Habitat Regulations Assessment NA3 Wolborough Development Framework Plan

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Greenbridge Ltd

Teignbridge District Council

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Habitat Regulations Assessment of NA3 Wolborough, Newton Abbot

Development Framework Plan

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Habitat Regulations Assessment for

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Natural England was consulted on the previous version of this report, i.e. the 'HRA Screening Assessment of the NA3 Development Framework Plan' and their comments have been reflected in this final version.

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Summary

The following report, commissioned and updated by Teignbridge District Council (TDC), provides a Habitat Regulations Assessment for the NA3 Wolborough allocation and Development Framework Plan (DFP), based on a more detailed examination of the site's geography, landscape / physical features, bat survey information and wider context in terms of potential in-combination effects with other development in the Newton Abbot area.

The Habitat Regulations Assessment of the NA3 Development Framework Plan identified the likely effects arising from the planning proposals for NA3 (e.g. their likely effect on the integrity of South Hams SAC in relation to greater horseshoe bats), and made recommendations, where required, for appropriate mitigation measures (commensurate with levels of information and certainty available at the Plan Making stage of the planning process). These mitigation measures have been incorporated into the NA3 Development Framework Plan, which this current Habitat Regulations Assessment considers.

The Adopted Teignbridge Local Plan was subject to comprehensive Habitat Regulations Assessment that examined both proposed policies and site allocations. In considering allocations such as NA3, the HRA identified a requirement for future planning applications on such sites to be brought forward accompanied by a 'bespoke greater horseshoe bat mitigation plan'. The purpose of these bespoke plans is to ensure that individual developments address all likely adverse effects on the bats, thus ensuring that there is no adverse effect on the integrity of the South Hams Special Area of Conservation (SAC).

This Habitat Regulations Assessment considers the NA3 Development Framework Plan and should also help guide the preparation of the bespoke mitigation plan.

This Assessment has also considered the implications of other large proposals between the northern edge of Torquay and Bovey Tracey to the north of Newton Abbot and their potential to cause 'in combination' effects with the development proposals for NA3.

On the basis that the proposed mitigation set out in Section 5 of this Assessment is adopted as part of the NA3 Development Framework Plan and subsequently secured through appropriate planning mechanisms at such time as individual planning applications are determined, then it is concluded that the development of NA3 (as proposed) will not have a 'likely significant effect' on the South Hams Special Area of Conservation.

This HRA Report has been undertaken in the context of the existing guidance published by Natural England (2010). Such guidance is updated periodically with a review of the existing Natural England guidance (currently being prepared by the SAC competent authorities) expected to be published in late 2018 or early 2019. Further ecological surveys and Habitat Regulations Assessment which will be required as part of any relevant applications on the NA3 site will therefore need to have regard to the most up to date guidance available at the time an application is submitted. This will need to be accompanied by a Bespoke Mitigation Plan as required by Policy NA3 of the Teignbridge Local Plan.

1. Introduction and Background

1.1 Introduction

- 1.1.1. The NA3 Wolborough Development Framework Plan (DFP) provides detailed and relevant planning guidance relating to the development of land that is allocated through Policy NA3 Wolborough, of the statutory adopted Teignbridge Local Plan 2013-2033.
- 1.1.2. This document has been commissioned and subsequently updated by Teignbridge District Council (TDC). It provides a Habitat Regulations Assessment (HRA) of the NA3 Wolborough allocation and Development Framework Plan, based on a more detailed examination of the site's geography, landscape / physical features, bat survey information and wider context in terms of potential in-combination effects with other development in the Newton Abbot area. As such, it has been carried out to meet the requirements of Regulation 105 of the Habitat and Species Regulations 2017. Local planning authorities may only adopt a plan after it has been ascertained through an HRA that the plan will not adversely affect the integrity of a European site (e.g. a Special Area of Conservation).
- 1.1.3. The Adopted Teignbridge Local Plan was subject to comprehensive Habitat Regulations Assessment that examined both proposed policies and site allocations. The Local Plan HRA identified that the development for which NA3 is allocated may impact the South Hams Special Area of Conservation (SAC) via impacts on the greater horseshoe bats that form one of the SAC's qualifying features. The Local Plan HRA concluded that NA3 is unlikely to impact any other European site.
- 1.1.4. This Habitat Regulations Assessment identifies the likely effects arising from the NA3 allocation and Development Framework Plan Proposals, i.e. their likely effect on the integrity of South Hams SAC in relation to greater horseshoe bats. It makes recommendations, where required, for appropriate mitigation measures commensurate with levels of information and certainty available at this stage of the planning process.
- 1.1.5. In considering allocations such as NA3, the Local Plan HRA identified a requirement for future planning applications on such sites to be brought forward accompanied by a 'bespoke greater horseshoe bat mitigation plan'. The purpose of these bespoke plans is to ensure that individual developments address all likely adverse effects on the bats, thus ensuring that there is no effect on the integrity of the South Hams Special Area of Conservation (SAC).
- 1.1.6. This Assessment is intended to inform the Development Framework Planning process for NA3 and will also help guide subsequent preparation of the bespoke mitigation plan(s).
- 1.1.7. This report sets the context for future detailed development proposals and is commensurate with the level of data and evidence that is appropriate at the SPD stage of the planning process. We recognise the limitations of some of the survey data used to inform this Assessment and that some indicative corridors may need to be refined at the planning application stage. Further survey work and a bespoke Greater Horseshoe Bat mitigation plan will be required in support of planning applications as explained at Section 5.

1.2 Background

1.2.1. The NA3 Development Framework Plan, once approved, will set out how proposals for housing, employment land, green spaces and the required infrastructure at Wolborough can be planned, delivered and phased comprehensively and in a sustainable form across the allocation as required by Policy NA3. It will be a material consideration in determining planning applications, ensuring that the overall allocation requirements, particularly in relation to planning and delivery, can be met. However, it does not preclude alternative planning proposals being considered

provided these are compliant with the policy requirements of the Local Plan and which help to deliver a comprehensive scheme for NA3 Wolborough.

1.3 Strategic Landscape Approach to Greater Horseshoe Bat Conservation

- 1.3.1. In undertaking a screening assessment of the NA3 Development Framework Plan, there has been a need to consider the conservation of a highly mobile species (greater horseshoe bat) at the landscape scale. Consequently, screening of the area has considered how (i) the conservation status of the bats and (ii) the conservation objectives for the South Hams SAC can be applied practically at a strategic landscape level for NA3 and the surrounding area. To do this, in addition to the requirements for plan and project level Habitat Regulations Assessment (HRA), mitigation proposals have also been informed by other relevant statutory provisions.
- 1.3.2. For instance, Regulation 41 of *The Conservation of Habitats and Species Regulations* (2017) transposes the requirements of Article 10 of the EU Habitats Directive (1992) into English legislation. Regulation 41 requires development plans to include policies that encourage the management of features of the landscape which are of major importance for wild flora and fauna. Article 10 states:

"Member States shall endeavour, where they consider it necessary, in their land use planning and development policies and, in particular, with a view to improving the ecological coherence of The Natura 2000 network, to encourage the management of features of the landscape which are of major importance for wild fauna and flora. Such features are those which, by virtue of their linear and continuous structure (such as rivers with their banks or the traditional systems of marking field boundaries) or their function as stepping stones (such as ponds or small woods), are essential for the migration, dispersal and genetic exchange of wild species".

1.3.3. In response to the above, the broad principles set out in Box 1 should be applied to the formulation of all appropriate greater horseshoe bat mitigation proposals for NA3.

Box 1 Guiding Principles for Greater Horseshoe Mitigation Measures

- *i.* Maintenance of dark and unlit habitat connectivity across the wider landscape;
- ii. Provision of adequate foraging habitat;
- *iii.* Provision, where appropriate, of adequate permeability through and between areas of built development following existing and new flight paths;
- iv. Provision of new bespoke roosts where they will provide 'stepping stones' across the landscape, as well as maintenance of existing roosts.
- 1.3.4. The application of these principles are considered in more detail in Section 5 of this Habitat Regulations Assessment for NA3.

2. Methodology

2.1 Desk Study

- 2.1.1. A preliminary appraisal of habitat and landscape features in and around NA3 Wolborough was undertaken with reference to relevant Ordnance Survey maps and aerial photographs. These were used to identify key topographical features associated within the area as well as prominent habitat features capable of supporting greater horseshoe bats, such as hedgerows, woodlands, water courses and grazed pasture.
- 2.1.2. Further information has been gathered from ecological surveys and reports that have been prepared to inform future planning applications within NA3.
- 2.1.3. Surveys of the nearby Conitor Cave confirm use by greater horseshoe bats during summer months and for hibernation.
- 2.1.4. Where available and in the public domain, other, older records have also been referenced and have provided further information on the occurrence and distribution of greater horseshoe bats in the landscape around NA3. Taken together, these sources of information present an overview of where and how greater horseshoe bats are using the wider landscape in the area.

Note: While not in the public domain, reference has also been made to greater horseshoe bat records collected by the Devon Bat Group and held by Devon Biodiversity Records Centre (DBRC). Although these records are not available for inclusion in this report, the data contained in these records do provide useful corroboration that greater horseshoe bats are dispersed across the wider landscape to the south of Newton Abbot.

- 2.1.5. Map 2 and Aerial Photo 3 of this report present a summary of the existing evidence and show:
 - The location of planning applications (shown by a red dot and application reference number) where greater horseshoe bats have been recorded, and;
 - Established and predicted flight lines based on best available evidence from various bat surveys undertaken within and in the vicinity of NA3.
- 2.1.6. One of the major landowners within NA3 also provided detailed information on his farming operations across the area. This included a breakdown of fields that are regularly under arable cultivation and those which are grazed by cattle either for prolonged periods through the spring and summer, or more irregularly e.g. after silage cuts.

