

Assessment under the Habitats Regulations

Proposed Submission
Scarborough Borough Local Plan

Scarborough Borough Council

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Contents

	Page
1. Summary	5
2. Introduction	6
3. Requirement for an Appropriate Assessment	6
4. Habitat Regulations Assessment	7
5. Relevant Natura 2000 Sites	21
6. Screening Assessments	31
7. Appropriate Assessment	66
8. Mitigation	73
9. Conclusion	76

Appendices

Appendix 1- Maps	77
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1. Summary

- 1.1 This Habitats Regulations assessment has considered in more detail the potential for policies and allocations in the Local Plan to harm the integrity of Natura 2000 sites. This has revealed that increasing the amount of housing land and employment space in the Borough and providing uses for visitors may have negative effects on the sites in terms of disturbance and trampling and emissions from vehicles, but that any effects are likely to be negligible.
- 1.2 In light of the findings of this assessment, and following the incorporation of appropriate mitigation measures, Scarborough Borough Council are satisfied that the Scarborough Borough Local Plan will not lead to harm to the integrity of any Natura 2000 sites.
- 1.3 This Habitats Regulations Assessment forms part of the submission Local Plan evidence base and has been amended following the comments received during Regulation 19 Stage and further engagement with Natural England.

2. Introduction

Requirement to carry out an assessment under the Habitats Regulations

- 2.1 Articles 6(3) and 6(4) of the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive) (Directive 92/43/EEC) require an assessment to be undertaken for plans and projects that are likely to have a significant effect, alone or in combination with other plans and projects, on one or more European sites (Special Protection Areas and Special Areas of Conservation). Article 6(3) states:

‘Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.’

- 2.2 This is translated into UK statute via The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007 and via The Conservation of Habitats and Species Regulations 2010 which state:

61.—(1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which –

- (a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and
(b) is not directly connected with or necessary to the management of that site, must make an appropriate assessment of the implications for that site in view of that site’s conservation objectives.

3. Requirement for an Appropriate Assessment

- 3.1 The Habitats Directive states that ‘Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans, shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In light of the conclusions of that assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.’
- 3.2 This Appropriate Assessment therefore aims to ensure there will be no harm to the integrity of Natura 2000 sites.

4. Habitats Regulations Assessment

4.1 The following guidance has been used in undertaking the Appropriate Assessment:

- Planning for the Protection of European Sites: Appropriate Assessment (Draft, DCLG, 2006)
- Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites' (European Commission, 2001)
- Habitats Regulations Guidance Notes 1, 3 and 4 (English Nature 1997, 1999 and 2001)
- The Assessment of Regional Spatial Strategies and Sub-Regional Strategies under the Provisions of the Habitats Regulations (David Tyldesley and Associates for Natural England, 2006)
- ODPM Circular 06/2005 Biodiversity and Conservation
- The Appropriate Assessment of Spatial Plans in England – A Guide to How, When and Why to do it (RSPB, 2007)

Level of detail

4.2 Although the Local Plan is allocating land for development, it is not possible to be completely certain about any effects as this will depend upon the types of occupants of employment land residential land and the behaviours of their customers, employees and residents.

Information requirements

4.3 In order to assess the possible effects of each policy in sufficient detail it is necessary to first establish the level of information that is required.

The following information is required in relation to the SACs and SPAs:

- Location of the site;
- The site's qualifying features;
- Vulnerabilities;
- Conservation Objectives
- The conservation status of the sites

This information is contained, where available, in Section 5.

The questions below will help to identify the nature of any effects:

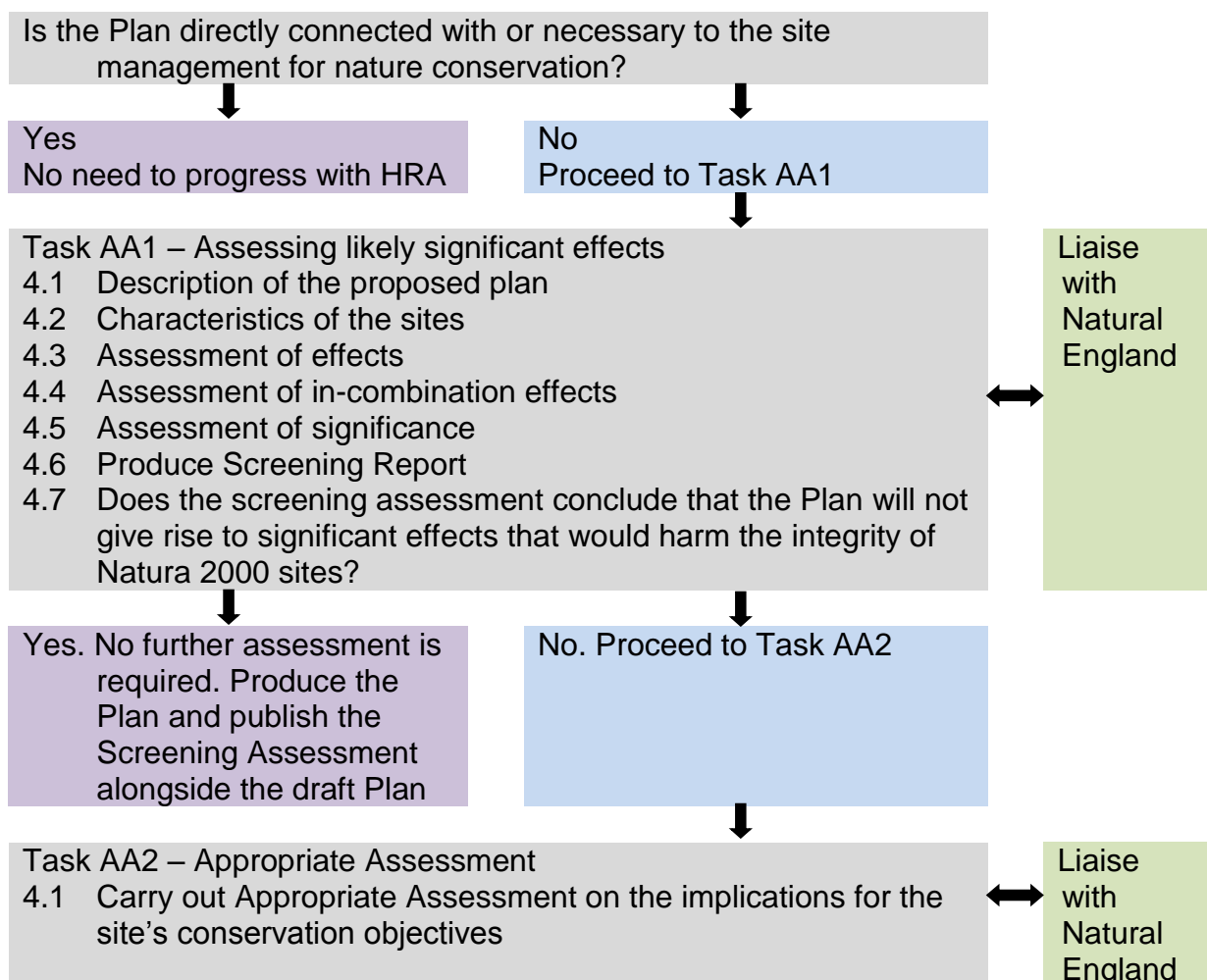
- Will it lead to a loss of habitat?
- Will it lead to fragmentation and isolation of habitats?
- Will it change any key habitat features?
- Will it lead to disturbance of species from noise, light or other visible features?
- Will it affect the quantity or quality of water in the sites?
- Will it affect air quality?

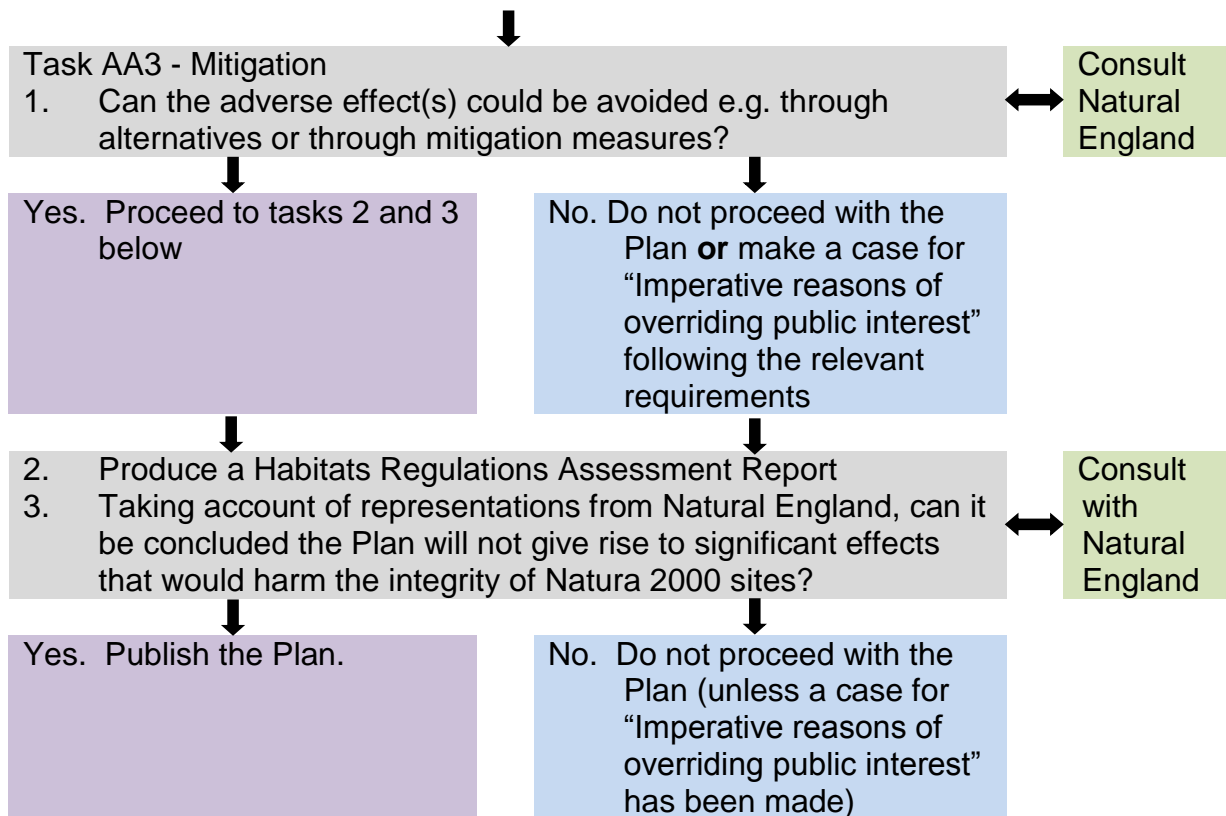
- 4.4 The assessment considers whether these effects are direct or indirect, and whether there are likely to be any cumulative effects. The significance of these effects is considered in relation to their magnitude and permanence. The assessment considers the effects in relation to the sites' qualifying features. In-combination effects were considered as part of the screening process.
- 4.5 The assessment concentrates upon the possible negative effects arising from the policies rather than any positive effects.

Methodology

- 4.6 The assessment has primarily been based upon consideration of the sites' vulnerabilities and reference to published data and reports where these are available, as well as the use of Ordnance Survey maps. Condition assessments are not available for the sites. The process of carrying out the Habitats Regulations Assessment is set out in Chart 1 below.
- 4.7 Section 6 identifies where policies in the Local Plan may lead to harm to the integrity of Natura 2000 sites. Mitigation measures are identified in the Table 3 and these are discussed in more detail in section 8 of this report.

Chart 1 - Procedure and Methodology for applying Assessment under the Habitats Regulations





Stage One - Screening

- 4.8 Stage one of the Habitats Regulations Assessment (HRA) process is the screening of the relevant plan or project for likely significant effects. Screening is fundamentally a risk assessment to determine whether the subsequent more detailed stage of assessment, which is known as Appropriate Assessment, is required. The essential question is:

Is the Local Plan, either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon Natura 2000 sites?

- 4.9 Screening is an iterative process and has taken place at each stage of development of the Local Plan. Screening of the Local Plan began in June 2009 to accompany the Core Strategy Issues and Options Paper, screening of the Draft Local Plan commenced in January 2014 and finally screening of the Local Plan Submission Policies was undertaken between July and September 2015.
- 4.10 Screening essentially involved assessing the significance of effects of policies and allocations within the Local Plan in relation to the designated interest features and conservation objectives of relevant Natura 2000 sites. Any effect that would compromise the functioning and viability of a site and prevent it from sustaining those features in a favourable condition was judged to adversely affect site integrity. Where no likely significant effects were identified, then no further steps needed to be taken. Where likely significant effects seem likely, a more detailed Appropriate Assessment of the Local Plan was necessary to assess whether there were any adverse effects on the

integrity of internationally designated sites. If insufficient information was available to make a clear judgement, the precautionary principle was adopted.

4.11 On the rare occasions where significant adverse effects cannot be avoided or mitigated, compensatory measures are required. Where any likely significant effects cannot be mitigated against than any reasonable alternative should be considered. Only where all reasonable alternatives have been considered and dismissed can the Plan argue that it is necessary for imperative reasons of overriding public interest (IROPI), including those of a social or economic reason. The IROPI test is a difficult test which a plan or its relevant components are generally considered unlikely to pass.

