Habitat Regulation Assessment: Totnes Neighbourhood Plan

Totnes Neighbourhood Plan Group

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Quality information

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1. Introduction

Background of the Project

1.1 AECOM was appointed by the Totnes Neighbourhood Plan Group to undertake a Habitats Regulations Assessment (HRA) for the Totnes Neighbourhood Plan (TNP) 2019-2034. This is to inform the group and District Council of the potential effects of Neighbourhood Plan (NP) development on European Sites and how they are being, or should be, addressed in the draft NP.

1.2 The objectives of the assessment are to:

- Identify any aspects of the Neighbourhood Plan that would cause an adverse effect on the integrity of international sites (Special Areas of Conservation (SACs), Special Protection Areas (SPAs)) including, as a matter of Government policy, Ramsar sites, either in isolation or in combination with other plans and projects, and
- To advise on appropriate policy mechanisms for delivering mitigation where such effects were identified.

1.3 The HRA of the Totnes Neighbourhood Plan is required to determine if there are any realistic linking pathways present between an international site and the Neighbourhood Plan and where Likely Significant Effects cannot be screened out, an analysis to inform Appropriate Assessment to be undertaken to determine if adverse effects on the integrity of the international sites will occur as a result of the Neighbourhood Plan alone or in combination.

Legislation

1.4 The need for HRA is set out within the Conservation of Habitats & Species Regulations 2017 (as amended) and concerns the protection of European sites. European sites can be defined as actual or proposed/candidate Special Areas of Conservation (SAC) or Special Protection Areas (SPA). It is also Government policy for sites designated under the Convention on Wetlands of International Importance (Ramsar sites) to be treated as having equivalent status to European sites.

1.5 The HRA process applies the precautionary principle to protected areas. Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the site(s) in question. Plans and projects may still be permitted if there are no alternatives to them and there are Imperative Reasons of Overriding Public Interest (IROPI) as to why they should go ahead. In such cases, compensation would be necessary to ensure the overall integrity of the site network.

> **Conservation of Habitats and Species Regulations 2017 (as amended)**
>
> With specific reference to Neighbourhood Plans, Regulation 106(1) states that:
>
> "*A qualifying body which submits a proposal for a neighbourhood development plan must provide such information as the competent authority* [the Local Planning Authority] *may reasonably require for the purpose of the assessment under regulation 105…* [which sets out the formal process for determination of 'likely significant effects' and the appropriate assessment']."

Box 1: The legislative basis for HRA

1.6 It is therefore important to note that this report has two purposes:

- To assist the Qualifying Body in preparing their plan by recommending (where necessary) any adjustments required to protect European sites, thus making it more likely their plan will be deemed compliant with the Conservation of Habitats and Species Regulations 2017 (as amended); and
- On behalf of the Qualifying Body, to assist the Local Planning Authority to discharge their duty under Regulation 105 (in their role as 'plan-making authority' within the meaning of that regulation) and Regulation 106 (in their role as 'competent authority').

1.7 As 'competent authority', the legal responsibility for ensuring that a decision of 'likely significant effects' is made, for ensuring an 'appropriate assessment' (where required) is undertaken, and for ensuring Natural

England are consulted, falls on the local planning authority and the Neighbourhood Plan examiner. However, they are entitled to request from the Qualifying Body the necessary information on which to base their judgment and that is a key purpose of this report. As competent authority Devon Council are entitled to make as much or little use of this HRA report as they consider necessary to conclude their statutory process. Similarly, while recommendations may be made in this report for amendments to the NP to improve protection of European sites, Devon Council's view as competent authority overrides AECOMs view.

1.8 The Habitats Regulations applies the precautionary principle to international sites: SAC, SPA, and Ramsar. For the purposes of this assessment candidate SACs (cSACs), proposed SPAs (pSPAs) and proposed Ramsar (pRamsar) sites are all treated as fully designated sites.

1.9 Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the site(s) in question. This contrasts with the SEA Directive which does not prescribe how plan or programme proponents should respond to the findings of an environmental assessment; merely that the assessment findings (as documented in the 'environmental report') should be 'taken into account' during preparation of the plan or programme.