2.2 Site Visits

- 2.2.1. The following report was informed by walk over surveys undertaken in the NA3 area during March 2016 by M. Oxford (FCIEEM, CEcol). Access for these visits was obtained from public rights of way or from views obtained from adjacent roads. Also, where necessary, access was gained under Teignbridge District Council's powers under Section 324 of the Town and Country Planning Act 1990, whereby a local planning authority may authorise a person to enter any land for the purpose of surveying it in connection with the preparation, adoption or approval of a local development document.
- 2.2.2. The purpose of the walkover surveys was to ground-truth topographic and habitat features identified through the desk studies and, in particular, to identify habitat features within the landscape that are capable of supporting foraging and commuting greater horseshoe bats. Once identified, and in conjunction with the results of field surveys, these features were used to help identify potential likely flight routes and areas used for foraging within the areas in and around NA3.

2.2.3. Walkover surveys do not in themselves provide a fully robust evidence base for reaching conclusions as to the use, or suitability, of the site for GHBs. However, done in conjunction with the desk top review of topographical data, aerial photographs and existing ecological survey data, the walkover surveys can enable reasonable assumptions to be made as to the network of commuting habitat features in and around the site. This level of survey and analysis is considered commensurate with this stage of the Development Framework Planning process. Further, full and up-to-date survey data will be required to inform the consideration and Habitat Regulations Assessment of future planning applications.

3.0 Structure of This Assessment

- 3.1 A Habitat Regulations Assessment for the NA3 Development Framework Plan is presented in Section 5 below. The assessment is based on the desk studies, bat surveys and walk over surveys described in Section 2 above. The Assessment provides information on the following:
 - a. The South Hams Special Area of Conservation (SAC) and greater horseshoe bats;
 - b. Key physical characteristics of the NA3 area;
 - c. Whether future development of the site has the potential to impact the integrity of the South Hams SAC;
 - d. Whether it is likely that likely impacts can be mitigated effectively.
- 3.2 In addition, this Assessment also considers the potential for 'in combination' effects with other development proposals that may interact with the proposals for NA3.

4. The South Hams SAC and Greater Horseshoe Bats

4.1 Composition and Importance of the South Hams SAC in a European Context

- 4.1.1 The South Hams SAC has been designated for its population of Greater Horseshoe Bats. This species is identified as an Annex II species in the Habitats Directive (1992) because it is one of the rarest/most threatened animals in Europe.
- 4.1.2 The SAC holds the largest population of greater horseshoe bat in the UK, with over 1,000 adult bats (approximately 30% of the UK population). It includes both maternity and hibernation roosts, and contains the largest known maternity roost in the UK and possibly in Europe.
- 4.1.3 The SAC comprises five Sites of Special Scientific Interest (SSSIs) spread across South Devon (see Table 1). Map 1 shows the location of the five sites that make up the South Hams SAC as well as the SSSI at High Marks Barn.

Table 1 Component Parts of the South Hams SAC (see also Map 1)

Site Name and Relevant LPA	Description and Reasons for Notification as a SSSI	Maternity	Hibernation
Berry Head to Sharkham Point SSSI and NNR Torbay Council	Roost in caves on sea cliffs	~	~
Buckfastleigh Caves SSSI Dartmoor National Park Authority Teignbridge District Council Devon County Council	Roosts in inland cave complex	v	✓
Bulkamore Iron Mine SSSI South Hams District Council Devon County Council	Roost in large disused mine		~
Chudleigh Caves and Woods SSSI Teignbridge District Council Devon County Council	Roosts in inland cave complex.	~	~
Haytor and Smallacombe Iron Mines SSSI Dartmoor National Park Authority Devon County Council	Roosts in disused mines		~

4.1.4 A sixth site has recently (2012) been designated as an SSSI as an important greater horseshoe maternity roost, although it is currently not a formal part of the designated SAC.

High Marks Barn SSSI	Large agricultural barn	\checkmark	
South Hams District Council Devon County Council			
Devon county council			

- 4.1.5 Between them, these six sites support a large proportion of the total greater horseshoe bat population across South Devon; and while the High Marks Barn has not been designated as a SAC, the colony here is an integral part of the overall SAC population and must therefore be included as a consideration in any and all relevant Habitat Regulations Assessments.
- 4.1.6 The designated roost sites have been identified on the basis of their relative importance for hibernation during winter, and/or also summer roosts where whole colonies gather together and where females give birth and rear their young.

NOTE Buckfastleigh and High Marks Barn are secure sites, owned and managed for the benefit of greater horseshoe bats by The Vincent Wildlife Trust.

4.1.7 In addition to the importance of the SAC roosts, greater horseshoe bats are dependent upon the wider countryside of South Devon for the majority of their activities, including commuting, foraging, roosting, mating and seasonal migration (see **Map 1**).

4.2 Greater Horseshoe Bats: Ecology, Behaviour and Use of the South Devon Landscape

- 4.2.1 The greater horseshoe bat is one of Britain's largest and rarest bats, with a total UK population of about 5500 individuals. It should be noted that their population is not confined to the SAC sites and they are able to travel relatively large distances across the landscape and have large foraging territories.
- 4.2.2 Greater horseshoe bats are long-lived (in excess of 30 years) with the bats remaining faithful to these important roosting sites, returning year after year for generations (Natural England 2010). They feed primarily in and around woodlands, hedges and grazed pasture, especially cattle-grazed pasture. Any loss or degradation to such areas can have an impact, especially in areas close to the maternity roosts, where the juvenile bats feed. For instance conversion of pasture to amenity grassland would remove the key food source for GH bats of dung-feeding insects'. Also, the bats follow a network of 'traditional' flyways between roost sites and feeding areas and are susceptible to breaks in or removal of the features along which they commute.

4.3 Sustenance Zones

- 4.3.1 The *Sustenance Zones* (shown on Map 1) are considered to be of strategic importance for maintaining the population of Greater Horseshoe Bats across the South Hams SAC. These zones are based on the original work undertaken to produce Natural England's Guidance (2010) and have been identified using the best available scientific knowledge¹.
- 4.3.2 For maternity roosts, the Sustenance Zones have generally been mapped using a 4km radius circle centred on each of the component SACs; as such they reflect the strategic importance of the feeding habitat around these roosts². However, the roost at Berry Head is situated on a peninsula surrounded on three sides by the sea, so the sustenance zone here has an area approximately equal to a 4km radius circle).
- 4.3.3 In addition to the Sustenance Zones around the SAC roosts, because of the number of bats it supports, a 4km radius sustenance area has been identified around the non-SAC roost at High Marks Barn SSSI in the Avon valley (see Map 1).

4.4 Strategic Flyways

4.4.1 Natural England (2010) have identified the *Strategic Flyways* (shown on Map 1) that are most likely to link the key (SAC) roosts and foraging habitats with the contiguous landscape features most likely to be used by greater horseshoe bats.

¹ Natural England based their 2010 guidance upon a consolidation of relevant greater horseshoe bat research and information drawn together over the previous year by Marquis & Lord Consultants. The knowledge gained through that project represents the best understanding, to date, of the dispersal patterns and key habitats of greater horseshoe bats across South Devon. In addition, based on the known distribution of greater horseshoe bats, Marquis & Lord collated spatial information to create a GIS layer that was used to inform the preparation of Map 1.

² Ransome RD and Hutson AM (2000) Action plan for the conservation of the greater horseshoe in Europe (Rhinolophus ferrumequinum), Convention on the Conservation of European Wildlife and Natural Habitats, Nature and Environment No 109. <u>http://www.swild.ch/Rhinolophus/PlanII.pdf</u> Also see EN research reports R174 R241 R341 & R532

4.4.2 The *Flyways* identified are closely associated with the main rivers and sheltered valleys of South Devon. They have been identified as being 500 metres wide to offer several pathways

Map 1 South Ham SAC, Sustenance Zones and Strategic Flyways



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and provide alternative routes to accommodate variance in the weather; for example, greater horseshoe bats will prefer to travel on the leeward side of a hedgerow when conditions are adversely windy.

4.4.3 While the network of flyways shown on Map 1 is a current '*best estimate*' for likely routes through the landscape, other equally important routes may be identified in the course of further survey work in the future. The SAC Partner Authorities (Devon County Council, Dartmoor National Park, South Hams District Council, Teignbridge District Council and Torbay Council) and Natural England are currently in the process of updating the guidance relating to the management of the SAC and, in particular, the network of Strategic Flyways. This HRA document is based on the published 2010 Guidance (https://www.teignbridge.gov.uk/media/1747/ne-south-hams-sac-planning-guidance-nov-2011.pdf), but any relevant future planning applications submitted should ensure they have regard to the most up to date guidance available at the time.

4.5 Features Required to Maintain the Integrity of the SAC

4.5.1 Under Regulation 61 of the *Habitat and Species Regulations* (2010) planning authorities³ in South Devon cannot lawfully grant planning permission, nor under Regulation 102 can they allocate proposals in their Local Plans, unless they have established that such development proposals are not likely to have a significant adverse effect upon the integrity of the South Hams SAC. The integrity of a European site can be defined⁴ as:

"the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified".