4.12 The purpose of screening the Local Plan was to identify:

- Those Natura 2000 sites that are not affected (meaning that no further assessment is required);
- Where there is a possible effect but where modification or removal of options, policies and or allocations within the Local Plan would avoid the effect; and
- Where an adverse effect on a Natura 2000 sites is probable and where Appropriate Assessment (Task 2) is therefore required.

4.13 The Screening stage required the collection and analysis of information relating to:

- All Natura 2000 sites within Scarborough Borough Local Plan Area and those shown to be linked to development within the authority's boundary through a known 'pathway';
- Local Plan options, policies and allocations; and
- Information on other plans and projects which might contribute to in-combination effects.

4.14 The distinct steps followed when undertaking screening were as follows:

1. Make a decision as to whether there is any possible mechanism by which the plan can affect any Natura 2000 site by altering its environmental conditions, focusing on those sites within the administrative boundary or which may be linked to development within the boundary by a pathway (scoping).
2. Explore the reasons for the designation of the Natura 2000 sites.
3. Explore the environmental conditions required to maintain the integrity of the selected sites and become familiar with the current trends in these environmental processes.
4. Gain a full understanding of the Local Plan and consider each spatial option, policy and allocation within the context of the environmental process - could the policy lead to an impact on any identified process?
5. First screening for likely significant effects then if required an Appropriate Assessment of adverse effects on integrity.

6. Identify other plans and projects that might affect these sites in combination with the Plan and decide whether there is likely to be a significant effect "in combination".

7. If likely significant effects have been identified, the HRA must progress to Task 2 (Appropriate Assessment), which will involve consideration of avoidance and mitigation measures.

4.15 Due to the scale of development in the Local Plan it was considered appropriate to carry out an assessment on all land allocations and policies which could potentially have an impact on any Natura 2000 sites within a 20 Kilometre radius of the Scarborough Borough Local Plan Area.

Impact Pathways

4.16 One of the first necessary steps for screening was to develop a long list of Natura 2000 sites potentially affected by the Local Plan and this required an understanding of the various ways in which land use plans can impact upon Natura 2000 sites. Current guidance suggests that the following Natura 2000 sites be included:

- Sites within Scarborough Borough boundary; and
- Sites potentially affected by development within Scarborough Borough through a known pathway.

4.17 Pathways are routes by which a change in activity within Scarborough Borough can lead to an effect upon a Natura 2000 site. Following consideration of the Local Plan and the development that it seeks to promote and direct, a number of broad potential impact types were identified that could affect Natura 2000 sites. These are discussed in detail below.

Air Quality

4.18 A change in the composition of air that disperses in the vicinity of a Natura 2000 site can change conditions, damage habitat, and harm species in designated areas. The main pollutants of concern for Natura 2000 sites are oxides of nitrogen (NO_x), sulphur dioxide (SO₂) and ammonia (NH₃)

4.19 Nitrogen is the second most important plant nutrient behind carbon, and the productivity of terrestrial ecosystems is generally limited by nitrogen supply. However, such communities exist in balance because their growth rates are contained by the level of available Nitrogen. Hence, the increase in nitrogen deposition will be expected to exert a large impact on ecosystem biodiversity. Nitrogen deposition may cause changes to species composition, often including a reduction in species richness and a loss of sensitive 'lower plants'; changes to soil microbial processes; changes to plant and soil biochemistry; increased susceptibility to abiotic stresses (such as winter injury) and biotic stresses (such as pests and pathogens); and it also contributes towards acidification.

4.20 Sulphur dioxide emissions are overwhelmingly influenced by the output of power stations and industrial processes that require the combustion of coal

and oil as well (particularly on a local scale) as shipping. Ammonia emissions are dominated by agriculture, with some chemical processes also making notable contributions. Nitrogen emissions are much more widely dispersed than ammonia, with the latter often deposited in high quantities to semi-natural vegetation in intensive agricultural areas. Reduced N (NHx) is primarily emitted from intensive animal units and more recently vehicles with the introduction of catalytic converters.

- 4.21 The Local Plan was identified as harbouring the potential to contribute to atmospheric pollution through; increased traffic linked to increased housing and employment.
- 4.22 In relation to impacts of atmospheric pollution from traffic on Natura 2000 sites the Appropriate Assessment of the North East Regional Spatial Strategy states that 'English Nature's (now Natural England's) advice to Runnymede Borough Council on traffic-related air pollution, based on interim guidance from the Department for Transport (2005), was that NO₂ emissions only needed to be considered if there is a road carrying a significant proportion of new traffic related to the plan within 200 metres of a European site.' Beyond 200m, the contribution of vehicle emissions from the roadside to local pollution levels is not significant. This is therefore the distance that was used throughout the screening assessment for determining whether Natura 2000 sites are likely to be significantly affected by increased traffic to and within Scarborough Borough Local Plan Area. Further work commissioned through AECOM sought to confirm whether or not the development proposed in the Plan would generate traffic of a scale which could have a likely significant effect on the Nitrogen deposition levels in the North York Moors SAC. The conclusion was that any change of traffic flows would be well below the 1,000 AADT and the change in HGV flows would be less than 200 per day. The table below shows the predicted increase in flows.

	Site 1	Site 2	Site 3	Site 4	Site5
Additional Traffic from Local Plan 24 Hour AADT	13	115	155	84	249

- 4.23 Even if the actual changes in flow on all links were doubled it would still be well below 1,000 AADT and AECOM confirm that this is a cautious assumption. (AECOM's response is appended Appendix 2).
- 4.24 This does not exceed the 1% critical level, as set by the Air Quality Technical Advisory Group (consisting of Natural England, Environment Agency and Natural Resources Wales) as the threshold below which any scheme (Plan) can be deemed to be effectively inconsequential and 'does not need to be included in an in-combination assessment'.
- 4.25 The Plan has no policies or allocations which would directly contribute to an increase in Ammonia, the HRA therefore does not assess any impact on Natura 200 sites. As mentioned previously Sulphur Dioxide emissions are associated with power stations and industrial processes. Whilst the Plan allocates substantial areas of employment land in Scarborough and the

Whitby Area Action Plan allocates land in Whitby. There is no indication on whether any operations would contribute to increases in Sulphur Dioxide emissions but these would be considered on a project scale against Policy ENV 3.

- 4.26 As well as our locational principles which seeks to provide employment and residential development in sustainable locations to reduce the need for motorised travel we have introduced Policy DEC 2 Electric Vehicle Charging Points which encourages the provision of electric charging points in an attempt to promote the use of electric vehicles. The Plan also includes specific policies intended to improve air quality including Policy ENV 1 Low Carbon and Renewable Energy and Policy ENV 3 Environmental Risk.

Water Quality and Hydrology

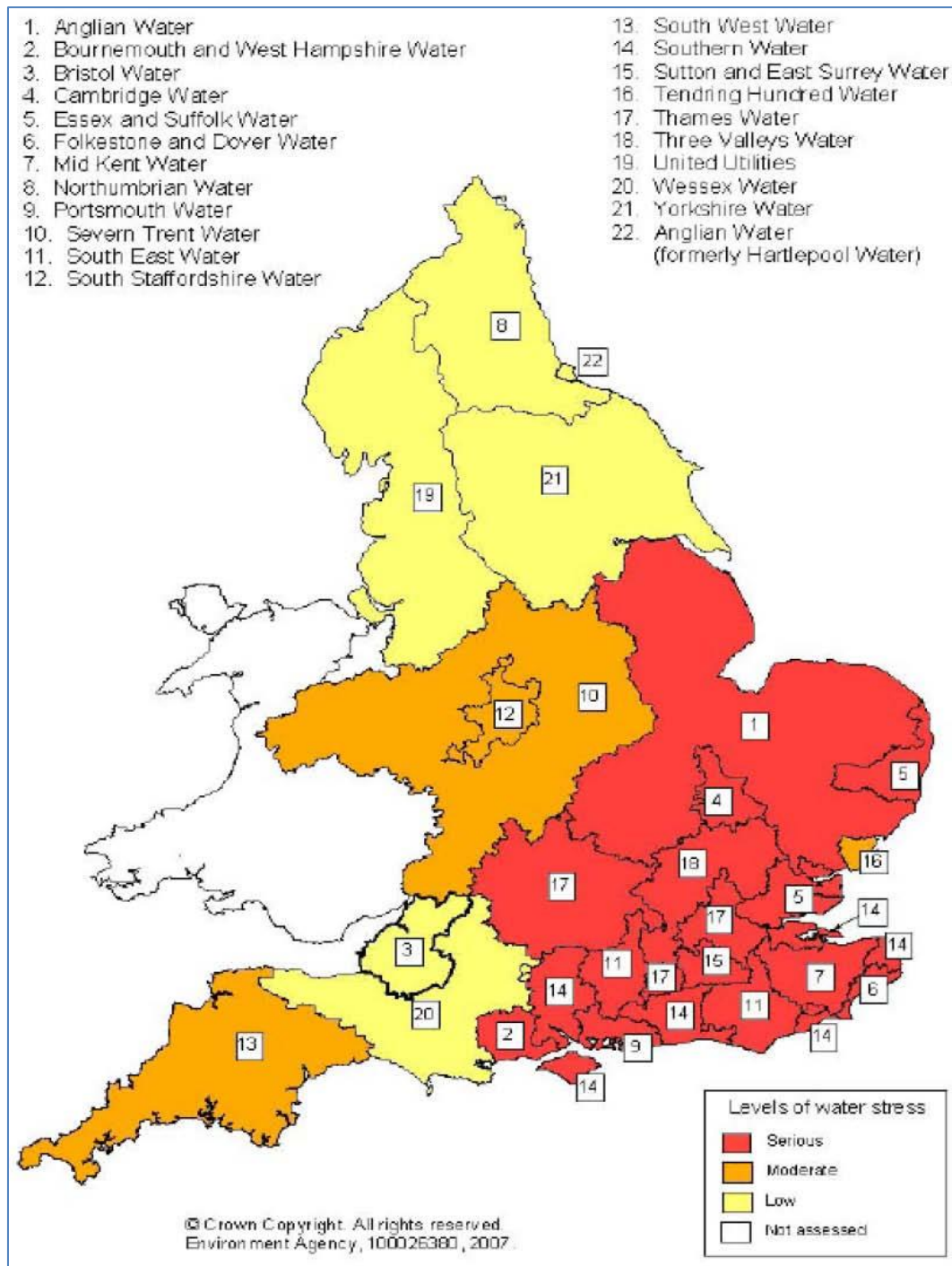
- 4.27 The quality of water that feeds Natura 2000 sites is an important determinant of the nature of their habitats and the species they support. Poor water quality can have a range of environmental impacts:

- At high levels, toxic chemicals and metals can result in immediate death of aquatic life, and can have detrimental effects including increased vulnerability to disease and change in wildlife behaviour. Loss of aquatic life can also have a direct knock on effect on other qualifying species such as birds and otters.
- Eutrophication increases plant growth and consequently results in oxygen depletion. Algal blooms, which commonly result from eutrophication, increase turbidity and decrease light penetration.
- Some pesticides, industrial chemicals, and components of sewage effluent are suspected to interfere with the functioning of the endocrine system, possibly having negative effects on the reproduction and development of aquatic life.

- 4.28 In Scarborough, one of the main risks to water quality is as a result of an increase in housing and employment sites putting pressure on sewage treatment works that are close to capacity. Further development may increase the risk of effluent escape into aquatic environments. Coupled with this risk, an increase in hard standing and increased pressure on sewer systems could increase run off and sewer flooding heightening water pollution risk.

- 4.29 Changes in water levels can result in drought or flooding of Natura 2000 sites that can damage habitat and harm species in designated areas. Increased housing and employment proposed by the Local Plan is likely to increase abstraction which could increase risk of lowering water levels within watercourses or groundwater sources that are required for the effective functioning of qualifying species and habitats. As mentioned, in section 4.26 an increase in hard standing could also increase run off affecting flows.

Figure 2 Areas of water stress within England. It can be seen from the map that Scarborough is classified as being an area of low water stress (coded yellow)



4.30 Water stress occurs when the demand for water exceeds the available amount during a certain period or when poor quality restricts its use. Water stress causes deterioration of fresh water resources in terms of quantity

(aquifer over exploitation, dry rivers, etc.) and quality (eutrophication, organic matter, pollution, saline intrusion, etc.)¹

- 4.31 Policies exist in the Plan to specifically protect and enhance water quality. Those policies are ENV 3 Environmental Risk, ENV 4 Groundwater Protection and ENV 5 The Natural Environment.
- 4.32 The effect of large scale developments on hydrology is difficult to predict including its potential impact on coastal cliff stability. Policy ENV 3 Environmental Risk was included to mitigate against any potential risk. All developments at a project level will need to ensure that it does not contribute to or exacerbate coastal erosion and/or landslip and ensure the development is not exposed to the risk of coastal erosion and/or coastal flooding. As each development will be assessed by this policy we have not included this requirement against every site in the detailed assessment.
- 4.33 The Plan recognises the requirements of the Water Framework Directive and the aims of the Humber Basin River Management Plan. Policy ENV 3 has criteria which aim to ensure that water supply and water resources are managed and water efficiency measures are incorporated to reduce resource need in line with the Environment Agency's licensing strategies. The policy also requires mitigation measures such as Sustainable Drainage Systems where possible in order to facilitate development in areas of sensitive drainage and to meet the requirements of the Water Framework Directive.

Habitat and Species Destruction or Fragmentation

- 4.34 Alongside changes to air quality and water quality there are a number of other 'pathways' that could contribute to habitat and species destruction or fragmentation as a potential result of the Local Plan. These include:
- Land take from Natura 2000 sites for development;
 - Recreational pressure; and
 - Urbanisation
- 4.35 The following sections discuss each of these factors in turn.