1.10 In 2018, the 'People Over Wind' European Court of Justice (ECJ) ruling determined that 'mitigation' (i.e. measures that are specifically introduced to avoid or reduce the harmful effects of a plan or project on international sites) should not be taken into account when forming a view on likely significant effects. Mitigation should instead only be considered at the appropriate assessment stage. Appropriate assessment is not a technical term: it simply means 'an assessment that is appropriate' for the plan or project in question. As such, the law purposely does not prescribe what it should consist of or how it should be presented; these are decisions to be made on a case by case basis by the competent authority. An amendment was made to the Neighbourhood Planning Regulations in late 2018 which permitted Neighbourhood Plans to be made if they required appropriate assessment.

1.11 Over the years, 'Habitats Regulations Assessment' (HRA) has come into wide currency to describe the overall process set out in the Habitats Regulations, from screening through to identification of IROPI. This has arisen in order to distinguish the overall process from the individual stage of "Appropriate Assessment". Throughout this Report the term HRA is used for the overall process and restricts the use of Appropriate Assessment to the specific stage of that name.

3. Methodology

Introduction

3.1 Figure 1 below outlines the stages of HRA according to current Ministry of Housing, Communities and Local Government guidance. The stages are essentially iterative, being revisited as necessary in response to more detailed information, recommendations and any relevant changes to the Plan until no significant adverse effects remain.

Figure 1: Four Stage Approach to Habitats Regulations Assessment. Source GOV.UK, 2019.

HRA Task 1 – Likely Significant Effects (LSE)

3.2 Following evidence gathering, the first stage of any Habitats Regulations Assessment is a Likely Significant Effect (LSE) test - essentially a risk assessment to decide whether the full subsequent stage known as Appropriate Assessment is required. The essential question is:

"*Is the project, either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon European sites?*"

3.3 The objective is to 'screen out' those plans and projects that can, without any detailed appraisal, be said to be unlikely to result in significant adverse effects upon European sites, usually because there is no mechanism for an adverse interaction with European sites. This stage is undertaken in Chapter 4 of this report.

HRA Task 2 – Appropriate Assessment (AA)

3.4 Where it is determined that a conclusion of 'no likely significant effect' cannot be drawn, the analysis has proceeded to the next stage of HRA known as Appropriate Assessment. Case law has clarified that 'appropriate assessment' is not a technical term. In other words, there are no particular technical analyses,

or level of technical analysis, that are classified by law as belonging to appropriate assessment rather than determination of likely significant effects.

3.5 During July 2019 the Ministry of Housing, Communities and Local Government published guidance for Appropriate assessment[1]. Paragraph: 001 Reference ID: 65-001-20190722m explains: '*Where the potential for likely significant effects cannot be excluded, a competent authority must make an appropriate assessment of the implications of the plan or project for that site, in view of the site's conservation objectives. The competent authority may agree to the plan or project only after having ruled out adverse effects on the integrity of the habitats site. Where an adverse effect on the site's integrity cannot be ruled out, and where there are no alternative solutions, the plan or project can only proceed if there are imperative reasons of over-riding public interest and if the necessary compensatory measures can be secured*'.

3.6 As this analysis follows on from the screening process, there is a clear implication that the analysis will be more detailed than undertaken at the Screening stage and one of the key considerations during appropriate assessment is whether there is available mitigation that would entirely address the potential effect. In practice, the appropriate assessment takes any policies or allocations that could not be dismissed following the high-level screening analysis and analyses the potential for an effect in more detail, with a view to concluding whether there would be an adverse effect on integrity (in other words, disruption of the coherent structure and function of the European site(s)).

3.7 A decision by the European Court of Justice[2] concluded that measures intended to avoid or reduce the harmful effects of a proposed project on a European site may no longer be taken into account by competent authorities at the Likely Significant Effects or 'screening' stage of HRA. The UK is no longer part of the European Union. However, as a precaution, it is assumed for the purposes of this HRA that EU case law regarding Habitat Regulations Assessment will still be considered informative jurisprudence by the UK courts. That ruling has therefore been considered in producing this HRA.

3.8 Also, in 2018 the Holohan ruling[3] was handed down by the European Court of Justice. Among other provisions paragraph 39 of the ruling states that '*As regards other habitat types or species, which are present on the site, but for which that site has not been listed, and with respect to habitat types and species located outside that site, … typical habitats or species must be included in the appropriate assessment, if they are necessary to the conservation of the habitat types and species listed for the protected area*' [emphasis added]. This has been taken into account in the HRA process.