- 4.5.2 In practical terms, this means understanding the specific requirements necessary to maintain the SAC's integrity and with it the population of greater horseshoe bats at a '*favourable conservation status*' (see Section 4.3). To achieve this, Natural England (2010) state:
 - i. The area has to be large enough to provide a range of food sources capable of supporting the whole bat population; the bats feed at a number of locations through the night and will select different feeding areas through the year linked to the seasonal availability of their insect prey.
 - ii. The bats regularly travel through South Devon between their feeding sites and roosts via a network of established flyways. They also travel greater distances between the sites designated as the South Hams SAC at certain times of the year, for example: in the spring and autumn between hibernacula and maternity sites, and in the autumn to mating sites.
 - iii. To move between their roosts and foraging areas, the bats require linear features in the landscape to provide landscape permeability. Compared to most other bat species, the echolocation call of the greater horseshoe bat diminishes (attenuates) rapidly in air due to its relatively high frequency. This means it cannot '*see*' a great distance and is one reason why it tends to use landscape features to navigate, such as lines of vegetation (*e.g.* hedgerows, woodland edge, vegetated watercourses, etc). The greater horseshoe bat will tend to fly close to the ground (up to a height of 2m), and mostly beneath vegetation cover. Radio tracking studies⁵ and observations in the field confirm that greater horseshoe bats will regularly use the interconnected flyways associated with lines of vegetation. Further studies⁶ have shown

³ The competent authority is most likely to be the planning authority for planning applications, but for other types of consent may be another regulatory body (e.g. the Environment Agency) or infrastructure provider (such as the Highways Authority).

⁴ See Chartered Institute of Ecology and Environment <u>http://www.cieem.net/glossary</u>

⁵ Radio tracking studies of greater horseshoe bats have been commissioned by Natural England as described in the following research reports R344, R496 & R573.

⁶ A L Walsh & S Harris, (1996), Foraging habitat preferences of vespertilionid bats in Britain. Journal of Applied

that landscapes with broadleaved woodland and watercourses are important as they provide habitat continuity.

- iv. This species is sensitive to light and will avoid lit areas⁷. The interruption of a flyway by light disturbance, as with physical removal/ obstruction, would force greater horseshoes to find an alternative route which is likely to incur an additional energetic burden and will therefore be a threat to the viability of the bat colony. In some circumstances, alternatives will not be available, leading to isolation and fragmentation of the bat population from key foraging areas and/or roosts.
- v. There must be a sufficient number and range of different types of roosts throughout the landscape to support the population through all stages of the bats' daily and seasonal life cycle.
- vi. Roost exits must be shielded from any artificial lighting, and suitable cover should be present to provide darkened flyways to assist safe access to and from the wider habitat⁸.
- vii. The feeding and foraging requirements of this species have been well studied in Devon and in the UK⁹. Most feeding activity is concentrated in an area within 4km of the roost (juvenile bats will forage within 3km at a stage in their life when they are most susceptible to mortality). The most important types of habitat for feeding have been shown to be permanent pasture grazed by cattle, broad-leaved woodland, hay meadows and wetland features such as stream-lines and wet woodland. Pastures and meadows are particularly well used where they are surrounded by well-developed field boundaries.
- viii. Depending upon the availability of suitable flyways and feeding opportunities, most urban areas will provide limited greater horseshoe bat habitat. This is particularly true of dense urban areas with a high incidence of night lighting and lack of unlit green spaces.

4.6 The Contribution of Other Roosts to The Integrity of the SAC

- 4.6.1 Conservation efforts for greater horseshoe bats have traditionally focused on maternity and hibernation sites. However, it is increasingly apparent that other roosts play a vital role during the annual cycle of the species. Bats use different roosts for different purposes through the year, for example spending several weeks at 'formation' roosts between the hibernation and maternity roosts. Later in the summer, large numbers of adult female and juvenile bats move to post-breeding sites. Male bats spend much of the year alone at mating roosts, where the females visit them in late summer and autumn. The importance of these additional roosts, should not be underestimated: mating roosts in particular are often overlooked because of the small number of bats present at any one time, but they are vital to healthy genetic mixing.
- 4.6.2 Attention must be paid to the protection of these 'satellite' roosts, and their supporting bat habitat, because together they are fundamental to the survival of the SAC bat population. The effect on the SAC population from loss of, or impacts on, individual satellite roosts may be hard to predict, but should still be considered during HRA, remembering that the precautionary principle applies under the Habitats Regulations.

Ecology, 33, 508 518.

⁷ <u>http://www.batsandlighting.co.uk</u>

⁸ See English Nature research report R174

⁹ R D Ransome and A M Hutson, (2000), Action plan for the conservation of the greater horseshoe in Europe (*Rhinolophus ferrumequinum*), Convention on the Conservation of European Wildlife and Natural Habitats, Nature and Environment No 109. <u>http://www.swild.ch/Rhinolophus/PlanII.pdf</u> Also see EN research reports R174 R241 R341 & R532.

4.7 Changes in the Landscape and Potential Impacts on Site Integrity

- 4.7.1 Taking the above requirements into account, greater horseshoe bats are particularly susceptible to the following changes in their habitat that may arise as a result of development:
 - Impact on roost sites (including damage, destruction, disturbance and prevention of access);
 - Removal, severance, obstruction or disturbance of linear features used for navigation and commuting;
 - Change in habitat structure and composition (*e.g.* loss or change in quality, quantity and distribution of foraging habitat);
 - Disturbance from new illumination causing bats to change their use of an area;
 - Physical injury by wind turbines and / or displacement from foraging or commuting habitat by wind turbines
 - Barrier effects across the landscape caused by new roads and increased risk of collision between bats and vehicles.
- 4.7.2 These effects are likely to be most significant, but not exclusively, in the *Strategic Flyways* and *Sustenance Zones* (see Map 1)¹⁰.
- 4.7.3 While there are odd exceptions, greater horseshoe bats are extremely sensitive to increased light levels and will typically avoid areas where the lighting is brighter than '*moonlight*' (typically recorded as being between 0.27 and 1lux)¹¹. Thus house lights, road lights, vehicle lights, security lighting and floodlighting may all have an adverse effect. For instance, one poorly positioned light can stop bats using a crucial flyway or an area of feeding habitat. Unusual levels and pitches of noise can also cause disturbance.

 $^{^{10}}$ Based on the South Hams SAC Planning Guidance prepared by Natural England (2010).

¹¹ Schlyter, Paul (1997–2009). Radiometry and photometry in astronomy. Archived from the original on 2013-12-07 and

Bunning, Erwin; Moser, Ilse (April 1969). Interference of moonlight with the photogperiodic measurement of time by plants, and their adaptive reactive. *Proceedings of the National Academy of Sciences of the United States of America* **62** (4): 1018–1022.

5. HRA Assessment

5.1 Screening and Full Appropriate Assessment

- 5.1.1 Consistent with the precautionary principle, and where proposed development is likely to lead to some or all of the impacts described in Table 2 below, an HRA Screening Assessment is required to determine whether there may be a 'likely significant effect' on the SAC.
- 5.1.2 Following the recent decision at the Court of Justice of the European Union (CJEU) in the matter of People Over Wind and Sweetman v Coillte Teoranta (C-323/17), the Screening Assessment must consider potential impacts in the **absence of mitigation measures**. Any proposed or possible mitigation measure must only be considered at the full Appropriate Assessment stage. The full Appropriate Assessment then considers any proposed mitigation and what other mitigation measures would be needed to avoid impact on the integrity of the SAC.
- 5.1.3 Section 5.2 and 5.3 equates to the Screening of NA3 proposals, while Section 5.4 onwards constitute the full Appropriate Assessment.

5.2 Key Characteristics of NA3 Wolborough and Use by Greater Horseshoe Bats

- 5.2.1 The NA3 area is characterised by gently rolling arable farmland with some areas of permanent and temporary grassland. It is adjacent to the southern edge of Newton Abbot, and lies between Ogwell to the west, Wolborough Hill, Decoy Wood and Decoy Lake to the north and the Aller Brook floodplain to the east. To the south is a raised ridge of land which forms a boundary from the village of Abbotskerswell.
- 5.2.2 NA3 does not lie directly within a *Sustenance Zone* for any of the designated South Hams SAC roosts, the closest being centred on the Chudleigh caves Site of Special Scientific Interest, 9km to the north-east of NA3. While within the theoretical daily flight range for greater horseshoe bats, it is unlikely that bats roosting at Chudleigh are regular visitors to the Wolborough area. However, there are a number of other, smaller, greater horseshoe roosts within easy daily commuting distance of NA3 The most significant of these is within Conitor Copse which is less than 0.5km to the west of NA3; this is both a summer and winter roost.
- 5.2.3 While not in a *Sustenance Zone*, the southern edge of NA3 lies directly within a SAC *Strategic Flyway* (see Aerial Photo 1) which is one of a network of flyways identified by Natural England as being important for the dispersal and distribution of greater horseshoe bats across the south Devon landscape. As such these 'flyways' provide key routes across the landscape that 'connect' the various SAC roosts with each other, with key foraging areas and with a network of smaller satellite roosts (see section 4.6 above).
- 5.2.4 However, because of the scale of development proposed, it has the potential to affect commuting routes through the wider landscape by creating a permanent and irreversible change at a landscape scale. Whilst greater horseshoe bat records are dispersed, and the exact abundance and distribution of these local bats is unclear due to the limitations of the evidence gathered for the purposes of this Assessment (see Section 2), surveys have shown that there is GHB activity in NA3 and its immediate vicinity. It is therefore important to ensure that the bats can continue to use this landscape to travel between the designated roosts, Sustenance Zones and other roosts. Although the main strategic function of the NA3 area for greater horseshoe bats will be commuting, there is likely to be some element of feeding as the bats travel around. It is also likely to provide an important feeding area for the sub-population of greater horseshoes using Conitor Cave.