Land Take

- 4.36 The Plan does not propose any direct land take from Natura 2000 sites.

Recreational Pressure

- 4.37 All types of Natura 2000 sites including woodlands can be affected by trampling, which in turn causes soil compaction and erosion. Another factor, whereby recreation can contribute to habitat destruction and/ or fragmentation is by increased nitrification of sites associated with dog walking. Increased

¹ UNEP Freshwater in Europe Glossary.

nitrification by dogs could also act in combination with increased dosage of nitrogen deposition through air pollution to impact upon sensitive sites.

- 4.38 The distances that people may travel to visit Natura 2000 sites were considered key to determining the potential impacts of the Scarborough Borough Local Plan. Initially, it was considered that identifying the distances that residents may travel to visit Natura 2000 sites would adequately support the screening stages of the Local Plan. Studies elsewhere suggest that 50% of people are willing to travel 20 minutes (approx. 1 Km) to reach wildlife areas, nature reserves, country parks, golf courses and specialist sports facilities. Other details of areas of disturbance are assessed in detail below.

Urbanisation

- 4.39 The impact of urbanisation is closely related to recreational pressure, in that they both result from increased populations within close proximity to sensitive sites. Urbanisation is considered separately as the impact is distinct from the trampling, disturbance and dog-fouling that results specifically from recreational activity. The main impacts of urbanisation are as follows:
- Invasive species - Invasive alien species can be spread either deliberately, through the inappropriate disposal of garden waste or may be bird-sown from local gardens. Plant pathogens may also be spread as a result of working of non-inert landfill sites.
 - Increased predation - A large proportion of domestic cats are found in urban situations, and increasing urbanisation is likely to lead to increased cat predation. Increased populations within Scarborough may also increase urban populations of rats and other predatory species such as foxes.
- 4.40 Urbanisation effects are likely to derive from housing development in the main. Concerns were raised with Natural England about the ability to screen in or out urbanisation effects, given the unquantified distance that invasive species could travel and the unquantified impacts of predatory species on Natura 2000 sites. It was agreed with Natural England in August 2011 that a pragmatic approach to this issue was necessary. However, no Natura 2000 sites were cited as vulnerable to invasive and/or predatory species.

Disturbance

Trampling

- 4.41 All types of terrestrial European site can be affected by trampling, which in turn causes soil compaction and erosion. Walkers with dogs contribute to pressure on sites through nutrient enrichment via dog fouling and also have potential to cause greater disturbance to fauna as dogs are less likely to keep to marked footpaths. Motorcycle scrambling and off-road vehicle use can cause more serious erosion, as well as disturbance to sensitive species.

4.42 In determining the impact of activities on habitats for which European sites may be designated, the following definition² should be borne in mind:

“Habitat deterioration occurs in a site when the area covered by the habitat in this site is reduced or the specific structure and functions necessary for the long-term maintenance or the good conservation status of the typical species which are associated with this habitat are reduced in comparison to their initial status. This assessment is made according to the contribution of the site to the coherence of the network.”

4.43 There have been several papers published that empirically demonstrate that damage to vegetation in habitats, including those for which European sites at Dungeness have been designated, can be caused by vehicles, walkers, horses and cyclists:

- The UK Marine SACs³ project has determined that effects may include erosion of soils and upper levels of less durable marine features; changes in the level and diversity of vegetation within a site or feature; and changes in feature density, porosity and penetrability. Significant impacts were concluded for sand dune and sand flat habitats as a result of off-road vehicle use, horse riding, and access routes to beaches. Littering was also noted to have impacts on coastal sites.
- Kindermann and Gormally⁴ examined the effect of vehicle-based recreation on three coastal dune systems on the west coast of Ireland. The results showed that the overall area of tracks increased more than threefold between 1973 and 2007 with the exception of one site where restricted access resulted in a subsequent reduction in the number of tracks.
- Wilson & Seney (1994)⁵ examined the degree of track erosion caused by hikers, motorcycles, horses and cyclists from 108 plots along tracks in the Gallatin National Forest, Montana. Although the results proved difficult to interpret, it was concluded that horses and hikers disturbed more sediment on wet tracks, and therefore caused more erosion, than motorcycles and bicycles.
- Cole et al (1995a, b)⁶ conducted experimental off-track trampling in 18 closed forests, dwarf scrub and meadow & grassland communities (each trampled between 0 – 500 times) over five mountain regions in the US. Vegetation cover was assessed two weeks and one year after trampling, and an inverse relationship with trampling intensity was discovered,

² Managing Natura 2000 Sites: The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC.

³ UK CEED 2000. A review of the effects of recreational interactions within UK European marine sites. Countryside Council for Wales (UK Marine SACs Project) 264 Pages

⁴ Vehicle damage caused by recreational use of coastal dune systems in a Special Area of Conservation (SAC) on the west coast of Ireland

⁵ Wilson, J.P. & J.P. Seney. 1994. Erosional impact of hikers, horses, motorcycles and off road bicycles on mountain trails in Montana. Mountain Research and Development 14:77-88

⁶ Cole, D.N. 1995a. Experimental trampling of vegetation. I. Relationship between trampling intensity and vegetation response. Journal of Applied Ecology 32: 203-214 . Cole, D.N. 1995b. Experimental trampling of vegetation. II. Predictors of resistance and resilience. Journal of Applied Ecology 32: 215-224

although this relationship was weaker after one year than two weeks indicating some recovery of the vegetation. Differences in plant morphological characteristics were found to explain more variation in response between different vegetation types than soil and topographic factors. Low-growing, mat-forming grasses regained their cover best after two weeks and were considered most resistant to trampling, while tall forbs (non-woody vascular plants other than grasses, sedges, rushes and ferns) were considered least resistant. Cover of hemicryptophytes and geophytes (plants with buds below the soil surface) was heavily reduced after two weeks, but had recovered well after one year and as such these were considered most resilient to trampling. Chamaephytes (plants with buds above the soil surface) were least resilient to trampling. It was concluded that these would be the least tolerant of a regular cycle of disturbance.

- Cole (1995c)⁷ conducted a follow-up study (in 4 vegetation types) in which shoe type (trainers or walking boots) and trampler weight were varied. Although immediate damage was greater with walking boots, there was no significant difference after one year. Heavier trampplers caused a greater reduction in vegetation height than lighter trampplers, but there was no difference in effect on cover.
- Cole & Spildie (1998)⁸ experimentally compared the effects of off-track trampling by hiker and horse (at two intensities – 25 and 150 passes) in two woodland vegetation types (one with an erect forb understorey and one with a low shrub understorey). Horse traffic was found to cause the largest reduction in vegetation cover. The forb-dominated vegetation suffered greatest disturbance, but recovered rapidly. Higher trampling intensities caused more disturbances.

Disturbance of Birds

- 4.44 In determining the impact of activities on bird species for which European sites may be designated, the following definition⁹ should be borne in mind:

“Disturbance of a species occurs on a site when the population dynamics data for this site show that the species could no longer constitute a viable element of it in comparison to the initial situation. This assessment is done according to the contribution of the site to the coherence of the network.”

- 4.45 Habitat Regulation Assessments of Core Strategies tend to focus on recreational sources of disturbance as a result of new residents or an increasingly aging population with more leisure time available. While this is a key factor, other sources of disturbance associated with an increase in

⁷ Cole, D.N. 1995c. Recreational trampling experiments: effects of trampler weight and shoe type. Research Note INT-RN-425. U.S. Forest Service, Intermountain Research Station, Utah.

⁸ Cole, D.N., Spildie, D.R. 1998. Hiker, horse and llama trampling effects on native vegetation in Montana, USA. *Journal of Environmental Management* 53: 61-71

⁹ Managing Natura 2000 Sites: The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC.

commercial development, road transport adjacent to sensitive sites or increases in shipping may also result.

- 4.46 Analysis was also undertaken to determine whether there was any relationship between the response level of the birds and the distance of each disturbance from the colony. The analysis shown in figure 2¹⁰ illustrates this statistically significant negative correlation (null hypothesis 2). It could be suggested that any management measures include educating users about the possible effects of getting too close to breeding seabirds and requesting that activities are undertaken away from the cliff. However some activities, such as the operation of small fishing boats and the use of canoes & kayaks which like to explore the caves and inlets, are likely to oppose a general proximity restriction. Similarly, controlling the proximity to rafting seabirds away from the cliff would be very difficult.

Breeding Birds

- 4.47 Concern regarding the effects of disturbance on birds stems from the fact that they are expending energy unnecessarily and the time they spend responding to disturbance is time that is not spent feeding¹¹. Disturbance therefore risks increasing energetic output while reducing energetic input, which can adversely affect the 'condition' and ultimately survival of the birds. In addition, displacement of birds from one feeding site to others can increase the pressure on the resources available within the remaining sites, as they have to sustain a greater number of birds¹². Research indicates that all species, except gannets, are reported to react by flying more than 50m away from a disturbance. Moreover, the more time a breeding bird spends disturbed from its nest, the more its eggs are likely to cool and the more vulnerable they, or any nestlings, are to predators.

Wintering Birds

- 4.48 Winter activity can still cause important disturbance, especially as birds are particularly vulnerable at this time of year due to food shortages, such that disturbance which results in abandonment of suitable feeding areas through disturbance can have severe consequences. Several empirical studies have, through correlative analysis, demonstrated that out-of-season (October-March) recreational activity can result in quantifiable disturbance:

¹⁰ Recreational Disturbance: An Assessment of Scientific Literature and Data Gathered within the Flamborough Head European marine Site in Relation to Activities that Potentially Impede the Maintenance of Conservation Features

¹¹ Riddington, R. *et al.* 1996. The impact of disturbance on the behaviour and energy budgets of Brent geese. *Bird Study* 43:269-279

¹² Gill, J.A., Sutherland, W.J. & Norris, K. 1998. The consequences of human disturbance for estuarine birds. *RSPB Conservation Review* 12: 67-72

Other activities causing disturbance

- 4.49 Human activity can affect birds either directly (e.g. through causing them to flee) or indirectly (e.g. through damaging their habitat). The most obvious direct effect is that of immediate mortality such as death by shooting, but human activity can also lead to behavioural changes (e.g. alterations in feeding behaviour, avoidance of certain areas etc.) and physiological changes (e.g. an increase in heart rate) that, although less noticeable, may ultimately result in major population-level effects by altering the balance between immigration/birth and emigration/death¹³
- 4.50 The degree of impact that varying levels of noise will have on different species of bird is poorly understood except that a number of studies have found that an increase in traffic levels on roads does lead to a reduction in the bird abundance within adjacent hedgerows - Reijnen et al (1995) examined the distribution of 43 passerine species (i.e. 'songbirds'), of which 60% had a lower density closer to the roadside than further away. By controlling vehicle usage they also found that the density generally was lower along busier roads than quieter roads¹⁴.
- 4.51 Whilst recreational activities on land could negatively affect the Natura 2000 sites, an increase in the recreational activities in the marine environment can also cause noise disturbance particularly to nesting birds along the cliffs. The main recreational activities which are evidenced as having an impact on the coastal areas are personal watercraft (jet skis), motorised boats of varying sizes and canoes & kayaks.
- 4.52 Data collected along the Flamborough Head to Filey pSPA indicated that recorded instances of disturbance caused by personal watercraft was observed to disturb rafting seabirds rather than those nesting on the cliff.¹⁵
- 4.53 One obvious reason for birds responding to human activities in a negative manner is due to the birds viewing humans as predatory threats¹⁶. This potential increased predatory risk can explain why there were more potential disturbance events in the marine environment than there were compared to land based activities (table 4). Birds are more likely to be affected by activities that are infrequent, and therefore frightening to the birds, as there is a lack of natural exposure¹⁷.

¹³ Riley, J. 2003. Review of Recreational Disturbance Research on Selected Wildlife in Scotland. Scottish Natural Heritage.

¹⁴ Reijnen, R. et al. 1995. The effects of car traffic on breeding bird populations in woodland. III. Reduction of density in relation to the proximity of main roads. *Journal of Applied Ecology* 32: 187-202

¹⁵ Recreational Disturbance: An Assessment of Scientific Literature and Data Gathered within the Flamborough Head European marine Site in Relation to Activities that Potentially Impede the Maintenance of Conservation Features

¹⁶ (Frid and Dill, 2002)

¹⁷ (Stillman *et al.*, 2009)

4.54 Activities other than recreation may also lead to disturbance of wildlife; for example, noise, vibration, deliberate bird control/scaring and visual disturbance from ports and airports, and potentially disturbance from wind farms.

Climate Change

4.55 Climate change is one of many threats to biodiversity and by reducing other sources of harm; natural systems will be better able to maintain their biodiversity in response to climate change. The Local Plan will need to ensure that it does not restrict the movement and migration of species and habitat in terms of their ability to adapt to climate change.

5. Relevant Natura 2000 sites

5.1 The Natura 2000 sites within the Local Plan area are:

- (a) Flamborough Head Special Area of Conservation (partly in East Riding District Council);
- (b) Flamborough Head and Bempton Cliffs Special Protection area (partly in East Riding District Council);
- (c) Flamborough Head proposed Special Area of Conservation; and
- (d) Flamborough and Filey Coast proposed Special Protection Area.