HRA Task 3 – Avoidance and Mitigation

3.9 Where necessary, measures are recommended for incorporation into the Plan in order to avoid or mitigate adverse effects on European sites. There is considerable precedent concerning the level of detail that a Neighbourhood Plan document needs to contain regarding mitigation for recreational impacts on European sites. The implication of this precedent is that it is not necessary for all measures that will be deployed to be fully developed prior to adoption of the Plan, but the Plan must provide an adequate policy framework within which these measures can be delivered.

3.10 When discussing 'mitigation' for a Neighbourhood Plan document, one is concerned primarily with the policy framework to enable the delivery of such mitigation rather than the details of the mitigation measures themselves since the Local Development Plan document is a high-level policy document. A Neighbourhood Plan is a lower level constituent of a Local Development Plan.

Confirming Other Plans and Projects That May Act 'In Combination'

3.11 It is a requirement of the Regulations that the impacts of any land use plan being assessed are not considered in isolation but in combination with other plans and projects that may also be affecting the European site(s) in question.

[1] https://www.gov.uk/guidance/appropriate-assessment#what-are-the-implications-of-the-people-over-wind-judgment-for-habitats-regulations-assessments [Accessed: 14/04/2021].
[2] People Over Wind and Sweetman v Coillte Teoranta (C-323/17)
[3] Case C-461/17

3.12 In considering the potential for combined regional housing development to impact on European sites the primary consideration is the impact of visitor numbers – i.e. recreational pressure and urbanisation.

3.13 When undertaking this part of the assessment it is essential to bear in mind the principal intention behind the legislation i.e. to ensure that those projects or plans (which in themselves may have minor impacts) are not simply dismissed on that basis but are evaluated for any cumulative contribution they may make to an overall significant effect. In practice, in-combination assessment is therefore of greatest relevance when the plan or policy would otherwise be screened out because its individual contribution is inconsequential.

4. Internationally Designated Sites Relevant to the Neighbourhood Plan

4.1 There are no standard criteria for determining the ultimate physical scope of an HRA. Rather, the source-pathway-receptor model should be used to determine whether there is any potential pathway connecting development to any European sites.

4.2 The following European sites are considered relevant to this assessment. No impact pathways linking to other European sites have been identified. The next nearest European site is Dartmoor SAC, located 12km from Totnes.

Table 1. European Sites for Consideration and their Location in Relation to the Totnes Neighbourhood Plan

European site	Location
South Hams SAC	Located 4 km from the TNP boundary at its closest.
South Dartmoor Woods SAC	Located 8.7 km from the TNP boundary at its closest.

Source: https://magic.defra.gov.uk/MagicMap.aspx

4.3 The reason for designation, conservation objectives and environmental vulnerabilities of the European sites are detailed below.

South Hams SAC

Introduction

4.4 The Devonian limestone headland and cliffs of the Torbay area of south Devon support a large area of the rare sheep's-fescue – carline thistle (*Festuca ovina – Carlina vulgaris*) grassland, including the autumn squill – Portland spurge (*Scilla autumnalis – Euphorbia portlandica*) sub-community, known from no other site in the UK. The site is exceptional in that it supports a number of rare and scarce vascular plants typical of the oceanic southern temperate and Mediterranean-Atlantic elements of the British flora. These include Portland spurge, rock stonecrop *Sedum forsterianum*, autumn squill and small hare's-ear *Bupleurum baldense*. On flatter slopes above the cliffs the grassland gives way to dry heaths characteristic of acid soils. Both heather – spring squill (*Calluna vulgaris – Scilla verna*) and heather – western gorse *Ulex gallii* heaths are represented.

4.5 The site includes some of the best examples of semi-natural woodland developed on limestone in Devon. The main block of woodland occupies a steep-sided valley on less steep hillsides to the south-west and north-east, all between 30 and 100 metres altitude. Most of the site is underlain by Devonian limestone, but the woodland at the extreme south-west has developed on base-rich shales. The woodland on the steepest slopes may have originated from a coppice with pollard system, with a high canopy and extensive shrub layer and ground flora.

4.6 Trees on the more exposed rock outcrops are stunted. Some mixed woodland has been planted but nevertheless contains a significant proportion of native species and rich ground flora, while other woods have a semi-natural structure. The trees forming the canopy are a mixture of pedunculate oak *Quercus robur*, ash Fraxinus excelsior, field maple *Acer campestre*, small-leaved lime *Tilia cordata*, wych elm *Ulmus glabra* and wild cherry *Prunus avium*, with some wild service-tree *Sorbus torminalis*. A wide variety of native shrub species form the understorey.