- 5.2.5 NA3 is a composite allocation made up of a number of land parcels; these are shown on Aerial Photo 2 of this report. Each are identified separately by a capital letter (e.g. 'A', 'B', 'C', etc.) and their key characteristics and interest for greater horseshoe bats are described in turn below.
- 5.2.6 Area 'A' forms the north-western corner of NA3 and is comprised of four or five small fields that generally slope towards the west. Most of these fields are bounded by mature hedgerows and have been recorded by SLR (July 2013) as being semi-improved grasslands with patches of mixed scrub. The fields are cattle grazed annually (dairy cows) between March and October. As such these fields represent near optimal foraging habitat for greater horseshoe bats.



- 5.2.7. The southern edge of Area 'A' is adjacent to St Mary's Church and graveyard, and Wolborough Barton farm. Greater horseshoe bats using Area 'A' would have virtually unimpeded access to and from farmland to the south. In contrast, areas of dense residential development lie to the north and east of Area 'A' and would be largely inhospitable to regular use by greater horseshoe bats. Similarly, to the west, there is a belt of residential properties between Area 'A' and the A381 that also poses a barrier to horseshoe bat movement. However, in the north-western corner of Area 'A' there is a small green gap between development (a pinch point) where bats could move from Area 'A' across the A381 towards Baker's Park and the River Lemon beyond. The River Lemon Valley to the west of Newton Abbot comprises small pasture fields and extensive areas of broadleaved woodland all of which provide near optimal foraging habitat for greater horseshoe bats and connect to other *Strategic Flyways* to the west of Newton Abbot. A greater horseshoe bats and connect to beside the River Lemon in a barn at Bradley Manor (200-300m) west of the A381 and just beyond the boundary of Baker's Park.
- 5.2.8. SLR (2015) report that greater horseshoe bats have been recorded within Area 'A' on a static detector located near the track that runs in a northerly direction from St Mary's Church. A total of

19 registrations were recorded in August and September 2013, which is relatively high compared with many other locations across NA3 where activity was recorded at a lower level.

- 5.2.9. **Area 'B'** lies on the western edge of NA3 and is bounded to the west by the A381. It has mature hedgerow-lined narrow lanes on the eastern and southern boundaries. Ogwell Cross cemetery lies immediately to the north of Area 'B' and the village of Abbotskerswell less than 500m to the south.
- 5.2.10. Land use within Area 'B' is predominantly arable, as recorded by SLR in their Phase I Habitat Survey (2015), and this has been confirmed by land-use data provided by the landowner. However, a semi-improved grassland field on the western edge of Area 'B' (adjacent to the A381) is cattle grazed from March to October annually.
- 5.2.11. SLR (2015) static detectors have recorded greater horseshoe bat activity along a field boundary running east-west that connects to the grazed pasture discussed above. This activity was relatively high in May 2013 and April 2014 compared to later months of the year. Overall, this activity in Area 'B' was also relatively high compared to many other locations across NA3.
- 5.2.12. Area 'B' is the closest part of NA3 to the established greater horseshoe roost in Conitor Copse. Furthermore, the A381 - beside the above grazed pasture field - is in a deep cutting providing a potential safe high-level route across the road for horseshoe bats between NA3 and the roost in the Copse. Another highly likely additional flight line for horseshoe bats exists where Firestone Lane joins the A381, providing strong linkage with a tree-lined bridleway and cattle-grazed pasture on the western side of the road, south of Conitor Copse.
- 5.2.13. **Area 'C'** covers a large proportion of the western half of NA3. The northern boundary is marked by Coach Road, the western boundary by Old Totnes Road, and the eastern boundary is marked by Magazine Lane and Decoy Brake. The southern boundary is marked by the steeply sloping ridge that runs westward from the south-western corner of Decoy Brake to the fork in the road where Firestone Lane and Stoneman's Hill join at the junction with Old Totnes Road.
- 5.2.14. The western edge of Area 'C' marks the highest point within NA3 and from this high ground the land slopes down in an easterly direction.
- 5.2.15. The fields immediately around Wolborough Barton Farm are identified as a mix of semi-improved and improved grassland by SLR (2013/14 and 2015). These fields are reported by the landowner to be grazed annually by cattle from March to October. Likewise, the field to the east of Magazine Lane is also grazed annually by cattle over this period. Two large fields between the farm and Magazine Lane are also grazed later in the year after 1 or 2 silage cuts.
- 5.2.16. The southern part of Area 'C' is comprised of a large gently sloping arable field that abuts Decoy Brake to the east. To the south-west of this large field is a narrow linear field that occupies the steep ground rising up to the ridge beside Stoneman's Hill; this field is also cattle grazed for much of the year on rotation.
- 5.2.17. SLR recorded the highest levels of greater horseshoe bat activity throughout the whole of NA3 on the western edge of Area 'C', with a particular peak in activity recorded in September 2013.
- 5.2.18. **Area 'D'** forms the southern and eastern components of NA3. Priory Road marks the southern boundary and much of the northern boundary is adjacent to Decoy Brake. Kingskerswell Road forms the eastern boundary with a small business estate adjacent to the north-eastern corner.
- 5.2.19. The western half of Area 'D' is formed by a narrow valley that runs eastward from high ground near the top of Stoneman's Hill. The eastern half of Area 'D' is, in contrast, formed where the valley opens into undulating ground that falls gently away to the Kingskerswell Road.

- 5.2.20. A large proportion of Area 'D' is under arable cultivation, with cattle grazing limited to the western fields along the southern side of the valley; this grazing is reported by the landowner to usually be after June, once silage cuts have been taken.
- 5.2.21. SLR (2015) have recorded relatively lower levels of greater horseshoe activity throughout Area 'D' and highest activity has been recorded along the southern side of the valley – which appears to correlate with the fields that are grazed with cattle. This activity also appears to correspond with the *Strategic Flyway* identified by Natural England that overlaps the southern edge of NA3.
- 5.2.22. **Area 'E'** is the smallest land parcel identified addressed in this HRA Screening Assessment. It lies to the east of the Kingskerswell Road and is comprised of just two fields that drop away to the flat low-lying floodplain of the Aller Brook. The northern field is recorded by SLR (July 2013) as being under arable cultivation and they record the southern field as being improved grassland. SLR (2013) have recorded some limited greater horseshoe activity along the eastern boundary of Area 'E'.
- 5.2.23. **Area** '**F**' is comprised wholly of mixed coniferous and deciduous woodland (Decoy Brake and Blackball Plantation). As a generality, the woodland slopes from high ground along its southern edge down towards Decoy Lake. However, the ground in Decoy Brake is more irregular with both north and west facing slopes and is particularly steep along the southern margins.
- 5.2.24. SLR (2015) have conducted limited bat surveys in the woodland, focusing their attention at two points along the line of the proposed 'link road' that would cut through the southern section of Decoy Brake. Only one greater horseshoe bat was recorded during surveys undertaken in May, June and September 2014.
- 5.2.25. **Area 'G'** is outside of the NA3 allocation and is only mentioned here because it is the Wolborough Fen Site of Special Scientific Interest (SSSI). The SSSI is nationally designated for its biodiversity interest and, being a wetland feature, is dependent upon hydrological characteristics of the surrounding land.
- 5.2.26. Decoy Wood and Wolborough Fen are both rich sources of potential prey species (invertebrates) for greater horseshoe bats, especially early in the year when woodland is a favoured foraging habitat.

5.3 Use of NA3 by Greater Horseshoe Bats

- 5.3.1 Bat surveys undertaken by SLR (2015) have confirmed that greater horseshoes are present and can be found commuting and/or foraging across many parts of NA3. The locations for highest recorded activity appear to correlate with fields that are grazed with cattle, either constantly from March to October or later in the year, when grazed after a silage cut has been taken¹² (for grazing land see Aerial Photo 3).
- 5.3.2 Overall, NA3 provides a very mixed landscape for greater horseshoe bats, with some areas providing near-optimal foraging and commuting habitat (e.g. permanent grazed pasture with tall bushy hedgerows), whereas other areas are relatively inhospitable (e.g. large arable fields with more intensively managed hedges).
- 5.3.3 Aerial Photo 3 of this report shows both established and predicted flight routes for greater horseshoe bats through and near NA3. The alignment of the 'predicted' routes have either been calculated by linking the locations of known greater horseshoe activity (drawn from existing bat surveys) and/or by identifying the presence of suitable foraging and commuting habitat in the immediate landscape.

¹² Details of landuse and farming operations across much of NA3 have been provided by the landowner.

5.3.4 Greater horseshoe bats have been afforded special protection under Annex II of the EU Habitats Directive (1992) because of their rarity. Even in their strongholds they are still rare compared to many other bat species, with low numbers dispersed across a wide landscape. Additionally, they are more difficult to detect than the majority of bat species. In light of this, numbers at any one-survey location would be expected to appear low, when compared to other, common, species (e.g. common pipistrelle). This must be born in mind when interpreting greater horseshoe bat survey records. It is thus generally much more appropriate to compare numbers of greater horseshoe bats found at the target site to numbers of greater horseshoes found elsewhere within the South Hams SAC area, rather than to the abundance of other species within the target site. However, comparing numbers of greater horseshoes between locations within the target site may help to show which areas of the site are more important to them.