5.2 In addition, parts of the following areas fall within the Borough as a whole, although the planning authority is the North York Moors National Park Authority:

- (e) North York Moors Special Area of Conservation;
- (f) North York Moors Special Protection Area;
- (g) Beast Cliff Special Area of Conservation, Whitby;
- (h) Arnecliff and Park Hole Special Area of Conservation;
- (i) Eller's Wood and Sand Dale Special Area of Conservation;
- (j) Fen Bog Special Area of Conservation; and
- (k) River Derwent Special Area of Conservation (Ryedale)

5.3 The following section provides a brief overview of the sites, and identifies particular vulnerabilities:

(a) Flamborough Head (part) – Special Area of Conservation

5.4 The site lies close to the boundary between two North Sea waterbodies and encompasses a large area of hard and soft chalk cliffs which extend seaward as bedrock, boulder and cobble reefs further than at other site in the UK. The reefs at Flamborough are important due to their substrate type, biogeographic position and the influences of hydrodynamic processes on reef topography and community structure. The reefs and cliffs on the north side of the headland are harder and more exposed than those of the south side of the headland and as a result they support a different range of species. The site supports an unusual range of marine species, rich animal communities and some species that are at

the southern limit of their North Sea distribution, e.g. the northern alga *Ptilota plumosa*. More than 110 species of seaweed and over 270 species of invertebrates have been recorded on the rocky shores. In the shallow waters the hard nature of the chalk have enabled kelp *Laminaria hyperborea* forests to become established. These are important as they are considered to be a key structural and functional component of the reefs at Flamborough. In the deeper waters the reefs become dominated by faunal turfs which are made up of sea mats and sponges, soft corals and sea fans. The site contains caves cut into soft rock exposures and is important for its specialised cave- algal communities, which contain abundant *Hildenbrandia rubra*, *Pseudendoclonium submarinum*, *Sphacelaria nana* and *Waerniella lucifuga*. There are more than 200 caves within the site. Some are partially submerged at all stages of the tide, others dry out at low tide, and some lie above the high water mark but are heavily influenced by wave splash and salt spray. The largest extend for more than 50 m from their entrance. The vegetated sea cliffs are characterised by both a maritime influence, and by the chalk underlying the boulder clay. Thrift *Armeria maritima* and sea plantain *Plantago maritima* grow alongside herbaceous species more typical of chalk grassland such as kidney vetch *Anthyllis vulneraria*. Where the undercliff has slipped and is flushed by calcareous runoff, northern marsh orchid *Dactylorhiza purpurella* may be found with saltmarsh species, including sea arrowgrass *Triglochin palustris* and sea-milkwort *Glaux maritima*. Towards the northern and southern end of the site the chalk is masked by drift deposits, which support mesotrophic and acidic grassland communities.

Vulnerabilities

- 5.5 The vegetated sea cliffs at this site are vulnerable to any changes that influence their exposure to the sea. This may result from physical damage or erosion to the site, or hydrological changes such as increasing turbidity. This could result from coastal defence work or increasing recreational activity close to the site. Toxic contamination of the seawater or changes to the thermal regime could also be detrimental to the wide assemblage of seaweed and invertebrates, and could be initiated by industrial discharge and changes in agricultural management.
- 5.6 The Flamborough and Filey Coast Site Improvement Plan which covers the Flamborough and Filey Coast pSPA and Flamborough Head SAC has identified priorities and issues. These are:
- Changes in species – decline in Black-legged kittiwake
 - Marine and freshwater fishery – potential impacts of fishing
 - Public access/Disturbance – prevent bird disturbance
 - Invasive species – investigate the impact of invasive species

Conservation Objectives:

- 5.7 These are to maintain, in favourable condition, the:
- Vegetated sea cliffs of the Atlantic and Baltic coasts
 - Submerged or partially submerged sea caves

- reefs

(b) Flamborough Head & Bempton Cliffs (part) Special Protection Area

5.8 The Flamborough Head and Bempton Cliffs SPA is located on the Humberside and North Yorkshire coast, north of Bridlington. It is an area of geological and geomorphological importance with the cliffs providing nesting grounds for large colonies of seabirds of national and international importance. The area comprises chalk, softer sedimentary rocks and cliffs. At the top of the cliffs there is a narrow belt of steeply sloping chalk grassland which widens around the bays. There are also numerous flushed areas and trickles. The cliff line has been eroded to form impressive stacks and caves between North Cliff and Castlemere Hole. Bempton cliffs support an important gannetry, the only gannetry in England and the largest mainland colony in Britain. The landward boundary of the SPA follows that of the existing Flamborough Head SSSI, between Speeton Sands in the north west and South Landing in the south. The seaward boundary is the low mean water mark. The site qualifies under Article 4.2 of the EC Birds Directive by regularly supporting an internationally important breeding population (counts taken in 1987) of 83,700 pairs of kittiwake *Rissa tridactyle* (4% of the western European population and 17% of the British population). It also supports nationally important populations of the following migratory seabirds: 32,300 individual guillemots *Uria algae* (over 3% of the British population): 7,700 razorbill *Alca torda* (over 5% of the British population) and 7,000 puffins *Fratercula arctica* (1% of the British population).

Vulnerabilities

5.9 The main vulnerabilities to these qualifying bird species is from changes that adversely affect food availability, particularly during the breeding season. In particular, changes in fish stocks from fishing or toxic contamination from agriculture or industry would be detrimental. Population decline may also be exacerbated by any physical damage to the cliff faces or inter tidal chalk platforms, for example by recreational diving, fishing activity or increased erosion as a result of coastal defence structures. An increase in recreational disturbance of the site, especially during the breeding season, could also be damaging.

5.10 The Flamborough and Filey Coast Site Improvement Plan which covers the Flamborough and Filey Coast pSPA and Flamborough Head SAC has identified priorities and issues. These are:

- Changes in species – decline in Black-legged kittiwake
- Marine and freshwater fishery – potential impacts of fishing
- Public access/Disturbance – prevent bird disturbance
- Invasive species – investigate the impact of invasive species

Conservation Objectives

5.11 These are to maintain, in favourable condition, the habitats for the populations of seabirds that contribute to the breeding seabird assemblage of European importance, with particular reference to:

- Coastal cliffs and caves
- Kittiwake

5.12 In addition, it is sought to maintain, in favourable condition, the habitats for the populations of seabirds that contribute to the breeding seabird assemblage of European importance, with particular reference to:

- Coastal cliffs and caves.

(c) Flamborough Head – proposed Special Area of Conservation

5.13 This proposed SPA is effectively an extension of (a) above and therefore the vulnerabilities and conservation objectives are the same.

(d) Flamborough and Filey Coast proposed Special Protection Area

5.14 Flamborough and Filey Coast pSPA is located on the Yorkshire coast between Bridlington and Scarborough. It includes the RSPB reserve at Bempton Cliffs, the Yorkshire Wildlife Trust Flamborough Cliffs nature reserve and the East Riding of Yorkshire Council Flamborough Head Local Nature Reserve. The cliffs of Flamborough Head rise to 135 metres and are composed of chalk and other sedimentary rocks. These soft cliffs have been eroded into a series of bays, arches, pinnacles and gullies with an extensive system of caves at sea-level. The cliffs from Filey Brigg to Cunstone Nab comprise a range of sedimentary rocks including shales and sandstones. The cliff top vegetation comprises maritime grassland vegetation growing alongside species more typical of chalk grassland. The intertidal area below the cliffs is predominantly rocky and part of reefs that extend into the subtidal area. The adjacent sea out to 2 km off Flamborough Head as well as Filey Brigg to Cunstone Nab is characterised by chalk reefs comprising kelp forest communities in the shallow subtidal and faunal turf communities below 2 metre water depths. The southern site of Filey Brigg shelves off gently from the rocks to the sand bottom of the Bay.

(e) North York Moors Special Area of Conservation

5.15 This site in north-east Yorkshire within the North York Moors National Park contains the largest continuous tract of upland heather moorland in England. Dry heath covers over half the site and forms the main vegetation type on the western, southern and central moors where the soil is free-draining and has only a thin peat layer. The principal type present is heather – wavy hair-grass (*Calluna vulgaris* – *Deschampsia flexuosa*) heath, with some heather – bell heather *Erica cinerea* heath on well-drained areas throughout the site, and large areas of heather – bilberry *Vaccinium myrtillus* heath on steeper slopes. Cross-leaved heath – bog-moss (*Erica tetralix* – *Sphagnum compactum*) wet heath is the second most extensive vegetation type on the site and is predominantly found on the eastern and northern moors where the soil is less free-draining. Purple moor-grass *Molinia caerulea* and heath rush *Juncus squarrosus* are also common within this community. In the wettest stands bog-

mosses, including *Sphagnum tenellum*, occur, and the nationally scarce creeping forget-me-not *Myosotis stolonifera* can be found in acid moorland streams and shallow pools.

Blanket mire occurs in small amounts along the main watershed of the high moors where deep peat has accumulated. These areas are dominated by heather and cross-leaved heath with frequent hare's-tail cottongrass *Eriophorum vaginatum* and common cottongrass *E. angustifolium*.

Vulnerabilities

- 5.16 This habitat is very sensitive to any changes to the existing moorland management regime, which is currently carried out by mainly for sheep and grouse shooting purposes. Changes to grazing levels will impact upon the diversity of the heather found, with overgrazing leading to direct heather loss and undergrazing allowing scrub to encroach. The wetter habitats are vulnerable to changes in drainage that can lead to a loss in structural diversity as well as the loss of mosses and lichens. Overburning or accidental fires, the risk of which can be exacerbated by increasing visitor numbers, may also detrimentally impact upon these habitats. Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.

Conservation Objectives:

- 5.17 The conservation objectives for the site are, subject to natural change, to maintain or restore:
- The extent and distribution of 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;

With particular reference to:

- Northern Atlantic wet heath
- European dry heath
- Blanket bog.

(f) North York Moors Special Protection Area

- 5.18 North York Moors Site of Special Scientific Interest (SSSI) (which includes the renotification of Tripsdale SSSI, Fylingdales Moor SSSI and May Moss SSSI) has been recommended has a Special Protection Area because of the site's European Ornithological importance. The North York Moors SPA contains the largest continuous tract of heather moorland in England. The site displays a

wide range of high quality dry heathland and blanket bog vegetation types dominated by *Calluna*. The transition from dry heathland to blanket bog is complemented by a diverse mosaic of wet heath and flush communities
Vulnerabilities

5.19 The value of the North York Moors as a habitat for merlin, golden plover and other breeding birds is dependent upon maintaining the existing levels of moorland management currently carried out by farmers and landowners. Overgrazing or too frequent heather burning (deliberate or accidental) could lead to a loss of structural diversity and bracken invasion.

5.20 Given the scope of the Local Plan in providing Local Plan-wide policies to steer the long-term development of the area, it is considered necessary to fully assess any potential implications for sites of European importance.

Conservation Objectives

5.21 These are to maintain or restore:

- The extent and distribution of the habitats of the qualifying features;
- The structure and function of the habitats of the qualifying features;
- The supporting processes on which the habitats of the qualifying features rely;
- The populations of the qualifying features;
- The distribution of the qualifying features within the site.

With particular reference to:

- Merlin; and
- European golden plover.

(g) Beast Cliff – Special Area of Conservation

5.22 Beast Cliff, Whitby is an east coast complex of hard and soft cliffs. The combination of geology, topography and plant communities found on the site are unique and it is one of the best examples of vegetated sea cliffs on the north-east coast of England. The underlying geology varies from base-rich to base-poor, and this variation is reflected in a characteristic and diverse flora across the site. Vertical hard cliffs support maritime crevice and ledge vegetation, and the more gently sloping parts of Beast Cliff itself are covered by scrub and woodland. Sandstone boulders support a luxuriant growth of mosses and ferns and pools on the cliff shelf support wetland plants and scrub. Due to the frequent land slippage occurring on the site, the woodland is constantly changing and being rejuvenated with mainly young trees forming secondary woodland. North of Beast Cliff to Ravenscar the vegetation is more open and reflects alternating strata of rich and poor base-status. Areas of calcareous clays support typical calcareous grassland and wet flush plant communities, whereas heathland species occur on more acidic sandstone outcrops. From Ravenscar north to Robin Hood's Bay the cliffs are composed either partly or entirely of soft boulder clay. This clay is continually being eroded by wave

action and slippage, and supports pioneer plant communities typical of this changing habitat.

Vulnerabilities

- 5.23 These cliffs are subject to active erosion processes in parts, particularly those areas of soft clay where coastal erosion maintains a cycle of erosion, landslip and colonisation. Any management of these cliffs is difficult due to their unstable nature, but they are sometimes grazed in conjunction with adjacent cliff-top pastures. More southerly sections of cliff are relatively stable, but due to their steep and inaccessible nature are virtually unmanaged. Any intensification in management may influence the vegetation communities present.
- 5.24 The location of this site is rural, but occasional settlements may give rise in the future to coast protection proposals which may interfere with natural coastal erosion processes. There is a current Shoreline Management Plan for this section of the coast; the preferred coastal defence option as outlined in the plan is 'do nothing', which should contribute to maintaining active coastal processes.

Conservation Objectives:

- 5.25 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

(h) Arnecliff and Park Hole – Special Area of Conservation

- 5.26 The site consists of East Arnecliff Wood and part of Park Hole Wood, which are ancient semi-natural woodlands, and part of West Arnecliff Wood, which is a mixture of ancient semi-natural and ancient replanted woodland. These woods are an important feature of Glaisdale valley which lies round the River Esk. The woodland community includes upland oak woodland on acidic soils with holly *Ilex aquifolium*, hard fern *Blechnum spicant* and a species-rich fern community. Of particular interest is a large population of the Killarney Fern *Trichomanes speciosum*, an internationally rare species.