4.7 The caves at Buckfastleigh are a good example of cave formation during the Pleistocene period. Abundant in the cave waters is the endemic crustacean *Niphargellus glenniei*, an animal thought to be a pre-glacial relict. The caves at Buckfastleigh, Haytor and Bulkamore Iron Mines also provide an important winter roost site for a large colony of the rare and endangered greater horseshoe bat *Rhinolophus ferrumequinum*, while the buildings at Buckfastleigh support nursery roosts during the summer months.

4.8 The buildings and caves at Buckfastleigh Caves, Chudleigh Caves and Woods, and Berry Head to Sharkham Point support the most important hibernation site in southwest England for the bats and this part of the site is also used throughout the year by other bat species, including lesser horseshoe R. *hipposideros* and natterer's *Myotis nattereri*. High Marks Barn SSSI is considered integral to the SAC population of greater horseshoe bats but is not included in the original SAC designation.

Reasons for Designation

4.9 Qualifying Annex I habitats:

- Caves not open to the public
- European dry heaths
- Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco Brometalia*). (Dry grasslands and scrublands on chalk or limestone)
- Tilio-Acerion forests of slopes, screes and ravines. (Mixed woodland on base-rich soils associated with rocky slopes)*
- Vegetated sea cliffs of the Atlantic and Baltic coasts

4.10 Qualifying Annex II species:

- Greater horseshoe bat *Rhinolophus ferrumequinum*

4.11 Annex I priority habitats are denoted by an asterisk (*).

Conservation Objectives[4]

4.12 "With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

4.13 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

Current Pressures and Threats

4.14 The Site Improvement Plan[5] identifies the following pressures and threats to the SAC:

- Planning Permission general
- Change in land management
- Forestry and woodland management
- Physical modification
- Inappropriate vegetation management
- Public Access/Disturbance

[4] http://publications.naturalengland.org.uk/publication/6279422093033472 [Accessed 15/04/2021]
[5] http://publications.naturalengland.org.uk/publication/5900395054366720 [Accessed 15/04/2021]

- Inappropriate scrub control
- Air Pollution: risk of atmospheric nitrogen deposition

South Dartmoor Woods SAC

Introduction

4.1 This complex of old sessile oak woods in south-west England supports nationally important assemblages of lower plants and dry Lobarion communities that are unique in Western Europe. This complex of old sessile oak *Quercus petraea* supports important assemblages of lower plants and dry Lobarion communities that are unique in Western Europe. The woods are notable for the variations in stand type that reflect past management (old coppice and high forest) and also include grazed and ungrazed areas. The woodland is part of a complex mosaic that includes heathland and species associated with open ground, such as the high brown fritillary *Argynnis adippe* and pearl-bordered fritillary butterfly *Boloria euphrosyne*. Variations also arise due to geology, resulting in the presence of small-leaved lime *Tilia cordata*, ash *Fraxinus excelsior*, wild service tree *Sorbus torminalis*, and small areas of wet woodland dominated by alder *Alnus glutinosa* and willow *Salix spp*.

4.2 Heathland on Trendlebere Down to the north of Yarner Wood is dominated by heather *Calluna vilgaris* and also contains abundant bell heather *Erica cinerea*, cross-leaved heath *Erica tetralix*, western gorse *Ulex gallii*, purple moor-grass *Molinia caerulea* and scrub birch *Betula sp*. Secondary birch has also developed with bracken *Pteridium aquilinum* on the sites of old field systems, where there is active regeneration of oak.

Reason for Designation

4.3 Qualifying Annex I habitats:

- Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles. (Western acidic oak woodland)
- European dry heaths

Conservation Objectives[6]

4.4 "With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Dredging (on-site with major impact)

4.5 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely

Current Threats or Pressures

4.6 The Site Improvement Plan[7] identifies the following pressures and threats to the SAC:

- Air Pollution: risk of atmospheric nitrogen deposition

[6] http://publications.naturalengland.org.uk/publication/5070408931868672 [Accessed 15/04/2021]
[7] http://publications.naturalengland.org.uk/publication/6031967451611136 [Accessed 15/04/2021]

5. Test of Likely Significant Effects

Physical scope of the HRA

5.1 Based upon Natural England Site Improvement Plans, there are eight impact pathways that require consideration regarding increased development within the TNP area and the two scoped in European sites.