5.4 Does Future Development of NA3 Wolborough Have the Potential to Impact the Integrity of the South Hams SAC?

- 5.4.1 A number of landscape features within NA3 offer suitable (or even optimal) foraging and commuting habitat for greater horseshoe bats (Aerial Photo 3). These include:
 - Cattle grazed fields north of St Mary's church in Area 'A';
 - The cattle grazed field in the south-western corner of Area 'B' adjacent to the A381 and near to Conitor Copse;
 - Cattle grazed fields in the northern half of Area 'C' and in Stray Park/Cross Park Meadow to the east of Magazine Lane;
 - Cattle grazed fields on the southern edge of Area 'C' and the western end of Area 'D' which are coincident with the Strategic Flyway;
 - Cattle grazed fields on north facing slopes and the water course through the Area 'D' some of which are also coincident with the Strategic Flyway;
 - Woodland and fen habitat in Areas 'F' and 'G';
 - Hedgerow habitat either side of the southern boundary of Area 'B', providing strong landscape linkage with optimal foraging and roosting habitat around Conitor Copse on the other side of the A381.
- 5.4.2 Seen at the landscape scale (see Aerial Photo 3), the land in and around NA3 provides a number of green corridors between the southern edge of Newton Abbot, the village of Abbotskerswell and the settlements of Ogwell. These provide greater horseshoe bats with the opportunity to move through this landscape, navigating around dense areas of built up development.
- 5.4.3 SLR (2015) have recorded relatively low levels of greater horseshoe activity around Wolborough. However, in light of the horseshoe activity across this landscape, development in an inappropriate location and/or of an inappropriate design does have the potential to disrupt or sever identified and suspected key landscape linkages. Such disruption could adversely affect the ability of this species to continue to use extensive areas of the landscape between the SAC roosts (see Map 1), and thereby be likely to impact on the integrity of the South Hams SAC. Based on the available evidence for this screening which identifies GHBs using the landscape, it will be important to ensure that the location and design of development does not have the potential to adversely affect the integrity of the South Hams SAC by negatively impacting on commuting habitat. Likely (i.e. potential) impacts that may arise from development proposals for NA3 are set out in Table 1 below.

Potential Effects from the New Road Network

5.4.4 Proposed development for NA3 includes a link road through the development that is planned to run through a part of the woodland in the south-western corner of Decoy Brake and across the ridge towards Ogwell Cross Roundabout.

- 5.4.5 Recently published research by Exeter University (2016) has identified substantial evidence indicating a significant risk to bats from roads, particularly through collision risk¹³. Some of the findings from this research are particularly relevant to this HRA Screening Assessment. For instance:
 - In addition to the direct risk of collision of bats with vehicles, roads could pose a threat to bat populations as a result of habitat loss, degradation and fragmentation, and could act as barriers to movements of bats between habitats;
 - Based on collated records of 1,207 bat road casualties in Europe, the research found that low-flying species (such as horseshoe bats) are more prone to collisions than high-flying species;
 - Analysis identified a significant bias towards male and juvenile casualties;
 - Casualties included rare species such as barbastelle and geographically restricted species such as horseshoe species;
 - The bias towards male casualties could be indicative of:
 - lower dispersal among females.
 - a tendency among females to remain in or return to their area of birth.
 - sexual segregation in habitats of varying quality, i.e. females may occupy better quality habitats than males, and road density may be lower in better quality habitats.;
 - Whether or not roads act as barriers to the movement of bats depends on a complex interplay of habitat and species-specific behaviour. For example:
 - the presence of favourable habitat for bats notably woodland was found in this review to be linked with significantly reduced barrier effects but a heightened risk of collision.
 In other words, bats are more likely to cross roads through woodland but are more prone to collision with vehicles.
 - Bat casualties were commonly reported where roads were close to or bisected other linear features, including treelines.
 - The presence of casualties from rare species on roads, such as horseshoe bats, is of particular concern, as relatively low levels of additional mortality could potentially have an impact on the long-term sustainability of local populations.
 - Where comparisons could be made, bat road casualties were more common at locations with greater traffic volume.
 - Fewer bats crossed roads where there was a gap of more than 4.5 metres.
- 5.4.6 It appears that, (a) in light of the findings of the research conducted by Exeter University; and (b) if no appropriate mitigation were put in place; the link road proposals could have a '*likely significant effect*' on greater horseshoe bats moving across the landscape south and south-east of Newton Abbot.

¹³ Grace-Fensome A. and Mathews F. (2016) *Roads and bats: a meta-analysis and review of the evidence on vehicle collisions an barrier effects.* Mammal Review. Mammal Society.

Likely Impacts Arising from Development	Implications for SAC Conservation Objectives (see Appendix B)
Loss of habitat connectivity through removal of or damage to linear habitat (e.g. trees and hedgerows) resulting in the loss of key commuting habitats and loss of access to foraging areas used by greater horseshoe bats.	Reduction in the extent and distribution of the habitats used by relevant qualifying species.
Disturbance from human activities along commuting routes where development is located too close to commuting habitat causing an adverse effect (primarily) from new sources of artificial light – either from within the new houses or from external lighting e.g. vehicles and street lighting.	Change in habitats used by relevant qualifying species, such that the structure and/or function of those habitats is compromised (not maintained).
Decline in habitat quality and/or connectivity around satellite roosts leading to their eventual abandonment. Loss of existing subsidiary roosts in and around the site and supporting commuting habitat.	
Disturbance from construction activities along commuting routes where increased noise and light may have an adverse effect in adjacent habitats.	
New, wider and busier roads in the landscape leading to increased risk of bat mortality through vehicle collisions.	Reduction in the population of the relevant qualifying species.
Increased length of commuting routes leading to the bats having to travel further to navigate through the landscape to the south of Newton Abbot, with consequent greater expenditure of energy to do so.	Change in the distribution of the relevant qualifying species across the South Hams SAC
Restriction on the bats' ability to disperse and move to and from roosts and foraging areas across the landscape around Newton Abbot. Such movement may occur on a regular daily basis, or on a more infrequent seasonal basis; such as in the:	
i. late summer and early autumn when males and females are seeking each other out to mate, and;	
ii. early spring and late autumn when the bats may be using routes through NA3 in order to migrate to and from their hibernation roosts used through the winter.	
NOTE: There is a known greater horseshoe hibernation roost less than 0.5km to the west of the western boundary of the Wolborough allocation.	

Table 2 Likely Impacts and their Implications for the SAC Conservation Objectives

5.5 Is it Likely That Impacts Can Be Mitigated Effectively?

5.5.1. Mitigation measures for greater horseshoe bats should support the *SAC Conservation Objectives* set by Natural England and also promote *Favourable Conservation Status* for this species (see Appendix B). As such, mitigation measures for NA3 should aim to:

Facilitate ease of movement and conserve energy expenditure by Greater Horseshoe Bats by providing optimal daily and seasonal commuting routes around and through the proposed new built up areas and by retaining and enhancing foraging and roosting opportunities.

- 5.5.2. In order to achieve the above aim, and to provide the certainty necessary to satisfy the requirements of the HRA process, the following mitigation principles must be incorporated into the development framework for the NA3 area (these reflect the guiding principles set out in Box 1, on page 8). These principles apply some site specific context to the mitigation requirements based on the evidence and information available for the purposes of this screening. Such measures are based on the principle of creating and maintaining habitat known to be associated with the bats. They will need to be refined, secured and implemented in full at such time as development applications are brought forward. They relate principally to ensuring connectivity through the landscape through the protection and maintenance of the greater horseshoe bat commuting habitat. Such mitigation should be a combination of identifying and recognising:
 - key design constraints required to avoid or minimise¹⁴ adverse effects, and;
 - habitat mitigation/enhancement opportunities to provide overall net gains¹⁵ for greater horseshoe bats specifically and for wider biodiversity in general.
- 5.5.3. The Design Principles i) to xx) below should be followed:
 - Protect the functionality and integrity of the greater horseshoe bat *Strategic Flyway* network around the southern side of Newton Abbot, ensuring that landscape linkages from NA3 to:
 (a) the south and east towards Kingskerswell; and (b) the west and north-west around Ogwell towards Conitor Copse and the River Lemon; are maintained.
 - ii. In support of (i) above, maintain and optimise existing, and also provide new, bat commuting and foraging habitat through and around NA3 to achieve overall connectivity in accordance with the proposed flyways shown on Aerial Photo 3.
 - iii. Minimise potential interruption of bat corridors by the new road network and especially for:
 - a. the proposed road through Decoy Brake;
 - b. the western 'spine' road as it crosses through the western end of the 'ridgeline' landscape corridor near Ogwell Cross cemetery.
 - iv. Mitigation measures for bat road crossings should be achieved, where appropriate, through a combination of:
 - a. careful siting of 'green bridges and/or culverts/underpasses¹⁶';
 - b. sensitive ground shaping (e.g. earth bunds, banks and cuttings);
 - c. sensitive lighting design;

¹⁴ Adverse effects should be 'minimised' to the point where either alone or in combination with other effects they do not have an adverse effect on the integrity of the South Hams SAC.

¹⁵ The achievement of a net gain for biodiversity is consistent with the objectives set out in paragraph 118 of the National Planning Policy Framework.

¹⁶ As appropriate and necessary to provide safe passage for bats where other mitigation measures are inadequate.