Vulnerabilities

- 5.27 Formerly extensive upland oak woodlands on acidic soils with holly, hard fern and a species-rich fern community. There has been extensive disturbance in the past to these woodlands for both iron workings and woodland management. There are abundant rocks and small cliffs and a generally uneven topography which has allowed important ferns to survive in an undisturbed state. Extensive

collecting of one of these ferns in the past has led to its near-extinction at a number of sites in Britain. This site contains a greater number of sporophytes than found elsewhere in the UK. However the plants are small, and in many cases not fully developed, with mature spore-producing plants extremely rare. The great significance of this site lies in that the sporophytes appear to be recently developed from gametophytes, a phenomenon that has only been rarely recorded elsewhere in the United Kingdom. The site also contains Old sessile oak woods with *Ilex* and *Blechnum*.

Conservation Objectives:

- 5.28 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.

(i) Eller's Wood – Special Area of Conservation

- 5.29 The site comprises a series of springs and associated fen along the lower slopes of Sand Dale. The springs drain into Thornton Beck which forms the eastern boundary of Eller's Wood. Rich fen vegetation follows the seepage lines from springs. Blunt-flowered rush *Juncus subnodulosus*, sharp-flowered rush *J. acutiflorus*, long-stalked yellow sedge *Carex lepidocarpa* and bryophytes form the basis of the community. Between the flushes on raised banks there is more acidic grassland amongst scattered gorse *Ulex europaeus* and hawthorn *Crataegus monogyna*. A population of Geyer's whorl snail *Vertigo geyeri* exists at this site in a tufa-rich flush.

Vulnerabilities

- 5.30 The site is very wet and vulnerable to both human and livestock pressure. However, the present management agreement with English Nature is preventing excessive livestock pressure whilst promoting light cattle poaching. The site is fairly isolated and human pressure at present is negligible. The number of visitors to the site is minimal but if this increased it would be very damaging. Scrub invasion in parts of the site is also a lesser threat but is being successfully managed through an EN Management Agreement.

Conservation Objectives:

5.31 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.

(j) Fen Bog – Special Area of Conservation

5.32 Fen Bog, lying at the watershed between the Pickering Beck and Eller Beck, is an example of oligotrophic valley mire; an acidic habitat supporting plants such as the bog-mosses *Sphagnum papillosum* and *S. rubellum*, bogbean *Menyanthes trifoliata* and round-leaved sundew *Drosera rotundifolia*. Many locally occurring species are associated with the less acidic margins; these include bog-sedge *Carex limosa* and many-stalked spike-rush *Eleocharis multicaulis*, whilst white beak-sedge *Rhynchospora alba* occurs on the main mire surface.

Vulnerabilities

5.33 The site has few significant pressures. The main vulnerability would be a lowering of the existing water table resulting from potential drainage to protect the railway running through the middle of the site. The site is lightly grazed at present; should grazing be removed, there is also long-term potential for a lowered water table due to succession at fringes to climax community growth such as woodland. There is public access to the northern section of the site. The site is subject to occasional fires due to its proximity to a steam engine railway. Surrounding the site is moorland which is occasionally subject to bracken-spraying. This has the potential to damage mire communities and species sensitive to active ingredients in chemicals used to control bracken.

Conservation Objectives:

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

(k) River Derwent – Special Area of Conservation

5.35 The Yorkshire Derwent is considered to represent one of the best British examples of the classic river profile. This lowland section, stretching from Ryemouth to the confluence with the Ouse, supports diverse communities of aquatic flora and fauna. Fed from an extensive upland catchment, the lowland course of the Derwent has been considerably diverted and extended as a result of glacial action in the Vale of Pickering.

The river supports an aquatic flora uncommon in Northern Britain. Several species, including river water-dropwort *Oenanthe fluviatilis*, flowering rush *Butomus umbellatus*, shining pondweed *Potamogeton lucens*, arrowhead *Sagittaria sagittifolia*, opposite-leaved pondweed *Groenlandia densa* and narrow-leaved water-parsnip *Berula erecta* are more typically found in lowland rivers in southern England.

The Derwent is noted for the diversity of its fish communities, which include river lampetra *Lampetra fluviatilis* and sea lampreys *Petromyzon marinus* populations that spawn in the lower reaches, as well as bullhead *Cottus gobio*. The diverse habitats also support otters *Lutra lutra*.

Vulnerabilities

5.36 Water levels and flooding are an issue with the River Derwent. Concern has been expressed about both the level of flooding of adjacent agricultural land and also recent flooding of urban areas. This has resulted in public pressure both for new flood defences and different water-level control regimes. Issues relating to water control levels are being addressed through a collaborative project between English Nature, Environment Agency and the water company, Yorkshire Water. English Nature is also fully consulted over any new proposals relating to new or improved flood defences. Water quality is also a potential issue on the river. Improvements are currently proposed under the AMP3 programme.

Conservation Objectives:

5.37 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.

6. Screening Assessment

Test: Necessary to the Management of European Sites

- 6.1 Under Regulation 61 of the Habitats Regulations it is necessary to decide whether a proposed Plan likely to have a significant effect on a European site is necessary for the management of that site. Irrespective of any conclusions on likely significant effects, none of the components of the proposed Plan is necessary to the management of the European sites identified in Section 5.
- 6.2 It is not anticipated that any policies within the Plan would have a negative effect on any of the Natura 2000 sites within the Local Plan area or adjacent. On a precautionary basis a detailed assessment of housing and employment allocations and all the policies in the Plan has been carried out to identify if there would be any likely significant effect either individually or in-combination.
- 6.3 None of the allocations will result in the direct physical loss or damage of the international site and due to a variety of factors including the distance from the international sites and the approach to identify allocation sites which are within or border existing developments the potential for effects through noise, light and visual impacts has been removed. Therefore no 'in combination' impacts are expected.
- 6.4 As with all housing developments there is the potential for residential impacts to occur, however, these are only likely where the allocation lies within close proximity to the international sites. Those housing allocations which do lie in close proximity to the international sites all contain significant areas of open space and thus any impacts would not be significant. Therefore no 'in combination' impacts are expected.

In-Combination Impact of other Plans and Projects

- 6.5 In addition to considering those allocations within the Local Plan area, it is necessary to assess the relevant Plans of adjoining authorities to determine any potential cumulative impact arising from allocations and emerging strategies. To the north of the Borough, Redcar & Cleveland Borough Council have not yet progressed a Local Plan to a stage that allows analysis of allocations. North York Moors National Park Authority adopted their 'Core Strategy and Development Policies' in November 2008, however, this does not include site specific allocations. Ryedale District Council adopted its 'Local Plan Strategy' in September 2013. This makes provision for approximately 750 dwellings within Pickering over the Plan period (2012 – 2027). The proximity of Pickering to the River Derwent SAC would mean that the impact of additional allocations within the Borough area should consider the addition of these 750 dwellings to fully establish the cumulative impact.
- 6.6 To the south of the Borough, East Riding of Yorkshire County Council have recently progressed their Strategy Document and Allocations Document through examination and are due to adopt both later in 2015. Due to the

progress with this, the emerging allocations will give a clear indication as to the anticipated location of development over the Plan period. Bridlington is the largest settlement at the northern end of the East Riding of Yorkshire, with the entire town being within 5 km of the Flamborough Head and Bempton Cliffs SPA, and Flamborough Head SAC. Within the Bridlington area, approximately 100 hectares of land is proposed to be allocated for housing and almost 20 hectares allocated for employment in the emerging Plan. As part of the submission for examination, East Riding of Yorkshire County Council completed a Habitat Regulations Assessment that considered the cumulative impact of all allocations on both the Flamborough Head and Bempton Cliffs SPA and Flamborough Head SAC. As that examination is ahead of this Local Plan, its Habitat Regulations Assessment will not have taken into account the cumulative impact when considered alongside emerging allocations within Scarborough Borough. This Habitat Regulations Assessment should therefore consider the impact of proposed allocations in addition to those within the Bridlington area when assessing the cumulative impact on Flamborough Head and Bempton Cliffs SPA and Flamborough Head SAC.

- 6.7 The North York Moors National Park Authority and Scarborough Borough Council adopted a joint Area Action Plan for Whitby Business Park in November 2014. This plan aims to capitalise on the potential economic benefits of the approved Dogger Bank off-shore wind farm and the Whitby potash mine. The Business Park is the closest employment land location to both developments. The Plan allocates approximately 14 hectares of additional employment land to facilitate expansion of the Business Park. The Habitat Regulations Assessment identified some in-combination effects with the National Park Management Plan which aims to increase visitor numbers. These effects include on air quality from increased road transport and new industrial uses but with no likely effects on hydrology (water levels or run off).
- 6.8 The North York Moors recently gave permission for a Potash Mine at Doves Nest which is outside the Plan area but adjacent to the North York Moors SAC and SPA. As any traffic visiting the mine would be travelling through these Natura 2000 sites the traffic impact of the proposal were considered.
- 6.9 The details of HRAs on documents in the adjoining area, a summary of their findings and the potential for in-combination effects are given in Table 1 below.

Table 1 Summary of In-Combination Assessment

Statutory Body	Name of Plan	Findings of HRA	In-Combination Assessment
East Riding of Yorkshire Council	East Riding Plan including the Strategy Document and the Allocations Document	The Plan seeks to protect international sites (in line with Policy ENV4). Due to the high level strategic nature of the Plan only broad details of future development possibly arising from Policies	'In combination' effects have been considered as part of this screening assessment for other projects and plans which have been subject to HRA. None of the other projects and plans identified in Section 6 (see above) will lead to likely significant

		<p>are given. As such the Plan commits to HRAs being carried out of any future Local Plan documents/planning applications when they are produced (in accordance with the HRA text in Section 9 of the Plan). Future allocations sites/planning applications will only be taken forward if it can be proven through HRA that there will be no adverse effect on the integrity of the International Sites from any of the proposed allocations sites/proposed planning applications on the international sites. Any adverse effects on integrity must be effectively mitigated.</p> <p>With the exception of allocation HAV1/2 at Hedon Haven none of the allocations are considered to have a likely significant effect upon the international sites.</p>	<p>effects on the international sites.</p>
Hambleton District Council	Site Allocations DPD	<p>The assessment concluded that there would be no likely significant effects on the Lower Derwent Valley SPA/SAC. On a precautionary principal any adverse effects on the integrity of Natura 2000 and Ramsar sites can be avoided or mitigated through the proper application of policy safeguards within and outside the planning process.</p>	<p>The assessment identified no potential effects on the Lower Derwent with the exception of water which will be mitigated through standard working procedures including Environment Agency Pollution Prevention Guidelines. Therefore no in-combination effects are anticipated.</p>
	Development Policies DPD	<p>The HRA confirmed that the majority of the policies in the Hambleton</p>	<p>The DPD deals with policies only which were amended where necessary whereas the allocations</p>

		<p>submission Development Policies DPD are likely to have neutral or positive effects. For those policies that were assessed as potentially adversely affecting the integrity of Natura 2000 or Ramsar sites, the incorporation of the changes to the policy wording will ensure that any potential adverse effects are avoided or mitigated.</p>	<p>deals with future development. Therefore no in-combination effects are anticipated.</p>
<p>North York Moors National Park and Scarborough Borough Council</p>	<p>Whitby Business Park Area Action Plan 2014</p>	<p>It was determined that the Whitby Business Park Area Action Plan would not give rise to any effects that would harm the integrity of the Natura 2000 sites following application of the mitigation measures. The mitigation measures identified in this report will be referred back to in delivering the policies of the Area Action Plan.</p>	<p>As the Local Plan has allocated a housing site opposite the Business Park this is designed to provide for sustainable development as well as the use of sustainable travel plans. There are no in-combination effects anticipated</p>
<p>DEFRA</p>	<p>Flamborough Management Plan 2001</p>	<p>Flamborough Head international Sites. Measures do not have adverse impact on these sites.</p>	<p>There are no in-combination effects anticipated.</p>
<p>North Eastern Sea Fisheries Committee (NESFC)</p>	<p>NESFC licensing of demersal trawling in the area within and around the SAC.</p>	<p>The Appropriate Assessment of this fishing activity has recently been completed and the precautionary principle put in place as it could not be proven that the demersal trawling was not having a significant effect on the habitats within the Flamborough Head international sites. As mitigation the NESFC have put a Byelaw in place</p>	<p>The assessment took the precautionary principle in that potential effects could not be ruled out as a result of trawling and therefore bylaws were put in place to limit trawling activity. The Local Plan does not promote development near to the Flamborough Head SAC or SPA. Policy ENV 3 aims to control any effects of Environmental Risk. There are no in-combination effects anticipated</p>

		that limits trawling activity around the Flamborough Head area such that there will be no significant effects on the SAC or SPA from this activity.	
Ryedale District Council	Conservation Area Assessment and Management Plan	The assessment concluded that there would be no likely significant effect on the River Derwent SAC.	The assessment identified no potential effects on the River Derwent SAC with the exception of water which will be mitigated through standard working procedures including Environment Agency Pollution Prevention Guidelines. Therefore no in-combination effects are anticipated.
	Core Strategy - Development Options, Dec 2009 & Addendum 2012	An addendum to the HRA undertaken in 2009 for the core strategy was undertaken in January 2012 which stated that the findings of the Core Strategy HRA undertaken in 2009 still applied. Concluded no likely significant effect provided the outlined measures were considered in determination of the preferred options and the recommendations were incorporated into the Core Strategy.	The strategy deals with policies in the Ryedale area whereas the Allocations Document deals with future development up to 2028/29. Therefore no in-combination effects are anticipated.
North York Moors National Park Authority	Application for Potash Mine, Doves Nest Whitby	The applicant submitted substantial amounts of information including air quality assessments. The National Park also commissioned its own HRA into the project. The HRA's agreed that subject to the mitigation measures agreed the development would not have an	The conclusions of the HRA were that the York Potash Project alone and in-combination (including the impacts of the emerging Scarborough Borough Local Plan).did not generate a significant effect which would affect the integrity of any Natura 2000 Sites.