5.2 Table 2 describes these environmental impact pathways. The consideration of Neighbourhood Plan policies (the Test of Likely Significant Effects) is then documented in Table 3.

Impact Pathways

5.3 Based on the Natural England Site Improvement Plan there are eight pressures and threats that are linked to the to the European sites. These are:

- Planning permission general
- Change in land management
- Forestry and woodland management
- Physical modification
- Inappropriate vegetation management
- Public access / disturbance
- Inappropriate scrub control
- Air pollution: risk of atmospheric nitrogen deposition.

5.4 Some of these pressures and threats fall within three larger impact pathways being loss of:

- Functionally linked land:
  - Planning permission general
  - Change in land management
  - Forestry and woodland management
- Recreational pressure:
  - Public access / disturbance
  - Planning permission general
- Atmospheric pollution (atmospheric nitrogen deposition):
  - Air pollution: risk of atmospheric nitrogen deposition
  - Planning permission general

Loss of Functionally Linked Land

5.5 While most European sites have been geographically defined to encompass the key features that are necessary for coherence of their structure and function, and the support of their qualifying features, this is not always the case. A diverse array of qualifying species including birds, bats and amphibians are not confined to the boundary of designated sites.

5.6 For example, the highly mobile nature of bats implies that areas of habitat of crucial importance to the maintenance of their populations are outside the physical limits of European sites. Despite not being part of

the formal designation, this habitat is still integral to the maintenance of the structure and function of the interest feature on the designated site and, therefore, land use plans that may affect such areas should be subject to further assessment.

5.7 The foraging behaviour of greater horseshoe bats is quite well understood. They forage on a range of insects depending upon availability and accessibility. Their preferred food is large beetles, such as cockchafers and dung beetles, large moths and caddis flies. Different insect prey are available at different times of year and from different habitat types, and a bats ability to forage depends upon its age and experience. Studies suggest that they prefer to forage within broadleaved woodland and adjacent pastures in spring, and then move further afield to meadows and pastures in the summer. They seek the best feeding opportunities to achieve greatest foraging efficiency. Most adult foraging occurs within 4km of the main breeding roost (Roost Sustenance Zone). Adults generally forage between 3-5km of the main breeding roost in mid-summer and much smaller distances in Spring and Autumn, generally less than 1km. Greater Horseshoe bats prefer cattle grazed permanent pastures which have a well-developed vegetation structure. Young bats are typically restricted to a 1km radius of their breeding roost (Young sustenance zone).

5.8 Greater horseshoe bats have a 'weak' echolocation call. They therefor generally fly close to the ground (up to ~2m) and close to linear landscape features such as hedges, woodland edge and vegetated watercourses which they use for navigation. Bats may use different commuting routes at different times of the year.

5.9 The guidance from the South Hams SAC Habitat Regulations Assessment Guidance[8] about developments which might impact the SAC states that the development should be designed to avoid impacts through:

- Avoiding loss, damage, or disturbance to greater horseshoe bat roosts, foraging habitats, and commuting routes and maintaining connectivity to offsite habitats.
- Where appropriate, creating sufficiently wide and dark buffers along or around habitats to protect them from impacts.
- Designing any lighting schemes to prevent impacts on known or potential greater horseshoe bat habitat.
- Designing the scheme to avoid future impacts e.g. impacts from the future introduction of householder lighting, safety lighting or household hedge management.

5.10 As Totnes lies Within the consultation area, which is the combined area of the sustenance zones and landscape connectivity zone, it should keep to the guidance given in the South Hams SAC Habitat Regulations Assessment Guidance.

Recreational Pressure

5.11 There is growing concern over the cumulative impacts of recreation on key nature conservation sites in the UK, as most sites must fulfil conservation objectives while also providing recreational opportunity. Various research reports have provided compelling links between changes in housing and access levels and impacts on European protected sites. Different European sites are subject to different types of recreational pressures and have different vulnerabilities. Studies across a range of species have shown that the effects from recreation can be complex. HRAs of Local Plans tend to focus on recreational sources of disturbance as a result of new residents.

5.12 Increased development near a European site area could lead to higher numbers of visitors to European Sites, particularly those within relatively easy recreational access. For example, the nature, scale, timing and duration of some human activities can result in the disturbance of bats at a level that may substantially affect their behaviour, and consequently affect the long-term viability of the population. Increased visitors can have direct and indirect impacts for a European Site that could prevent said site achieving its conservation objectives.