- d. sympathetic landscape design;
- e. vehicle speed restrictions and vehicle 'calming' measures, in order to avoid and reduce risk of vehicle collision with bats and to avoid disturbance caused from artificial light spill into flight routes¹⁷.
- v. One of the key measures available to mitigate potential risk of vehicle collisions with bats (through Decoy Wood and across the ridge near Ogwell) is through the imposition of a speed restriction. This should be possible as a necessary requirement arising out of the Habitat Regulations Assessment of the Wolborough proposals, whereby Devon County Council as the Highway Authority is legally obliged to consider a plan or project (for which it is the competent authority) in the context of Regulation 63 of the Habitat and Species Regulations 2017).
- vi. Have regard to areas of optimal foraging habitat and maintaining and optimising these as necessary to support commuting routes and habitat;
- vii. Achieve no loss of existing hedgerows and trees within NA3 which are used to provide greater horseshoe bat commuting habitat;
- viii. Avoid light spill in bat flyways and foraging areas, i.e. achieve light levels less than 0.5 lux and have regard to other ambient background lighting and overall light spill from the development as a whole;
- ix. Ensure that the development proposals do not sever key habitat connectivity and thus hinder the potential for commuting/migrating bats (see Aerial Photo 3) to move through the landscape from Decoy Country Park to the greater horseshoe bat *Strategic Flyway* that follows the ridge along the western and southern side of NA3;
- x. Ensure that any public footpaths / cycleways through the bat corridors are either unlit or are lit through a very carefully designed scheme that minimises light spill in sensitive locations, while at the same time providing a safe and adequately lit route for pedestrians and cyclists;
- xi. Ensure that the provision of areas of public realm open space (e.g. hill top park, activity hub, children's play areas, community orchards and allotments) in or near the bat corridors identified in Aerial Photo 3 while being potentially multifunctional are designed and maintained to also provide habitat for commuting and foraging greater horseshoe bats;
- xii. Submit a *Bespoke Bat Mitigation Plan* (see Appendix C) with any applications for development, in accordance with the guidelines set out in this HRA Screening report. The Plan(s) should be based on up to date bat surveys and take into consideration how to address any in-combination effects identified during the course of detailed impact assessment.

Habitat Mitigation/Enhancement Opportunities should where appropriate:

- xiii. Undertake tree planting to create new orchards and areas of woodland in order to provide more diverse habitat for greater horseshoe bats;
- xiv. Mitigate (both on-site and, where necessary, off-site) for the loss of hedgerows (flyways) if removal is unavoidable;

¹⁷ All mitigation aimed at providing safe road crossings for bats must follow the *precautionary principle* and be informed by latest research and best practice, such as Berthunissen and Altringham (2015) and Grace-Fensome and Mathews (2016).

- xv. Undertake habitat creation/enhancement (in partnership with landowners) to provide new tree lines and hedgerows in the surrounding landscape to strengthen bat commuting habitat in the wider landscape (see Aerial Photo 1, on page 19);
- xvi. Provide a "stand off zone" from development between bat flyways / supporting foraging habitat and the newly built development (as shown on Aerial Photo 3);
- xvii. Protect existing subsidiary roost(s) and create new bespoke bat roost(s) as necessary to support and improve the number and distribution of subsidiary roosts; these to be in appropriate locations either within the green infrastructure in NA3 or within the surrounding landscape;
- xviii. Provide long-term habitat management, for each parcel of development, through a Landscape and Ecological Management Plan (LEMP), secured through a planning condition and/or obligation;
- xix. Implement development through the means of a prior-approved Construction Environmental Management Plan (CEMP), secured through a planning condition;
- xx. Undertake appropriate and proportionate ecological monitoring of bat activity and LEMP delivery to establish the effectiveness of proposed mitigation measures and to provide early warning of any necessary contingency or remedial measures required to meet original objectives;
- 5.5.4. The provision of such measures would be consistent with the four principles set out in section 1.3.3 (Box 1) of this Screening Assessment.

5.6 **Requirements from Future Applications**

- 5.6.1 The NA3 allocation and this Development Framework Plan have been assessed under the Habitat Regulations. Subsequent planning applications will also be subject to the Habitat Regulations process.
- 5.6.2 In order to meet the requirements of the HRA process, decisions by Teignbridge District Council over future planning applications for development within NA3 Wolborough will need to be informed by:
 - Adequate bat surveys (consistent with the 3nd Edition of the Bat Conservation Trust's "Bat Surveys for Professional Ecologists – Good Practice Guidelines", Natural England's South Hams SAC Planning Guidance 2010 (or its replacement)¹⁸ and in accordance with Clause 6.2 of BS42020:2013);

NOTE: Comprehensive surveys should cover potential roost locations, flight routes and foraging areas and should provide sufficient seasonal coverage to detect/identify differing use in different seasons.

- Accompanying ecological impact assessments (EcIAs), and;
- A Bespoke Greater Horseshoe Bat Mitigation Plan for NA3 concentrating on measures required in sensitive locations (e.g. at bat road crossing points, such as through culverts where the design and alignment of the culvert may be critical and supported by appropriate landform and habitat establishment on either side). An outline for the proposed Bespoke Plan is included as Appendix C of this document.

¹⁸ South Hams SAC Supplementary Planning Guidance, (due early 2019).

NOTE: The provision of a Bespoke Mitigation Plan to support planning applications is a requirement under a number of TDC Local Plan Policies¹⁹. Such detailed information will enable the planning authority to undertake final 'project level' HRA to ensure that all necessary mitigation is an integral part of the proposed development.

5.6.3 The Teignbridge Local Plan Policy NA3 Wolborough includes a requirement that a bespoke greater horseshoe bat mitigation plan must be submitted and approved before planning permission will be granted. Such detailed information will enable the planning authority to undertake final 'project level' HRA to ensure that all necessary mitigation is an integral part of the proposed development.

¹⁹ Provision of Bespoke GHB Mitigation Plans in support of planning applications are an explicit requirement in Local Plan Policies NA1, NA2, NA3, KS1, KS3, KK1, BT1, BT2A, BT2C, BT3, BT4, CH1, CH2, CH3, CH4.

6. Consideration of 'In combination' Effects

6.1. Statutory Requirement

6.1.1. When undertaking HRA, the underlying purpose of Article 6(3) of the Habitats Directive must be considered. This is to ensure that a plan or project is authorised only to the extent that it will not, either 'alone' or 'in combination' with other plans or projects, adversely affect the integrity of a European site. The following sections consider the likely significant effects of NA3 in relation to 'in combination' effects generated by other plans and projects that may affect the integrity of the South Hams SAC.

6.2. Potential 'In Combination' Effects

- In order to inform the assessment of potential 'in combination' effects, TDC has commissioned 6.2.1. the preparation of the South Hams SAC Mitigation Strategy for the Heart of Teignbridge and Bovey Tracey: Mitigating 'In Combination' Effects by Protecting Landscape Connectivity Through Development 'Pinch Points' (Greenbridge Ltd; 2017). This was consulted on between February and April 2017 and responses to the consultation have been reviewed and considered. Due to the timely preparation of the South Hams SAC Greater Horseshoe Bat Joint Supplimentary Planning Document by Devon County Council, Dartmoor National Park, South Hams District Council, Teignbridge District Council and Torbay Council in partnership with Natural England, it has been agreed that this document will be replaced and updated by the SPD rather than issuing a final version. The in-combination effects that the draft Mitigation Strategy refers to have been taken into consideration in the preparation of the SPD.
- 6.2.2. There are a number of planned and consented development projects taking place around Newton Abbot close proximity to NA3. In particular, these include (see Maps 3 and 4):
 - NA3A Beverley Way
 - Houghton Barton, NA1
 - Whitehill, NA2
 - The line of the proposed A382 road improvement scheme north of Newton Abbot
 - Mineral workings in the Bovey Basin
 - Developments applications near The Barn Owl, Kingskerswell
 - Allocations at Kingskerswell
- 6.2.3. There are also a number of major mineral working units in the surrounding Bovey Basin which have the potential to impact on the way in which greater horseshoe bats are able to use the landscape
- 6.2.4. Both individually and collectively these commitments and proposals represent a permanent and irreversible change at a landscape scale, with the potential to further fragment commuting habitats used by greater horseshoe bats to move between the South Hams SAC designated roosts within the Sustenance Zones. These potential landscape scale impacts and incombination effects could affect the favourable conservation status of greater horseshoe bats by restricting landscape scale connectivity and reducing population resilience to change.
- 6.2.5. It is expected that further guidance relating to identifying and managing potential in-combination effects will be consulted on in 2018/19 as part of the process of updating Natural England's guidance currently being undertaken by the South Hams SAC competent authorities. This should be referred to at the point of undertaking further ecological surveys and HRA screening at the planning application stage.

6.3. Likely Effects of Various Road Proposals for Greater Horseshoe Bats

- 6.3.1. Sections 5.3.4 to 5.3.6 above outline research published by Exeter University (2016) which has identified a significant risk to bats from roads, particularly through collision with vehicles²⁰. They can also act as barriers to bat movements due to their width and/or illumination.
- 6.3.2. A combination of recent changes to the road network, coupled with proposed new roads across the landscape in Teignbridge, have the potential to affect greater horseshoe bats; for NA3 these include:
 - The South Devon Link Road south of Newton Abbot (opened in 2016);
 - The line of the proposed A381/A380 link road through NA3 Wolborough.