		<p>significant effect on any Natura 2000 site. The applicant's assessment included looking at in-combination Plans and projects including the Scarborough Borough Local Plan. It also considered any planning applications that had been approved that may contribute traffic numbers to the area.</p>	
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Table 2 Screening of Large Allocations

Site	Natura 2000 sites affected	Likely Significant Effect (Yes/No/Uncertain)	Indirect or Cumulative Impacts
Land opposite Whitby Business Park and south of Eskdale Park, Whitby (320 dwellings)	1) Arnecliff & Park Hole SAC (13km); 2) Beast Cliff SAC (6.6km); 3) Fen Bog SAC (13km); 4) North York Moors SPA & North York Moors SAC (3.1km)	Uncertain In relation to the North York Moors SAC and SPA there is no likely significant effect on any of the other designations.	<p><u>Recreational</u> Increased number of people in the SPA and SAC. The increase is likely to be relatively small when compared to current visitor numbers for both the National Park area (7 million visitors) and Whitby town (whilst not broken down, Scarborough Borough has seen an increase in visitor numbers).</p> <p>Trampling of vegetation and habitat in any of the sites. Individual incidences of trampling are unlikely to harm the integrity of the sites but cumulative effects may do.</p> <p>Disturbance to merlin and golden plover, qualifying features of the North York Moors SPA. Individual incidences of disturbance are unlikely to harm the integrity of the sites but cumulative effects may do.</p> <p><u>Air Quality</u></p> <p>Additional traffic movements along the A169 and A171 may lead to increased nitrogendeposition in the SAC. This leads to effects on the vegetation, these effects may be permanent depending upon the degree of harm. Any increases as a result of development are likely to be negligible when compared to the total numbers of vehicles using the roads. The critical level of Nitrogen Oxides to the habitats is 30 µg NOx. The latest concentration levels are recorded at 7.5 µg NOx¹⁸ this gives an exceedance level of -22.5 µg. Any potential increase on traffic dissecting the SAC or SPA would not produce levels of Nitrogen Oxides anywhere near the critical levels that would violate environmental protection levels. Further work commissioned through AECOM sought to confirm whether or not the development proposed in the Plan would generate traffic of a scale which could have a likely significant effect on the Nitrogen deposition levels in the North York Moors SAC. The conclusion was that any change of traffic flows would be well below the 1,000 AADT and the change in HGV flows would be less than 200 per day.</p>

¹⁸ Air Pollution Information System

			<p>This does not exceed the 1% critical level, as set by the Air Quality Technical Advisory Group (consisting of Natural England, Environment Agency and Natural Resources Wales) as the threshold below which any scheme (Plan) can be deemed to be effectively inconsequential and 'does not need to be included in an in-combination assessment'.</p> <p>Though the site lies within 4Km of the North York Moors SPA it is unlikely to affect foraging by breeding birds from within the SPA as similar birds in the South Pennines have been shown to rarely forage further than 2.5km. There is enough land elsewhere for any development not to impact on the habitats or feeding grounds of breeding birds.</p> <p>Whilst additional traffic movements are referred to above there are potential beneficial impacts of the developments relationship with (a) the business park and (b) the open space and linkages to the Cinder Track.</p> <p>(a) Locating housing opposite the Business Park is a sustainable option offering excellent opportunities for employment opportunities near to the home thus raising the potential of increased journeys along the above referred to A171 and A169 through the National Park. (b) The large area of open space and links to the recreational/sustainable commuting route (the Cinder Track) can provide an excellent facility for recreation and dog walking as well as alternatives to using the car into Whitby. This easy access space and routes can reduce pressure on other protected Natura 2000 sites.</p> <p><u>Water Quality</u></p> <p>Residential development on the site is unlikely to reduce water quality as any application will have to demonstrate how waste water will utilise mains sewers and appropriate design, as required by proposed Local Plan policies ENV3 and 4 to ensure water quality is not adversely affected. It is not anticipated that any development would require water abstraction and it is not considered that water abstraction would affect coastal and marine habitat.</p>
Land to north of Middle Deepdale (East of Deep Dale Valley) Eastfield (600 dwellings) and Open Space Allocations	1) Beast Cliff SAC (15km); 2) Ellers Wood & Sand Dale SAC (19km); 3) Flamborough & Filey Coast pSPA (3km); 4) Flamborough	Uncertain in-combination with other sites to the south of Scarborough	<p><u>Recreational</u></p> <p>The coastal SPA and SAC are the closest to this proposal and an increased number of people potentially using the coast for recreation could result in trampling of vegetation and disturbance to nesting birds. Individual incidences of disturbance are unlikely to harm the integrity of the sites but cumulative effects may do.</p> <p>Notwithstanding this there are other more accessible locations on the coast within closer proximity to this site that offer a similar experience not within protected locations. From this</p>

	<p>Head SAC & Flamborough Head & Bempton Cliff SPA (14.5km); 5) North York Moors SPA & North York Moors SAC (17km)</p>		<p>location they are approximately 1.4km away (which is at least half of the distance to any protected sites) The distance to these sites and the other options available suggest that any such impact on protected areas will be most likely be negligible.</p> <p>Other sites are a significant distance from this proposal and impacts due to visitation will therefore be dispersed over a wider area leading to negligible impacts on individual protected sited. The substantial areas of open space proposed on the three Middle Deepdale sites will also provide for excellent opportunities for recreation and dog walking on the doorstep of the development, further negating the requirement to travel for such needs. These provide easy links north-south allowing access into the town and Cayton to the south, This would further diminish the propensity for visitation to protected areas by future and in some cases existing residents of Eastfield and earlier phases of Middle Deepdale.</p> <p>Residential impacts- The site is too distant from the SPA/SAC to be affected by anti-social impacts, which are most likely to occur in closer proximity to the built environment (Local Authorities near to the Thames Basin Heaths SAC suggest that urban effects are typically limited to 400m. In this instance there are no sites within at least 3km) Recorded fly-tipping occurs most commonly where there is a council interest, typically: highways, council land, alleyways and footpaths .¹⁹ There has only been one instances of garden waste fly-tipping in the last 5 years, there is no evidence that a development in this location would lead to an increase.</p> <p><u>Air Quality</u></p> <p>Any increase in traffic as a result of this development would not lead to significant additional trips through the sites.</p> <p>Additional traffic movements along the A169 and A171 may lead to increased nitrogen deposition in the SAC. This leads to effects on the vegetation, these effects may be permanent depending upon the degree of harm. Any increases as a result of development are likely to be negligible when compared to the total numbers of vehicles using the roads. The critical level of Nitrogen Oxides to the habitats is 30 µg NOx. The latest concentration levels are recorded at 7.5 µg NOx²⁰ this gives an exceedance level of -22.5 µg. Any potential increase on traffic dissecting the SAC or SPA would not produce levels of Nitrogen Oxides anywhere near the critical levels that would violate environmental protection levels. Further work commissioned through AECOM sought to confirm whether or not the development proposed in the Plan would generate traffic of a scale which could have a likely significant effect on the Nitrogen deposition</p>
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¹⁹ Fly-tipping: Causes, Incentives and Solutions, UCL Jill Dando Institute of Crime Science, May 2006

²⁰ Air Pollution Information System

			<p>levels in the North York Moors SAC. The conclusion was that any change of traffic flows would be well below the 1,000 AADT and the change in HGV flows would be less than 200 per day.</p> <p>This does not exceed the 1% critical level, as set by the Air Quality Technical Advisory Group (consisting of Natural England, Environment Agency and Natural Resources Wales) as the threshold below which any scheme (Plan) can be deemed to be effectively inconsequential and 'does not need to be included in an in-combination assessment'</p> <p><u>Water Quality</u></p> <p>The site is located on a Source Protection Zone which would have to be taken into account in any development of the site. All sites within the SPZ have the added protection of a bespoke policy (ENV4) within the Local Plan, co-authored by the Local Planning Authority, Environment Agency and Yorkshire Water. This model policy has been welcomed by the aforementioned organisations and provides substantial protection to these zones. It should also be noted that Yorkshire Water has no objections to this allocation. It is not anticipated that there would be any reduction in water quality or any significant additional water abstraction. Waste water will utilise mains sewers and appropriate design, as required by proposed Local Plan policies ENV3 and 4 will further ensure water quality as not adversely affected.</p>
Land to west of Middle Deepdale, Eastfield (100 dwellings)	<p>1) Beast Cliff SAC (15km);</p> <p>2) Ellers Wood & Sand Dale SAC (18km);</p> <p>3) Flamborough & Filey Coast pSPA (4.5km);</p> <p>4) Flamborough Head SAC & Flamborough Head & Bempton Cliff SPA (15.5km);</p> <p>5) North York Moors SPA & North York Moors SAC (17km)</p>	Uncertain in-combination with other sites to the south of Scarborough	<p><u>Recreational</u></p> <p>The coastal SPA and SAC are the closest to this proposal and an increased number of people potentially using the coast for recreation could result in trampling of vegetation and disturbance to nesting birds. Individual incidences of disturbance are unlikely to harm the integrity of the sites but cumulative effects may do.</p> <p>Notwithstanding this there are other more accessible locations on the coast within closer proximity to this site that offer a similar experience not within protected locations. From this location they are approximately 3km away (significantly closer than any protected sites). The distance to these sites and the other options available suggest that any such impact on protected areas will be most likely be negligible.</p> <p>Other sites are a significant distance from this proposal and impacts due to visitation will therefore be dispersed over a wider area leading to negligible impacts on individual protected sites. The substantial areas of open space proposed on the three Middle Deepdale sites will also provide for excellent opportunities for recreation and dog walking on the doorstep of the development, further negating the requirement to travel for such needs. These provide easy links north-south allowing access into the town and Cayton to the south, This would further diminish the propensity for visitation to protected areas by future and in some cases existing residents of Eastfield and</p>

			<p>earlier phases of Middle Deepdale.</p> <p><u>Air Quality</u> Any increase in traffic as a result of this development would not lead to significant additional trips through the sites. Additional traffic movements along the A169 and A171 may lead to increased nitrogen deposition in the SAC. This leads to effects on the vegetation, these effects may be permanent depending upon the degree of harm. Any increases as a result of development are likely to be negligible when compared to the total numbers of vehicles using the roads. The critical level of Nitrogen Oxides to the habitats is 30 µg NOx. The latest concentration levels are recorded at 7.5 µg NOx ²¹ this gives an exceedance level of -22.5 µg. Any potential increase on traffic dissecting the SAC or SPA would not produce levels of Nitrogen Oxides anywhere near the critical levels that would violate environmental protection levels. Further work commissioned through AECOM sought to confirm whether or not the development proposed in the Plan would generate traffic of a scale which could have a likely significant effect on the Nitrogen deposition levels in the North York Moors SAC. The conclusion was that any change of traffic flows would be well below the 1,000 AADT and the change in HGV flows would be less than 200 per day.</p> <p>This does not exceed the 1% critical level, as set by the Air Quality Technical Advisory Group (consisting of Natural England, Environment Agency and Natural Resources Wales) as the threshold below which any scheme (Plan) can be deemed to be effectively inconsequential and 'does not need to be included in an in-combination assessment'</p> <p><u>Water Quality</u></p> <p>The site is located on a Source Protection Zone which would have to be taken into account in any development of the site. All sites within the SPZ have the added protection of a bespoke policy (ENV4) within the Local Plan, co-authored by the Local Planning Authority, Environment Agency and Yorkshire Water. This model policy has been welcomed by the aforementioned organisations and provides substantial protection to these zones. It should also be noted that Yorkshire Water has no objections to this allocation. It is not anticipated that there would be any reduction in water quality or any significant additional water abstraction. Waste water will utilise mains sewers and appropriate design, as required by proposed Local Plan policies ENV3 and 4 will further ensure water quality as not adversely affected.</p>
Land to north of Middle	1) Beast Cliff SAC (14.5km);	Uncertain in-combination with	Recreational

