proposed Scheme on agricultural lands and the soils environment, a range of mitigation measures are proposed, as described in the preceding Section and in Table 7 below.

Soil/land function	Design measure
Landscape support	Retention of stripped topsoil. Minimising soil compaction in landscaped areas. Avoidance of traffic on undisturbed areas.
Food and fibre production	Retention of land for conservation areas and animal grazing.
Transformation and buffering	Maximising use of porous surfaces. Minimising soil compaction.
Supporting habitats/biodiversity	Minimising soil compaction in landscaped areas. Avoidance of traffic on undisturbed areas. Provision of a range of biodiversity features with landscape areas.
Storing and transmitting Water	Maximising use of porous surfaces. Minimising soil compaction in landscaped areas.

Table 9.7 Project design measures to avoid or reduce the main effects of construction on soil and land functions

9.9. Residual Effects

9.9.1 The Project would result in the loss of 23 ha of best and most versatile land in sub-grade 2-2b which represents in a minor adverse effect. Approximately 7 ha of sub-grade 3b will also be removed from production.

9.9.2 No mitigation is possible for the areas of land sealed by the built environment, but a soils managements plan will maintain soil functions in the gardens and landscaping within these areas. Areas designed as open space (conservation land, school playing fields, wildlife corridors) will also protect soil functions.

9.9.3 Approximately 6.7 ha in the southern fields will be retained as conservation and grazing.

9.10. Cumulative Effects

9.10.1 This section assesses the likely significant cumulative effects of the Project when considered in the context of other future developments.

9.10.2 The following projects have been considered in the assessment of cumulative environmental effects:

Planning Ref	Development
P/2009/1287	Park Bay, Brixham Road, Paignton Full planning application for 70 dwellings, related infrastructure, landscaping, play areas and a hill top park. Outline planning permission for up to 70 dwellings with all matters reserved except for access.

P/2014/0983	Land South Of Yalberton Road (Yannon's Farm) Paignton Torbay Outline mixed use proposal for phased residential development (Use Class C3) of up to 192 dwellings and employment development (Use Classes B1 and B8) of between 7,400 sq m and 9,200 sq m floor area, together with the provision of ecological mitigation measures, public open space and other associated infrastructure. (Means of access to be determined only) (Revised Scheme)
P/2014/0947	Land Off Brixham Road -Long Road Former Nortel SIte Paignton Outline Application with all matters reserved except access,for demolition of the remaining buildings on the site and redevelopment for mixed use purposes comprising up to 255 Class C3 dwellings, up to 5,574sqm of B1 and /or B8 business and/or warehousing uses, up to 8,501sqm Class A1 (bulky goods) retail with up to 515sqm garden centre, and up to 139sqm of A3 cafe /restaurant uses, along with related site access, access roads and paths, parking,servicing ,open space and landscaping.
P/2011/0197	Land West Of Brixham Road Paignton Devon TQ4 7RZ; Mixed Use Development of 39 Hectares of land at White Rock, Paignton to construct up to 350 dwellings, approximately 36,800m2 gross employment floorspace, a local centre including food retail (up to 1652m2 gross) with additional 392m2A1/A3 use and student accommodation, approximately 15 hectares of open space, sports pavilion and associated infrastructure and engineering works to provide access, drainage and landscaping (Outline Application)
P/2009/1084	Marine Park Holiday Centre Grange Road Paignton Devon TQ4 7JR Reserved matters for layout,appearance, scale and landscaping - following outline approval P/2009/1084/MOA for revised plans; layout and agree siting of plots 6 to 17; formation of one hundred residential units with pedestrian and vehicular access (in outline) (Variation of Condition P1 of original planning permission P/2012/1078)
P/2016/1123	Claylands' Cross Site Brixham Road Paignton Hybrid Application: Full Planning Application for alterations to Claylands Cross junction to create an access to the site, access roads within the site including related infrastructure, drainage and earth retaining works. Outline Application with all matters reserved except access for the erection of two buildings to provide four industrial B8 (storage and distribution) and B1 (business) units including car parking areas, loading yards and a central service road.
P/2016/0964	Beverley Parks (Goodrington) Ltd Goodrington Road Paignton TQ4 7JE Change of use of site area designated for touring pitches to provide additional mobile holiday accommodation and associated engineering works. Change of use of existing residential unit to call centre. (Proposal/description amended 2 November 2016)