Atmospheric Pollution (Atmospheric Nitrogen Deposition)

5.13 The main pollutants of concern for European sites are oxides of nitrogen (NOx), ammonia (NH_3) and sulphur dioxide (SO_2). Ammonia can have a directly toxic effect upon vegetation, particularly at close distances to

[8] https://www.devon.gov.uk/planning/planning-policies/other-county-policy-and-guidance/south-hams-sac-guidance

the source such as near road verges[9]. NOx can also be toxic at very high concentrations (far above the annual average critical level). However, in particular, high levels of NOx and NH_3 are likely to increase the total N deposition to soils, potentially leading to deleterious knock-on effects in resident ecosystems. Increases in nitrogen deposition from the atmosphere is widely known to enhance soil fertility and to lead to eutrophication. This often has adverse effects on the community composition and quality of semi-natural, nitrogen-limited terrestrial and aquatic habitats[10] [11].

5.14 Sulphur dioxide emissions overwhelmingly derive from power stations and industrial processes that require the combustion of coal and oil, as well as (particularly on a local scale) shipping[12]. Ammonia emissions originate from agricultural practices[13], with some chemical processes also making notable contributions. As such, it is unlikely that material increases in SO_2 or NH_3 emissions will be associated with the available Local Plan Documents.

5.15 NO_x emissions, however, are dominated by the output of vehicle exhausts (more than half of all emissions). A 'typical' housing development will contribute by far the largest portion to its overall NO_x footprint (92%) through the associated road traffic. Other sources, although relevant, are of minor importance (8%) in comparison[14]. Emissions of NO_x could therefore be reasonably expected to increase because of a higher number of vehicles due to implementation of the Local Plan Documents.

[9] http://www.apis.ac.uk/overview/pollutants/overview_NOx.htm.
[10] Wolseley, P. A.; James, P. W.; Theobald, M. R.; Sutton, M. A. **2006.** Detecting changes in epiphytic lichen communities at sites affected by atmospheric ammonia from agricultural sources. Lichenologist 38: 161-176
[11] Dijk, N. **2011.** Dry deposition of ammonia gas drives species change faster than wet deposition of ammonium ions: evidence from a long-term field manipulation Global Change Biology 17: 3589-3607
[12] http://www.apis.ac.uk/overview/pollutants/overview_SO2.htm.
[13] Pain, B.F.; Weerden, T.J.; Chambers, B.J.; Phillips, V.R.; Jarvis, S.C. 1998. A new inventory for ammonia emissions from U.K. agriculture. Atmospheric Environment 32: 309-313
[14] Proportions calculated based upon data presented in Dore CJ et al. 2005. UK Emissions of Air Pollutants 1970 – 2003. UK National Atmospheric Emissions Inventory. http://www.airquality.co.uk/archive/index.php

Table 2. Description of potential impact pathways from increased development to European Sites.

Impact pathway	Summary
Changes in land management	Changes in pasture or grazing management may reduce the value of the habitat surrounding the South Downs SAC for foraging by Greater horseshoe bats. Changes to hedgerow management may also reduce their value to that bats.
Planning Permission: general	Development on the land between the five SSSIs that make up the South Hams SAC could have an impact on bats through loss of foraging habitat, loss of minor roost sites, and disruption of flightpaths (the latter particularly through light pollution). The issue is generally handled through the planning process by the local planning authorities with advice from Natural England.
Physical modification	The infilled rubbish tip at the old entrance of Bakers Pit in the South Hams SAC is causing the temperature and humidity to rise. Rubbish is leaching into the cave entrance and could have an adverse effect on the hibernating bat roosts for Greater horseshoe bats. However, this particular part of the site is not the major roost and the issue has therefore been assigned a relatively low priority.
Inappropriate vegetation management	There is a need to put a maintenance programme in place and to identify resources to manage vegetation around the entrances and to maintain the grilles and gates on some sites.
Public Access / Disturbance	Roost sites are protected, where necessary by grilles to control access. Activities of climbers and general recreational use nearby could potentially cause disturbance. The intensive use of the grasslands of the Berry Head SSSI by thousands of walkers each year is reducing the sward height so that flowering is unlikely - in places the sward is worn away to bare ground. Many of the walkers are accompanied by dogs whose urine and faeces may alter the nutrient balance in the soil that supports the grassland.
Forestry and woodland management	There is a need to manage the woodland to create conditions favourable to lichens. This might include measures such as ivy removal, woodland thinning, and grazing. A management plan will consider the best methods for the site.
Inappropriate scrub control	In the absence of grazing, scrub species (blackthorn, European gorse, etc) naturally colonise open habitats and eliminate small flowering plants through shade and changes to the soil.
Air Pollution: risk of atmospheric nitrogen deposition	The South Hams SAC habitats are naturally low in nutrients and are therefore susceptible to eutrophication. Nitrogen deposition exceeds the site-relevant critical load for ecosystem protection and hence there is a risk of harmful effects, but the sensitive features are currently considered to be in favourable condition on the site. This requires further investigation. In the South Dartmoor Woods nitrogen deposition exceeds the site-relevant critical load for ecosystem protection and hence there is a risk of harmful effects, but the sensitive features are currently considered to be in favourable condition on the site. This requires further investigation. As a consequence, from the old sessile oak woods habitat there is a risk of a decrease in mycorrhiza, a loss of epiphytic lichens and bryophytes, and changes in ground vegetation. With respect to heath habitat there is a risk of a transition from heather to grass dominance, a decline in lichens, changes in plant biochemistry and increased sensitivity to abiotic stress.