Implications of the South Devon Link Road (SDLR)

- 6.3.3. Greater horseshoe bats were not identified as a major issue during the work to inform the Environmental Statement for the planning application for the South Devon Link Road (SDLR)²¹. Consequently, no specific mitigation measures have been provided for greater horseshoe bats along the route of the road. However, monitoring by JBA Consulting (S. Jennings Devon County Council; Pers. Comm. July 2016) has established that small numbers of greater horseshoes are using the culverts under the southern section of the road south of Kingskerswell.
- 6.3.4. Greater horseshoe bats are also present on either side of the northern section of the SDLR north of Kingskerswell. From survey work undertaken by EPS Ecology (April 2015) it is known that greater horseshoes are present to the east of the road at Zigzag Quarry adjacent to the northern stretch of the SDLR. Likewise, survey work undertaken by SLR Consulting (April 2104 and November 2015) to inform development of NA3 has established that greater horseshoe bats are also present to the SDLR.
- 6.3.5. The overall land take for the new junction on the northern end of the SDLR has resulted in the loss of potential commuting habitat that previously contributed to the viability of the Strategic Flyway (identified by Natural England 2010). This Strategic Flyway runs in an east-west direction across the line of the SDLR north of Kingskerswell (shown as a dotted line on Map 3). Google Earth Pro shows that ground clearance and vegetation removal for the road at this point is approximately 300m wide; this constitutes the length of Strategic Flyway potentially affected. Consequently, while there is suitable commuting and foraging habitat to the east and west, it must be assumed that the new multiple lane junction (without the benefit of appropriate east-west culverts under the junction) acts as a very substantial barrier to bat movement. It follows that this is likely to have resulted in a reduction in the number of route-options available to the bats, thus creating a likely '*pinch point*' along the flyway.

6.4. The Likely 'In Combination' Effects of Proposed Development on Greater Horseshoe Bats

6.4.1. When the developments outlined in section 6.2 and 6.3 are viewed at the landscape scale (see Map 3) coupled with the full extent of existing built up areas, what becomes apparent is the presence of an almost unbroken swathe of development (of one form or another) stretching all the way from Torbay to Dartmoor. Together these add up to extensive areas of inhospitable land and/or create far-reaching potential barriers in the landscape for greater horseshoe bats. What remains are a number of '*pinch points*' between the existing and proposed developments (see

²⁰ Grace-Fensome A. and Mathews F. (2016) *Roads and bats: a meta-analysis and review of the evidence on vehicle collisions an barrier effects.* Mammal Review. Mammal Society.

²¹ Andrew McCarthy Associates (April 2010) South Devon Link Road (Kingskerswell Bypass) Ecological Mitigation & Monitoring Scheme plan (EMMS)

Map 4). At these locations the quality of habitat and/or the width of commuting routes are much reduced with there being few, if any, suitable alternative routes available.

- 6.4.2. The recent and proposed projects outlined in paragraph 6.2 and 6.3 above therefore constitute a significant cumulative change in the landscape and one that, without adequate mitigation, could result in significant additional barriers for greater horseshoe bats to negotiate when moving through this landscape.
- 6.4.3. As and where the landscape becomes less hospitable for greater horseshoe bats, necessary changes in flight routes, caused by the loss of existing foraging and commuting routes, may of necessity lead to the adoption of new routes that involve longer distances and require greater expenditures of energy with diminished access to suitable foraging areas.
- 6.4.4. The viability of some routes may be lost entirely, or the risks associated with others (e.g. road crossings) may result in reduced permeability and dispersal across the landscape and/or increased mortality.
- 6.4.5. Ultimately, the risk is that the sub-population at the Chudleigh SAC roost in the east becomes significantly more isolated from the greater horseshoe population across the wider SAC area to the south and west. If this occurs it could represent an adverse change in the distribution and abundance of greater horseshoes across South Devon. Such effects would be:
 - in conflict with the *Conservation Objectives* (see Annex B.1 of this HRA) for the South Hams SAC as set out by Natural England, and;
 - likely to have an adverse effect on the *Favourable Conservation Status* (see Annex B.2 of this HRA) of greater horseshoe bats in South Devon.
- 6.4.6 To mitigate for these potential effects, it will be necessary to build sufficient '*resilience*' into the landscape for greater horseshoe bats to ensure that ample opportunities remain in the future for them to be able to adapt to a changing local environment (as is the case now). This necessitates a '*precautionary approach*'²² to both master-planning, through the Development Framework Plan, and the design and implementation of future individual planning applications. A precautionary approach is required by the Habitats Directive and is also justified because our understanding of greater horseshoe bat ecology and behaviour is still incomplete and we cannot predict exactly how they will respond locally to changes in their environment.
- 6.4.7 Consequently, the best that can be achieved is to provide options within the landscape for the bats, based on best available knowledge of their use of the landscape, and to then provide and maintain additional features over and above the bare minimum suggested by existing survey data which are limited because they do not provide a complete picture of their activity. Provision of such measures will enable the bats to select what suits them, rather than humans attempting to predict and plan everything for them and to 'shoe horn' them into what suits us; which is highly likely to be unsuccessful.
- 6.4.8 Such additional mitigation measures should not be considered as unnecessary (or even as simple enhancements) because in reality they are more than this; they should be viewed as measures required to help '*future proof*' proposed mitigation and are necessary in the absence of scientific certainty that such a full set of measures are not required. Otherwise, if we secure only the

²² The *Precautionary Principle/Approach* is one of the key elements for policy decisions concerning environmental protection and management. It is applied in circumstances where there are reasonable grounds for concern that an activity is, or could, cause harm but where there is scientific uncertainty about the probability of the risk and the degree of harm. The Precautionary Principles has been endorsed internationally: Rio Earth Summit (1992) *Agenda 21 Principle 15* and by the European Commission (2000) *Communication on the use of the Precautionary Principle. See* http://jncc.defra.gov.uk/default.aspx?page=2519

'minimum mitigation' that is apparently required today, this does not necessarily provide sufficient options for the bats and nor does it offer long-term resilience. Minimal mitigation measures may be effective for a number of years, but when further change occurs, as inevitably it will, the bats will start to run out of alternatives. In other words, future changes in the landscape that we cannot currently anticipate will, over time, have an increasingly adverse effect on the bats. Worse still, if a minimal approach to mitigation is applied, and those measures aren't effective, then the bats will almost immediately have fewer options available to adapt. The evidence for this is compelling²³, because the well-established historical and ongoing decline in biodiversity is a result of many accumulating small-scale losses i.e. the consequence of multiple 'in combination' effects over time.

- 6.4.9 One means of applying a precautionary approach to reduce 'in combination' effects on greater horseshoe bats is through adoption of the requirements set out in Articles 3 and 10 of the Habitats Directive (1992), and by Regulation 41 of the Habitat and Species Regulations (2017). (More detail on these statutory provisions are provided in Appendix A of this document.) In practice, this means that all proposed new development should adhere to the principles set out in Section 1.3.3 of this HRA and should thereby ensure:
 - The maintenance of dark and unlit habitat connectivity across the wider landscape;
 - The provision of adequate foraging habitat;
 - The provision, where appropriate, of adequate permeability through and between areas of built development following existing and new flight paths;
 - The provision of new bespoke roosts where they will provide 'stepping stones' ²⁴ across the landscape, as well as maintenance of existing roosts.
- 6.4.10 Obviously the aim should be to apply these principles to each development scheme in such a way as to ensure that they do not lead to any residual effects after initial mitigation that could still, 'in combination' with other development, result in an overall significant adverse effect.
- 6.4.11 In relation to greater horseshoe bats, a practical way of *testing* whether a development has left any residual effects is to consider whether after initial scheme mitigation there will still be:
 - i. some loss (quality or quantity) of suitable foraging habitat e.g. cattle grazed pasture;
 - ii. new artificial light in the locality that could still affect the bats adversely;
 - iii. restriction or severance of flight corridors across the landscape that have not been fully reconnected and/or where no alternatives have been provided for elsewhere;
 - iv. lack of adequate permeable routes through the development that prevent the bats from accessing previously used habitat (i.e. without significant increases in energy expenditure);
 - v. some residual impacts that are of relatively limited duration, such as:
 - might be described as 'temporary' effects during construction (e.g. over months);
 - short term effects experienced until new planting becomes established and functional (e.g. <5yrs).

NOTE: Even impacts of limited duration may have permanent or longer terms adverse effects, such as activity that interrupts mating behaviour with subsequent knock-on effects for breeding success, and thereby replenishment of local populations.

²³ The State of Nature UK Report provides evidence that one in ten species in the UK is threatened with extinction and 56% are in decline.

http://www.rspb.org.uk/our-work/conservation/centre-for-conservation-science/research/projects/363867-the-state-ofnature-report

²⁴ For more information on 'stepping stones' see Appendix A.

7. Compliance of the Development Framework Plan with HRA Requirements

- 7.1. The above elements of the HRA have not changed substantially from the HRA of the Local Plan, being based on the same data, policy, guidance and intentions. However, the Development Framework Plan has now been updated to provide further guidance on how and where development at NA3 can be delivered. The Green Infrastructure Strategy map from the revised Development Framework Plan is reproduced at Map 5 below.
- 7.2 The evolution of the current Development Framework Plan has been guided by the NA3 policy and the previous HRAs of the allocation. Every effort has been made to incorporate the mitigation measures recommended by earlier HRA work. This is evident in:
 - The inclusion of the points from Section 5.5 of the HRA in the current Development Framework Plan
 - The proposed network of dark corridors, including retained hedges, new planting and lighting controls
 - Identification of the need for greater horseshoe bat-friendly road crossings on the link road
 - The mapping of locations for four bespoke greater horseshoe bat roosts
 - Identification of the need for cattle grazed pasture in the retained green infrastructure areas
- 7.3 As far as is consistent with its role and level of complexity, the current Development Framework Plan conforms with the HRA requirements for South Hams SAC mitigation measures.
- 7.4 Submission of further detail on the delivery of the required mitigation measures, and Appropriate Assessment of that detail, is the realm of individual planning applications and their Bespoke GHB Mitigation Plans.