P/2014/0141	Riviera Bay Holiday Park Mudstone Lane Brixham Devon TQ5 9EJ Revised plans; Demolition of all existing holiday chalet units (185 total); existing facilities building; staff accommodation building; and two separate buildings used for storage on part of the Riviera Bay Holiday Park. Proposed development of 72 new self-catering holiday lodges; new ancillary management building including shop, cafe/bar and gym room; laying out of 180 car parking spaces to serve the redeveloped Holiday Park; and associated mitigation works including construction of a bat barn. Development of two residential properties (Use Class C3) at the corner of Douglas Avenue and Mudstone Lane, to be accessed from Mudstone Lane. This application is accompanied by an Environmental Statement.
P/2009/0452	Landscove Holiday Village Gillard Road Brixham Devon TQ5 9EP Use of land for the stationing of additional 101 static holiday caravans for occupation between 16th February and 14th January in any year, installation of public footpath and ancillary operations
P/2013/0785	Wall Park Holiday Centre Wall Park Road Brixham Devon TQ5 9UG Erection of 165 dwellings (including 25 affordable); touring caravan park (including facilities building with office, cafe, laundry room, showers, toilets and 2-bed managers flat, 12 no. camping pods, 59 permanent touring caravan pitches, associated access and parking); community sports pitch (to be used annually as an overflow touring caravan park / campsite for 69 pitches during June, July and August); changing & shower facilities building for community sports pitch with associated access and parking; landscape and ecological enhancement works (including bat barn, hedgerow planting and footpaths); associated pumping stations, roads, footways / cycleways, new vehicular access onto Centry Road and alterations / widening of existing access onto Wall Park Road; demolition of existing buildings (including former holiday park buildings and dwelling - 53 Wall Park Road) (Full Application) (Revised Scheme)
P/2014/0938	Land Off Luscombe Road Paignton Torbay Formation of up to 68 dwellings with associated road and landscaping
P/2016/0462	Land At Alfriston Road Paignton Devon Residential development comprising 80 units (revised from 83 as per revised plans received 30.08.2016), creation of new vehicular and pedestrian access, and associated works
	Collaton St Mary Master Plan Adopted February 2016

9.10.3 Of these projects the only future development deemed to have a potential cumulative effect when considered jointly with this Project is Yannons Farm, Paignton and the Collaton St Mary master plan going forward. The former is under development, the latter is yet to commence.

9.10.4 These development are likely to have a low effect. It is considered that the cumulative effects of the Project when considered in the context of other future developments are unlikely to be significant.

9.11. Statement of Effects

9.11.1 The overall effect of the Project on soil and agriculture is summarized in Table 9.9 below.

Receptor	Effect
Farm businesses and smallholdings	Minor adverse on Tenant farmers
Agricultural land resource (best & most versatile land)	Minor, adverse
Soil ecosystem services and functions	Moderate adverse in built areas. Beneficial to minor adverse in landscape areas

Table 9.9. Overall effect of the proposed development on agriculture and soil resources

10. Summary of Effects

10.1.1 This Environment Statement has considered the potential environmental impacts in respect of ecology, landscape and visual impact, lighting, transport and access and soils and agricultural land. The assessment of potential effects, together with the cumulative impact (where relevant) is addressed in the relevant chapter.

10.1.2 In summary terms, the effects are as follows:

Ecology

10.1.3 Due to embedded mitigation within the design, together with the approach to early delivery of mitigation in the phasing plan, significant negative impacts on all important ecological features are avoided during the construction phase.

10.1.4 Following construction, significant positive impacts will arise due to the ability to deliver mitigation, in perpetuity, on wider land under the applicants control.

Landscape and Visual Impact

10.1.5 As with ecology, the proposed development has evolved with significant mitigation ebedded within the proposals. This has resulted in ensuring that:

- in respect of landscape effects, the effect of the propsals will be limited to some minor, and some local adverse effects, but, on balance, these will not alter the wider landscape character; and,
- In respect of visual impacts, any adverse impacts likely to arise would not change the nature of views.
- In respect of the AONB, it is judged that the proposals will not significantly affect the visual context of the AONB nor those views available from it.

Lighting

10.1.6 The lighting assessment and resultant strategy, has been developed in conjunction with the ecology and LVIA work. As such, the scheme design ensures that there are no significant effects in respect of important species or nightime views of the proposals from key viewpoints.

Transport and Access

10.1.7 Transport assessment work, as with other disciplines, has highlighted the opportunities to embed mitigation within the development proposals. The ability to deliver improvements to the highway network, including at Long Road, is ensured due to land being owned by the applicant and thus being able to brought into the scope of the application and assessment.

10.1.8 As such, the overall impact of development is judged to be no more than minor/neglibile during construction and minor during the operatial, post development phase. No effects of a major or moderate adverse level are forecast and therefore further mitigation is not required.

Soils and Agricultural Land

10.1.9 It is recognised that the proposed development will result in the loss of agricultural land which is classified as best and most versatile. There will also be an impact on existing farm businesses, although this would be mitigated to some extent via the renewal/redrafting of tenancies in respect of wider land in the applicants ownership.

10.1.10 The summary position therefore notes that there wil be a minor adverse impact on farm buessines and agricultural land resource and some, albeit localised, moderatie adverse impact on soil ecosystems in the areas of development. It should be noted that this does not impact on the whole redline site and that in order areas there would be a beneficial to minor adverse impact.

Overall position

10.1.11 On the basis of the assessment work undertaken and the embedded mitigation proposed, this Environmental Statement has demonstrated that no significant adverse impacts will arise as a result of development.

10.1.12 The development proposals are, due to the wider land ownership of the applicant, are able to secure appropriate mitigation to ensure this position in the long term. The wider application package includes documents which will secure the detail of this; these will be secured via section 106 agreement to ensure their delivery.

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