Table 3. Screening assessment (likely significant effect) of the TNP.

Policy	European Sites and Proximity to Policy Area	Brief summary	Screening outcome
Policy V1: Local Identity	N/A	Policy describes how support will be given to new development in Totnes which conserves and enhances the town and its reputation.	**No Likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy V2: Health and Wellbeing	N/A	Policy describes how support will be given to new development which results in benefits to local community health and wellbeing.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy En1: Sustainable Development and the Settlement Boundary	N/A	Policy describes the criteria needed for future development within and outside the settlement boundary of Totnes parish.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy En2: Development and Design	N/A	Policy describes the design criteria needed for future development.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy En3: Historic and Built Character	N/A	Policy describes the need for new development to respect the historic and built character of the town and protect the heritage assets of Totnes	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy En4: Landscape Setting of Totnes	N/A	Policy describes the need for new development to not adversely impact the landscape setting of Totnes.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy En5: The River Dart	N/A	Policy describes the criteria for new development on or adjacent to the river.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy En6: Enhancing Local Environmental Capacity	N/A	Policy describes the requirement for new developments to provide an overall enrichment in local environmental capacity with the scale of the development.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy En7: Renewable Energy Generation	N/A	Policy describes the requirement for new developments to incorporate and maximize opportunities for the use of renewable energy generation.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy En8: Domestic and Small-Scale Waste Management	N/A	Policy states that new development should make provisions to be processed on site wherever possible.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.

Policy	European Sites and Proximity to Policy Area	Brief summary	Screening outcome
Policy En9: Local Food Growing	N/A	Policy states that new development are encouraged to take full advantage of and enable on-site potential to grow food.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy E1: The Local Economy	N/A	Policy states the requirements needed for new employment and economic development as well as the requirements needed to enhance local employment opportunities.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy E2: Existing Employment Land and Premises	N/A	Policy states that existing employment land and premises will be safeguarded and kept available for such use unless it can be demonstrated that it cannot be used for continued employment.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy E3: The Town Centre	N/A	Policy states the requirements for new development within the town centre, as well as the plans to maintain the town centre.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy E4: Training and Education	N/A	Policy states the requirements for new developments to be supported that support education and training	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy E5: The Industrial Estate	N/A	Policy states the requirements for new developments to be supported that increase amount and quality of industrial floor space and quality or function of the industrial estate.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy E6: The Green Economy	N/A	Policy states that new development enabling the green economy in Totnes will be supported and encouraged.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy E7: Sustainable Transport	N/A	Policy states the requirements for new developments that support sustainable transport, as well as how developments will be expected to contribute towards traffic and transport measures to enable that development to be delivered.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy E8: Walking and Cycling	N/A	Policy states the requirements for new development that improves the functionality and quality of walking and cycling network.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy E9: Public and Community Transport	N/A	Policy states the requirements for new development that will improve public transport and community transport.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy E10: Car Parking	N/A	Policy states the requirements of pre-existing and new development of car parks.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.