8. Conclusion

- 8.1 In undertaking any Habitat Regulations Assessment, the Council must ascertain that the plan and/or proposals would not adversely affect the integrity of a European site. This should only be concluded if the Council has made certain that this is the case. In order to be certain, the planmaking body should be convinced that no reasonable scientific doubt remains as to the absence of such effects.²⁵
- 8.2 However, an absolute guarantee that there will be no adverse effect on site integrity is not possible. The best that can be achieved is for the competent authority to identify the potential risks, so far as they may be reasonably foreseeable, in light of such information as can reasonably be obtained, and then put in place a legally enforceable framework with the aim of preventing the risks from materialising²⁶. In undertaking this Habitat Regulations Assessment, the Council has referred to all of the data available to it on the occurrence and distribution of greater horseshoe bats both within NA3 and across the surrounding landscape.
- 8.3 This HRA identifies the potential risks from development to greater horseshoe bats and has set out mitigation measures that are necessary to avoid such risks from occurring. They have been incorporated as an integral part of the current Development Framework Plan for NA3. (This ensures that the approach is consistent with that already adopted for NA1, NA2 and BT3.)
- 8.4 Consequently, since it is possible to identify appropriate and adequate mitigation that will avoid significant adverse effects (that are capable of being secured through the determination of specific planning applications), it is possible to conclude that the allocation and the current Development Framework Plan will not result in adverse effects on the integrity of the South Hams SAC.
- 8.5 However, it is essential that all necessary mitigation is secured and implemented. Consequently, the Council must in order to discharge its statutory obligations ensure that all future planning applications are subjected to adequate scrutiny through a Habitat Regulations Appropriate Assessment, wherever uncertainty remains over possible adverse effects on the integrity of the SAC.
- 8.6 The Council will continue to liaise with the other SAC Competent Authorities to ensure that development proposals do not give rise to any in combination effects on the South Hams SAC.

²⁵ See paragraph 61 European Court of Justice case C-127/02 dated 7th September 2004, 'the Waddenzee ruling'

²⁶ WWF-UK Ltd and RSPB v Secretary of State for Scotland et al [1999] 1 C.M.L.R. 1021 [1999] Env LR 632, Court of Session, Edinburgh, 28th October 1998

APPENDIX A

PROTECTION AND ENHANCEMENT OF ECOLOGICAL NETWORKS

- A.1.1 Across Europe, all of the Special Areas for Conservation (SACs) and Special Protection Areas (SPAs) together contribute to the European Natura 2000 network. The protection, management, and enhancement of such ecological networks, and especially those relating to the *Natura 2000* network, are identified as being particularly important in the *EU Habitats Directive*.
- A.1.2 Article 3 of the Directive states:

Where they consider it necessary, Member States shall endeavour to improve the ecological coherence of Natura 2000 by maintaining, and where appropriate developing, features of the landscape which are of major importance for wild fauna and flora, as referred to in Article 10.

A.1.3 Article 10 then goes on to explain:

Member States shall endeavour, where they consider it necessary, in their land use planning and development policies and, in particular, with a view to improving the ecological coherence of The Natura 2000 network, to encourage the management of features of the landscape which are of major importance for wild fauna and flora. Such features are those which, by virtue of their linear and continuous structure (such as rivers with their banks or the traditional systems of marking field boundaries) or their function as stepping stones (such as ponds or small woods), are essential for the migration, dispersal and genetic exchange of wild species.

- A.1.4 The Conservation of Habitats and Species Regulations (2010) transpose the above EU Directive into English legislation. Regulation 41 requires development Plan policies to include policies that implement at the local level the requirements of Article 10 so as to encourage the management of features of the landscape which are of major importance for wild flora and fauna.
- *A.1.5* In relation to the recent and potential development discussed in this document, Regulation 41 provides Teignbridge District Council with an opportunity to link conservation objectives to the development of some if not most of the sites under consideration. In particular, the LPA has both a justification and a statutory mechanism by which they can seek through their development Plan policies the management and enhancement of landscape features in and around the Local Plan Areal which are of major importance for GHBs.
- A.1.6 For instance, planning for Green Infrastructure in and around the areas of development discussed in this document could also lead to significant biodiversity gains and substantial improvement of GHB commuting and foraging habitat providing the bats with a very much enhanced flyways around and through the settlements between Torquay and Bovey Tracy. Such measures could also contribute to wider Green Infrastructure objectives and achieve benefits that could then also be enjoyed by the local community.

APPENDIX B

SAC CONSERVATION OBJECTIVES AND GHB CONSERVATION STATUS

B.1. South Hams SAC Conservation Objectives

B.1.1 As required by the Habitats Directive, high-level '*Conservation Objectives*' for the South Hams SAC have been identified by Natural England. An overarching objective and a list of further generic objectives aim to:

[•]Avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving <u>Favourable Conservation</u> <u>Status</u> of each of the qualifying features.[•]

This is to be achieved by, subject to natural change, maintaining and restoring:

- The extent and distribution of the qualifying natural habitats and habitats of qualifying species.
- The structure and function (including typical species) of qualifying natural habitats and habitats of qualifying species.
- The supporting processes on which qualifying natural habitats and habitats of qualifying species rely.
- The populations of qualifying species.
- The distribution of qualifying species within the site'.

NOTE Natural England is in the process of preparing site-specific objectives for each SAC and SPA in England.

B.1.2 The application of these objectives will be site specific and dependant on the nature of the site and its features. The local planning authorities should take these objectives into account when undertaking Habitat Regulations Assessments.

B.2 Favourable Conservation Status (FCS)

- B.2.1 Article 2(1) of the Habitats Directive states that '*Measures taken pursuant to this Directive shall* be designed to maintain or restore at <u>favourable conservation status</u>, natural habitats and species of wild fauna and flora of Community interest' (emphasis added).
- *B.2.2* The concept of 'conservation status' is therefore fundamental to the purposes of the Habitats Directive. Article 1(i) defines the conservation status of a species as:

'the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its population within the territory referred to in Article 2' and continues that the conservation status of the species will be taken as 'favourable' when:

- 'population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis'

APPENDIX C

OUTLINE STRUCTURE FOR A GREATER HORSESHOE BAT BESPOKE MITIGATION PLAN

An evidenced based and bespoke mitigation plan for greater horseshoe bats should provide information on 'why', 'what, 'where, 'when' and 'how' the various necessary mitigation proposals will be provided and 'who' will be responsible for their implementation. As such the plan should include:

- a) Summary of greater horseshoe activity and suitable habitat features recorded on site and in the surrounding landscape so as to provide context for on-site mitigation proposals.
- b) Purpose (e.g. overall aim) and conservation objectives for all proposed mitigation measures intended to support greater horseshoe bat conservation associated with any specific planning application²⁷.

NOTE: Where the Council has prepared a Habitat Regulations Assessment Report for a Development Framework Plan, this should be used to provide context for and to inform the aims and objectives of the bespoke mitigation plan.

- c) Review of site opportunities and constraints (e.g. illustrated visually where relevant through an *Ecological Constraints and Opportunities* Plan (ECOP see BS42020 Clause 5.4 page 17).
- d) Design concepts, principles and details and intended working method(s) for all capital works necessary to achieve stated objectives²⁸.
- e) Extent and location/area of all detailed proposed mitigation measures shown on appropriate scale maps and plans.
- f) Type and source of materials to be use where appropriate; for instance:
 - i) native species as an integral component of landscape planting and/or
 - ii) materials for any capital works e.g. bespoke bat roosts or road crossing points e.g. underpasses.
- g) Measures necessary to avoid or mitigate adverse effects during the construction of the proposed development e.g. to be secured through a *Construction Environmental Management Plan* (CEMP).
- h) Timetable for implementation demonstrating that works are aligned with the proposed phasing of development.
- i) Details for disposal of any wastes arising from works.
- j) Details of long-term management to sustain proposed features for future generations e.g. to be secured through a detailed *Landscape and Ecological Management Plan* (LEMP).
- k) Details for monitoring and remedial/contingencies measures e.g. to be secured through a detailed *Ecological Monitoring and Contingencies Strategy* (EMCS).
- I) Persons responsible for implementing the works.

The above outline is based on Annex 4.3 and 4.4 of BS42020 *Biodiversity – A Code of Practice for Planning and Development* (2013).

²⁷ It may be useful to demonstrate how the purpose and conservation objectives for proposed mitigation on (and where appropriate offsite) may assist in the achievement of the over-arching Conservation Objectives set for the South Hams Special Area of Conservation (SAC) by Natural England.

²⁸ Design details and working methods should provide sufficient information to demonstrate that the proposed mitigation will deliver stated aims and objectives if granted consent. Particular regard should be given to:

⁽i) likely effectiveness, e.g. proposed mitigation measures are appropriate to the case and technically feasible and, if implemented, likely to achieve desired outcomes;

⁽ii) certainty over deliverability, e.g. there is evidence of commitment and adequate legal mechanisms to secure sufficient land and resources to implement necessary measures, and;

⁽iii) whether the intention is to secure proposed measures, and the necessary resources for their delivery, through either planning condition(s) and/or a planning obligation - or other appropriate mechanism.

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Maps and Aerial Photos



Map 2 Recorded GHB Activity in the wider landscape surrounding NA3



Map 3 Overview of Large-scale Development: Torquay to Bovey Tracey

Map 3: Overview of Large-scale Development: Torquay to Bovey Tracey

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Aerial Photo 2 Land Parcels within NA3



Aerial Photo 3 GHB Flight Corridors – Established and Predicted



Map 5 Green Infrastructure Strategy Map from DFP

Teignbridge District Council / Greenbridge Ltd NA3 Wolborough 12th July 2018

Habitat Regulations Assessment for