²¹ Air Pollution Information System

<p>Deepdale (West of Deep Dale Valley) Eastfield (500 dwellings) and Open Space Allocations</p>	<p>2) Ellers Wood & Sand Dale SAC (18km); 3) Flamborough & Filey Coast pSPA (4km); 4) Flamborough Head SAC & Flamborough Head & Bempton Cliff SPA (15km); 5) North York Moors SPA & North York Moors SAC (16.5km)</p>	<p>other sites to the south of Scarborough</p>	<p>The coastal SPA and SAC are the closest to this proposal and an increased number of people potentially using the coast for recreation could result in trampling of vegetation and disturbance to nesting birds. Individual incidences of disturbance are unlikely to harm the integrity of the sites but cumulative effects may do.</p> <p>Notwithstanding this there are other more accessible locations on the coast within closer proximity to this site that offer a similar experience not within protected locations. From this location they are approximately 2.2km away (almost half the distance compared to any protected sites). The distance to these sites and the other options available suggest that any such impact on protected areas will be most likely be negligible.</p> <p>Other sites are a significant distance from this proposal and impacts due to visitation will therefore be dispersed over a wider area leading to negligible impacts on individual protected sited. The substantial areas of open space proposed on the three Middle Deepdale sites will also provide for excellent opportunities for recreation and dog walking on the doorstep of the development, further negating the requirement to travel for such needs. These provide easy links north-south allowing access into the town and Cayton to the south, This would further diminish the propensity for visitation to protected areas by future and in some cases existing residents of Eastfield and earlier phases of Middle Deepdale.</p> <p><u>Air Quality</u></p> <p>Any increase in traffic as a result of this development would not lead to significant additional trips through the sites.</p> <p>Additional traffic movements along the A169 and A171 may lead to increased nitrogen deposition in the SAC. This leads to effects on the vegetation, these effects may be permanent depending upon the degree of harm. Any increases as a result of development are likely to be negligible when compared to the total numbers of vehicles using the roads. The critical level of Nitrogen Oxides to the habitats is 30 µg NOx. The latest concentration levels are recorded at 7.5 µg NOx²² this gives an exceedance level of -22.5 µg. Any potential increase on traffic dissecting the SAC or SPA would not produce levels of Nitrogen Oxides anywhere near the critical levels that would violate environmental protection levels. Further work commissioned through AECOM sought to confirm whether or not the development proposed in the Plan would generate traffic of a scale which could have a likely significant effect on the Nitrogen deposition levels in the North York Moors SAC. The conclusion was that any change of traffic flows would be well below the 1,000 AADT and the change in HGV flows would be less than 200 per day.</p>
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²² Air Pollution Information System

			<p>This does not exceed the 1% critical level, as set by the Air Quality Technical Advisory Group (consisting of Natural England, Environment Agency and Natural Resources Wales) as the threshold below which any scheme (Plan) can be deemed to be effectively inconsequential and 'does not need to be included in an in-combination assessment'</p> <p><u>Water Quality</u></p> <p>The site is located on a Source Protection Zone which would have to be taken into account in any development of the site. All sites within the SPZ have the added protection of a bespoke policy (ENV4) within the Local Plan, co-authored by the Local Planning Authority, Environment Agency and Yorkshire Water. This model policy has been welcomed by the aforementioned organisations and provides substantial protection to these zones. It should also be noted that Yorkshire Water has no objections to this allocation. It is not anticipated that there would be any reduction in water quality or any significant additional water abstraction. Waste water will utilise mains sewers and appropriate design, as required by proposed Local Plan policies ENV3 and 4 will further ensure water quality as not adversely affected.</p>
Land to the east of Lancaster Park, Scalby (900 dwellings)	<p>1) Beast Cliff SAC (8km);</p> <p>2) Ellers Wood & Sand Dale SAC (17km);</p> <p>3) Fen Bog SAC (17.5km)</p> <p>4) Flamborough & Filey Coast pSPA (9.5km);</p> <p>5) Flamborough Head SAC & Flamborough Head & Bempton Cliff SPA (13km);</p> <p>6) North York Moors SPA & North York Moors SAC (10km)</p>	No	<p><u>Recreational</u></p> <p>This site is almost equidistant from the coastal areas of Beast Cliff and Filey. There is a potential for increased use of these areas for recreational purposes which could include more instances of trampling of ground flora if people divert from the paths which could lead to damage or direct loss of important plant species, albeit probably very localised. Notwithstanding this there are other more accessible locations within very close proximity to this site that offer a similar experience not within protected locations (eg Scalby Mills). The distance to these sites and the other options available suggest that any such impact on protected areas will be most likely be negligible.</p> <p>Other protected areas are a considerable distance from this site and are unlikely to have significant visitation from this site.</p> <p><u>Air Quality</u></p> <p>Lying at the north of Scarborough this development has more propensity to lead to an increase in traffic travelling northwards to Whitby and beyond, through the NYM SPA and SAC. However, this must be considered in light of the fact that most employment opportunities occur within Scarborough and to the south at the Business Park. As such an increase in traffic travelling through the protected areas of the National Park as a result of this development is likely to be negligible when compared to the total numbers of vehicles using the roads. Additional traffic</p>

			<p>movements along the A169 and A171 may lead to increased nitrogen deposition in the SAC. This leads to effects on the vegetation, these effects may be permanent depending upon the degree of harm. Any increases as a result of development are likely to be negligible when compared to the total numbers of vehicles using the roads. The critical level of Nitrogen Oxides to the habitats is 30 µg NOx. The latest concentration levels are recorded at 7.5 µg NOx²³ this gives an exceedance level of -22.5 µg. Any potential increase on traffic dissecting the SAC or SPA would not produce levels of Nitrogen Oxides anywhere near the critical levels that would violate environmental protection levels. Further work commissioned through AECOM sought to confirm whether or not the development proposed in the Plan would generate traffic of a scale which could have a likely significant effect on the Nitrogen deposition levels in the North York Moors SAC. The conclusion was that any change of traffic flows would be well below the 1,000 AADT and the change in HGV flows would be less than 200 per day.</p> <p>This does not exceed the 1% critical level, as set by the Air Quality Technical Advisory Group (consisting of Natural England, Environment Agency and Natural Resources Wales) as the threshold below which any scheme (Plan) can be deemed to be effectively inconsequential and 'does not need to be included in an in-combination assessment'</p> <p>The proposed central area of open space and access opportunities to the Cinder Track offer good recreational and dog walking opportunities further negating the requirement to travel for such needs. Whilst there is identified under Policy INF4 (Cinder Track) a small potential to increase access to protected areas via the Cinder Track such protected areas are a considerable distance away from this section of the former railway line (distances shown in previous columns – minimum 8km from this point).</p> <p><u>Water Quality</u></p> <p><u>The nearest water course is Scalby Beck which is less than 1 km away. The Environment Agency records show the water course as very good in terms of Chemistry and Biology with low levels of Phosphates and medium levels of Nitrates. It is not anticipated that there would be any reduction in water quality or any significant additional water abstraction.</u></p>
Land south of Cayton (2,500 dwellings)	1) Beast Cliff SAC (17km); 2) Ellers Wood &	Uncertain in-combination with other sites to the	<p><u>Recreational</u></p> <p>Increased number of people potentially using the coast for recreation which could include</p>

²³ Air Pollution Information System

	<p>Sand Dale SAC (19km); 3) Flamborough & Filey Coast pSPA (3.5km); 4) Flamborough Head SAC & Flamborough Head & Bempton Cliff SPA (13km); 5) North York Moors SPA and North York Moors SAC (18.5km);</p>	<p>south of Scarborough</p>	<p>trampling of vegetation and disturbance to nesting birds. Individual incidences of disturbance are unlikely to harm the integrity of the sites but cumulative effects may do.</p> <p>Again there are other more accessible locations on the coast within close proximity to this site that offer a similar experience not within protected locations. The distance to these sites and the other options available suggest that any such impact on protected areas will be most likely be negligible.</p> <p>Furthermore, the development will offer substantial areas of open space for a variety of uses with the inclusion of parks (linear and/or neighbourhood level) and connections to the north running through The Dell at Eastfield through to Oliver's Mount and the town beyond. This would further reduce the propensity to affect protected areas further afield providing excellent opportunities for recreation and dog walking.</p> <p><u>Air Quality</u></p> <p>Lying at the south of Scarborough this development, although large, has less propensity to lead to a significant increase in traffic travelling northwards to Whitby and beyond, through the NYM SPA and SAC. There is a greater likelihood that travel from this site will be westwards along the A64 or to the adjoining Business Park and Scarborough Town Centre. As such any increase in traffic through the protected areas as a result of this development is likely to be negligible when compared to the total numbers of vehicles using the roads.</p> <p>Additional traffic movements along the A169 and A171 may lead to increased nitrogen deposition in the SAC. This leads to effects on the vegetation, these effects may be permanent depending upon the degree of harm. Any increases as a result of development are likely to be negligible when compared to the total numbers of vehicles using the roads. The critical level of Nitrogen Oxides to the habitats is 30 µg NO_x. The latest concentration levels are recorded at 7.5 µg NO_x²⁴ this gives an exceedance level of -22.5 µg. Any potential increase on traffic dissecting the SAC or SPA would not produce levels of Nitrogen Oxides anywhere near the critical levels that would violate environmental protection levels. Further work commissioned through AECOM sought to confirm whether or not the development proposed in the Plan would generate traffic of a scale which could have a likely significant effect on the Nitrogen deposition levels in the North York Moors SAC. The conclusion was that any change of traffic flows would be well below the 1,000 AADT and the change in HGV flows would be less than 200 per day.</p> <p>This does not exceed the 1% critical level, as set by the Air Quality Technical Advisory Group (consisting of Natural England, Environment Agency and Natural Resources Wales) as the</p>
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²⁴ Air Pollution Information System

			<p>threshold below which any scheme (Plan) can be deemed to be effectively inconsequential and 'does not need to be included in an in-combination assessment'</p> <p><u>Water Quality</u></p> <p>It is recognised that this site lies on a Source Protection Zone, however, the Local Plan contains a bespoke policy on this matter and was agreed by EA and Yorkshire Water. This should ensure that water levels and pollutants do not adversely affect the SPZ and associated boreholes. Whilst the site is more than 20km from the River Derwent SAC it is noted that the River Hertford to the south of this site drains into the aforementioned river. Run-off rates will be an important consideration in the determination of future applications to ensure that agricultural run-off rates are retained; a standard request from the local drainage board. Subject to adhering to these requirements and meeting appropriate policy in the Plan there should be no effects on the River Derwent SAC.</p>
Land to south of Racecourse Road, East Ayton (100 dwellings)	<p>1) Beast Cliff SAC (14km);</p> <p>2) Ellers Wood & Sand Dale SAC (14km);</p> <p>3) Fen Bog SAC (19.5km);</p> <p>4) Flamborough & Filey Coast pSPA (8.5km);</p> <p>5) Flamborough Head SAC & Flamborough Head & Bempton Cliff SPA (19km);</p> <p>6) North York Moors SPA and North York Moors SAC (16km);</p>	No	<p>This is a small development that is unlikely to have any impact on identified sites as a consequence of traffic movements or recreation.</p> <p><u>Recreational</u></p> <p>Although the River Derwent SAC is approximately 20km away, there will be an anticipated increase in the number of people using the river as a recreational resource in close proximity to this site. The section of the River Derwent in close proximity to this site (approximately 800 metres away) flows towards the SAC section of the river. When compared to current recreational usage, there would only be a minor increase resulting from this development, however, any disturbance in terms of trampling of ground flora would be limited to this area and unlikely to impact on the SAC itself.</p> <p><u>Air Quality</u></p> <p>Additional traffic movements along the A169 and A171 may lead to increased nitrogen deposition in the SAC. This leads to effects on the vegetation, these effects may be permanent depending upon the degree of harm. Any increases as a result of development are likely to be negligible when compared to the total numbers of vehicles using the roads. The critical level of</p>

	7) River Derwent SAC (20km);		<p>Nitrogen Oxides to the habitats is 30 µg NOx. The latest concentration levels are recorded at 7.5 µg NOx²⁵ this gives an exceedance level of -22.5 µg. Any potential increase on traffic dissecting the SAC or SPA would not produce levels of Nitrogen Oxides anywhere near the critical levels that would violate environmental protection levels. Further work commissioned through AECOM sought to confirm whether or not the development proposed in the Plan would generate traffic of a scale which could have a likely significant effect on the Nitrogen deposition levels in the North York Moors SAC. The conclusion was that any change of traffic flows would be well below the 1,000 AADT and the change in HGV flows would be less than 200 per day.</p> <p>This does not exceed the 1% critical level, as set by the Air Quality Technical Advisory Group (consisting of Natural England, Environment Agency and Natural Resources Wales) as the threshold below which any scheme (Plan) can be deemed to be effectively inconsequential and 'does not need to be included in an in-combination assessment'</p> <p><u>Water Quality</u></p> <p>Run-off rates will be an important consideration in the determination of future applications to ensure that agricultural run-off rates are retained; a standard request from the local drainage board. Subject to adhering to these requirements and meeting appropriate policy in the Plan there should be no effects on the River Derwent SAC.</p>
Land at Yorkshire Coast College, Lady Edith's Drive, Scarborough (100 dwellings) and Open Space Allocation,	<p>1) Beast Cliff SAC (10.5km);</p> <p>2) Ellers Wood & Sand Dale SAC (16.5km);</p> <p>3) Fen Bog SAC (19.5km);</p> <p>4) Flamborough & Filey Coast pSPA (7.5km);</p> <p>5) Flamborough Head SAC & Flamborough Head & Bempton Cliff SPA</p>	No	<p>This is a relatively small development that is unlikely to have any impact on identified sites as a consequence of traffic movements.</p> <p><u>Recreational</u></p> <p>There is limited potential for increased use of these areas for recreational purposes due to the size of the proposal which could include more instances of trampling of ground flora if people divert from the paths which could lead to damage or direct loss of important plant species, albeit probably very localised.</p> <p>Notwithstanding this there are other more accessible locations within very close proximity to this site that offer a similar experience not within protected locations (eg Scalby Mills). The distance to these sites and the other options available suggest that any such impact on protected areas will be most likely be negligible. Most notably a large area of open space is proposed for retention to the front of the development. This provides an important urban buffer but also offers</p>