Policy	European Sites and Proximity to Policy Area	Brief summary	Screening outcome
Policy C1: The Public Realm	N/A	Policy describes the need for new developments to make a positive contribution to the public realm and the requirements of the design and layout.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy C2: Public Open Spaces	N/A	Policy states that importance of public open spaces and the requirements open spaces should provide.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy C3: Local Green Spaces	N/A	Policy states which spaces within the Totnes parish are designated as local green spaces.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy C4: Housing	N/A	Policy states the requirements for new development of housing but does not allocate any housing sites.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy C5: Services and Facilities	N/A	Policy states the requirements to permit the development of services and facilities such as maintenance, enhancement or loss of services and facilities.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy C6: New Services and Facilities	N/A	Policy states the provisions needed for the new development of services and facilities.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy C7: Educational Improvement at KEVICC	N/A	Policy states the requirements to support the rationalisation and upgrading of educational facilities at KEVICC.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy C8: Development of Land at KEVICC as Identified in the JLP	N/A	Policy states the requirements for residential development on land no longer required for educational or recreational purposes at KEVICC.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. Therefore, no impact pathways exist to European Sites.
Policy C9: Streamer Quay	N/A	Policy states the requirements for new leisure or river related development at Streamer Quay.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. The policy expresses support for development but that simply sets out the opinion of the Group. The policy does not make an allocation and the Parish Council have no authority to grant planning consent. Moreover, the support is clearly contingent on any development having no adverse impact on the South Hams Special Area of Conservation's population of greater horseshoe bats. Therefore, no impact pathways exist to European Sites.
Policy C10: Market Square and Civic Hall	N/A	Policy states the requirements for proposals that provide a positive change to Market Square and Civic Hall.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. The policy expresses support for development but that simply sets out the opinion of the Group. The policy does not make an allocation and the Parish Council have no authority to grant planning consent. Therefore, no impact pathways exist to European Sites.

Policy	European Sites and Proximity to Policy Area	Brief summary	Screening outcome
Policy C11: Town Centre Car Parks	N/A	Policy states the requirements for redevelopment of any land currently used for town centre car parking.	**No likely Significant Effect. Screened out.** This is a development management policy and does not specifically allocate sites for development. The policy expresses support for development but that simply sets out the opinion of the Group. The policy does not make an allocation and the Parish Council have no authority to grant planning consent. Therefore, no impact pathways exist to European Sites.

6. Effects 'in Combination'

6.1 It is a requirement of the Regulations that the impacts and effects of any land use plan being assessed are not considered in isolation but in combination with other plans and projects that may also be affecting the internationally designated site(s) in question.

6.2 When undertaking this part of the assessment it is essential to bear in mind the principal intention behind the legislation i.e. to ensure that those projects or plans which in themselves have minor impacts are not simply dismissed on that basis but are evaluated for any cumulative contribution they may make to an overall significant effect. In practice, in combination assessment is therefore of greatest relevance when the plan would otherwise be screened out because its individual contribution is inconsequential. The overall approach is to exclude the risk of there being unassessed likely significant effects in accordance with the precautionary principle. This was first established in the seminal Waddenzee[15] case.

6.3 For the purposes of this assessment, we have determined that, due to the nature of the identified impacts, the key other plans and projects with potential for in combination likely significant effects are those schemes that have the following impact pathways: recreational pressure and hydrological changes. The following plans have been assessed for their in-combination impact to interact with the Totnes Neighbourhood Plan:

- Plymouth & South West Devon Joint Local Plan 2014-2034 (26,700 new dwellings)[16]

6.4 However, no impact pathways were identified linking the Totnes Local Plan to any European sites, largely due to the fact that the Neighbourhood Plan does not allocate any sites for development but confines itself to shaping the form and details of development that is consented in the parish. Since no impact pathway has actually been identified between the Neighbourhood Plan and any European sites, no in combination effects will arise.

[15] Waddenzee case (Case C-127/02, [2004] ECR-I 7405)
[16] https://westdevon.gov.uk/jointlocalplan [Accessed 16/04/2021]

7. Conclusions

5.1 All potential impact pathways could be screened out during the test of likely significant effects. This is largely due to the fact that the Neighbourhood Plan does not allocate any sites for development but confines itself to shaping the form and details of development that is consented in the parish. As such, there is no potential for likely significant effects on any European sites as a result of TNP policies and allocations. No Appropriate Assessment was required. There is no need for the TNP to include further policy and/or mitigation requirements to avoid impacts on the integrity of any European sites.