²⁵ Air Pollution Information System

	(19.5km); 6) North York Moors SPA and North York Moors SAC (11.5km)		<p>good opportunities for recreation, play and dog walking.</p> <p><u>Air Quality</u></p> <p>Additional traffic movements along the A169 and A171 may lead to increased nitrogen deposition in the SAC. This leads to effects on the vegetation, these effects may be permanent depending upon the degree of harm. Any increases as a result of development are likely to be negligible when compared to the total numbers of vehicles using the roads. The critical level of Nitrogen Oxides to the habitats is 30 µg NOx. The latest concentration levels are recorded at 7.5 µg NOx²⁶ this gives an exceedance level of -22.5 µg. Any potential increase on traffic dissecting the SAC or SPA would not produce levels of Nitrogen Oxides anywhere near the critical levels that would violate environmental protection levels. Further work commissioned through AECOM sought to confirm whether or not the development proposed in the Plan would generate traffic of a scale which could have a likely significant effect on the Nitrogen deposition levels in the North York Moors SAC. The conclusion was that any change of traffic flows would be well below the 1,000 AADT and the change in HGV flows would be less than 200 per day.</p> <p>This does not exceed the 1% critical level, as set by the Air Quality Technical Advisory Group (consisting of Natural England, Environment Agency and Natural Resources Wales) as the threshold below which any scheme (Plan) can be deemed to be effectively inconsequential and 'does not need to be included in an in-combination assessment'</p> <p><u>Water Quality</u></p> <p>The nearest water course is Scalby Beck which is more than 1 km away. The Environment Agency records show the water course as very good in terms of Chemistry and Biology with low levels of Phosphates and medium levels of Nitrates. It is not anticipated that there would be any reduction in water quality or any significant additional water abstraction.</p>
Land to North of Scarborough Road and Land of Church Cliff Drive and Open Space	1) Flamborough & Filey Coast pSPA (less than 1km); 2) Flamborough Head pSAC (less than 1km);	Uncertain in-combination with other sites to the south of Scarborough	<p><u>Recreational</u></p> <p>Although these sites individually are small it is considered appropriate to assess these together due to their relative proximity to one another and the pSPA and pSAC. The site yield is circa 90 dwellings which is under the previously referred to 100 dwelling threshold, however, it is considered relevant to set out some of the issues and beneficial impacts of these sites and</p>

²⁶ Air Pollution Information System

<p>Allocations to north of these sites (circa 90 dwellings)</p>			<p>associated open space. These two sites are bounded (or will be) by the Filey Flood Alleviation Scheme which results in an area of unusable agricultural land between the Filey Country Park and the Filey Boys and Girls Football Club to the west. This land is proposed as an area of open space. It is not of a formal nature and will be Natural and Semi-Natural Green Space. It will be directly accessible from the new developments and will provide significantly more open space than would normally be required. This is also of benefit to the existing residential properties along Scarborough Road and beyond.</p> <p>It is considered that this new area of open space could actually benefit the protected areas at Filey Brigg and surrounding area by providing a closer alternative for recreational activities, for example, walking.</p> <p>As such these sites are unlikely to have any detrimental impact on the protected areas due to their relative scale and the aforementioned improvements to accessible open space and could have a positive impact.</p> <p><u>Air Quality</u></p> <p>Whilst the sites are within walking distance of the pSAC and pSPA there is still the ability to drive onto the cliff top at Filey Brigg. The Nitrogen Oxide levels at this location are 9.41 µg where the critical level is 30µg. The allocations should not in themselves generate traffic movements which would have an effect on the protected sites.</p> <p><u>Water Quality</u></p> <p>Whilst the site is near the cliff tops, the natural topography takes water away from the cliffs, The development of the site would not result in any reduction water quality or any significant additional water abstraction.</p>
<p>Employment land north and south of Cayton Approach, Scarborough (24.2ha)</p>	<p>1) Beast Cliff SAC (16.5km); 2) Ellers Wood & Sand Dale SAC (18km); 3) Flamborough & Filey Coast pSPA (4.5km); 4) Flamborough</p>	<p>No</p>	<p><u>Recreational</u></p> <p><u>Air Quality</u></p> <p>As this is an employment site it does not raise the propensity for visitors to the protected sites but may increase travel through those with roads traversing them to and from this site. This would only potentially affect the NYM SPA and SAC, however, as this site lies to the south of the town it is likely that most employees or visitors to the Business Park will be from the urban area of Scarborough or from the main connection westwards; the A64. Whilst a small number</p>

	<p>Head SAC (14.5km); Flamborough Head & Bempton Cliff SPA (14.5km); 5) North York Moors SPA and North York Moors SAC (18.5km)</p>	<p>may travel from Whitby and further north this is likely to be a small number compared to current traffic on this road. Additional traffic movements along the A169 and A171 may lead to increased nitrogen deposition in the SAC. This leads to effects on the vegetation, these effects may be permanent depending upon the degree of harm. Any increases as a result of development are likely to be negligible when compared to the total numbers of vehicles using the roads. The critical level of Nitrogen Oxides to the habitats is 30 µg NO_x. The latest concentration levels are recorded at 7.5 µg NO_x ²⁷ this gives an exceedance level of -22.5 µg. Any potential increase on traffic dissecting the SAC or SPA would not produce levels of Nitrogen Oxides anywhere near the critical levels that would violate environmental protection levels. Further work commissioned through AECOM sought to confirm whether or not the development proposed in the Plan would generate traffic of a scale which could have a likely significant effect on the Nitrogen deposition levels in the North York Moors SAC. The conclusion was that any change of traffic flows would be well below the 1,000 AADT and the change in HGV flows would be less than 200 per day.</p> <p>This does not exceed the 1% critical level, as set by the Air Quality Technical Advisory Group (consisting of Natural England, Environment Agency and Natural Resources Wales) as the threshold below which any scheme (Plan) can be deemed to be effectively inconsequential and 'does not need to be included in an in-combination assessment'</p> <p>As such impact on the NYM SAC and SPA is considered to be negligible.</p> <p><u>Water Quality</u></p> <p>It is recognised that this site lies on a Source Protection Zone, however, the Local Plan contains a bespoke policy on this matter and was agreed by EA and Yorkshire Water. This should ensure that water levels and pollutants do not adversely affect the SPZ and associated boreholes. Whilst the site is more than 20km from the River Derwent SAC it is noted that the River Hertford to the south of this site drains into the aforementioned river. Run-off rates will be an important consideration in the determination of future applications to ensure that agricultural run-off rates are retained; a standard request from the local drainage board. Subject to adhering to these requirements and meeting appropriate policy in the Plan there should be no effects on the River Derwent SAC. The Environment Agency River Quality mapping shows the main rivers in Scarborough namely the Derwent, Esk and Hertford all being very good in terms of Chemistry, Biology and Phosphates and average for Nitrates. The Derwent and Hertford both flow from East to West away from the sea so whilst they may increase in Nitrates and Phosphates as they travel down the Vale of Pickering this will be due to farming practices and not down to activities within</p>
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²⁷ Air Pollution Information System

			Scarborough Borough.
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6.10 These proposed housing allocations identified within the Local Plan are of a scale that are not considered to have a significant effect any of the identified Natura 2000 sites that would warrant further assessment under the Habitats Regulation Assessment. All housing sites have been fully assessed within the individual housing assessments used to determine which sites are put forward for allocation²⁸. Whilst individually sites are not seen to have a likely significant effect on any Natura 2000 sites, the screening recognises that the majority of housing allocations are to the south of Scarborough and within 6km of the Flamborough and Filey Coast pSPA. As a precautionary measure and due to potential in-combination effect of the housing allocations it was considered necessary to carry out an Appropriate Assessment of the Flamborough and Filey Coast pSPA.

6.11 The sites below have all been covered by these assessments and found to be of such a minor scale and/or distance from the Natura 2000 sites that any impact by means of recreational pressure, air quality and water quality/hydrology was considered most likely to be negligible. As the Plan has been considered as a whole in respect of the impact of air quality within the North York Moors SAC and SPA and found any effect to be inconsequential it can therefore be concluded that these small sites when considered individually will also be inconsequential.

Table 3 Screening of Smaller Housing Sites

Site and Ref:	Area	Yield	Notes from Assessment
HA1 – Land off Springhill Lane, Scarborough	2.08ha	40	This is a redevelopment of the current reservoir site. It is more than 5km from a Natura 2000 Site. Allied to the fact that this is a relatively small scale development, would mean that any impact on sites covered by the Habitats Regulation Assessment is likely to be negligible.
HA2 – Westwood Campus, Scarborough	0.83ha	50	This is a conversion of a college building to residential use.

²⁸ Scarborough Borough Local Plan Housing Site Assessment

			It is more than 5km from a Natura 2000 Site. Allied to the fact that this is a relatively modest scale development, would mean that any impact on sites covered by the Habitats Regulation Assessment is likely to be negligible.
HA3 – 101 Prospect Mount Road, Scarborough	0.43ha	30	<p>This is the conversion of an Elderly Persons Care Home to residential use.</p> <p>It is more than 5km from a Natura 2000 Site. Allied to the fact that this is a relatively small scale development, would mean that any impact on sites covered by the Habitats Regulation Assessment is likely to be negligible.</p>
HA5 – Land off Lady Edith's Drive, Newby	1.78ha	60	<p>This is a site which is currently being considered through the submission of a planning application.</p> <p>It is more than 5km from a Natura 2000 Site. Allied to the fact that this is a relatively modest scale development, would mean that any impact on sites covered by the Habitats Regulation Assessment is likely to be negligible.</p>
HA10 – Braeburn House, Moor Lane, Eastfield	0.39ha	30	<p>This site was a former elderly person's care home.</p> <p>It is less than 5km from a Natura 2000 Site (Flamborough and Filey Coast pSPA). Although it is within 5km of the above it is of a small scale and any adverse impact on those sites covered by the Habitats Regulation Assessment is likely to be negligible.</p>
HA11 – Land to west of Church Lane, Cayton	2.12ha	40	<p>The site is a small piece of land identified for residential development to the immediate north of Cayton.</p> <p>It is less than 5km from a Natura 2000 Site (Flamborough and Filey Coast pSPA). Although it is within 5km of the above it is of a small scale and any adverse impact on those sites covered by the</p>

			Habitats Regulation Assessment is likely to be negligible.
HA12 – Land to east of Church Lane, Cayton	3.82ha	80	<p>The site is adjacent to an existing caravan park utilising land for residential that was previously used for ancillary purposes for the site.</p> <p>It is less than 5km from a Natura 2000 Site (Flamborough and Filey Coast pSPA). Although it is within 5km of the above it is of only a modest scale and any adverse impact on those sites covered by the Habitats Regulation Assessment is likely to be negligible.</p>
HA14 – Land off Rimington Way, Osgodby	3.52ha	90	<p>The site lies to the immediate south of Osgodby.</p> <p>It is less than 5km from a Natura 2000 Site (Flamborough and Filey Coast pSPA). Although it is within 5km of the above it is of only a modest scale and any adverse impact on those sites covered by the Habitats Regulation Assessment is likely to be negligible.</p>
HA15 – Land off Stakesby Road, Whitby	1.45ha	80	<p>The sites most recent use was a depot for the Borough and County Councils and is proposed for housing development.</p> <p>It is less than 5km from a Natura 2000 Site (North York Moors SPA and SAC). Although it is within 5km of the above it is of only a modest scale and any adverse impact on those sites covered by the Habitats Regulation Assessment is likely to be negligible.</p>
HA16 – Land between West Thorpe and The Nurseries, Whitby	0.3ha	10	<p>The sites most recent use was the nursery for the Borough Council.</p> <p>It is less than 5km from a Natura 2000 Site (North York Moors SPA and SAC). Although it is within 5km of the above it is of a small scale and any adverse impact on those sites covered by the Habitats Regulation Assessment is likely to be</p>

			negligible.
HA18 – Land adjacent Captain Cook Crescent, Whitby	2ha	40	<p>The site is adjacent to existing housing and allotments to the north.</p> <p>It is less than 5km from a Natura 2000 Site (North York Moors SPA and SAC). Although it is within 5km of the above it is of a small scale and any adverse impact on those sites covered by the Habitats Regulation Assessment is likely to be negligible.</p>
HA19 – Residential Care Home, 1 Larpool Lane, Whitby	0.7ha	20	<p>The site is currently in use as an elderly person's care home but is part of a wider programme of replacement.</p> <p>It is less than 5km from a Natura 2000 Site (North York Moors SPA and SAC). Although it is within 5km of the above it is of a small scale and any adverse impact on those sites covered by the Habitats Regulation Assessment is likely to be negligible.</p>
HA20 – Land to south of Upper Bauldbyes, Whitby	2.39ha	50	<p>The site lies to the south of an existing residential development and adjacent to the former railway line.</p> <p>It is less than 5km from a Natura 2000 Site (North York Moors SPA and SAC). Although it is within 5km of the above it is of only a modest scale and any adverse impact on those sites covered by the Habitats Regulation Assessment is likely to be negligible.</p>
HA21 – Land at Whitby Golf Club (East), Whitby	2.55ha	60	<p>The site currently comprises two holes from Whitby Golf Club. The course is to be re-designed to retain its 18 hole status with this land being released for housing.</p> <p>It is more than 5km from a Natura 2000 Site. Allied to the fact that this is a relatively modest scale development, would mean that any impact on sites</p>

			covered by the Habitats Regulation Assessment is likely to be negligible.
HA24 – Silver Birches, Station Avenue, Filey	0.3ha	30	<p>The site is currently in use as an elderly person's care home but is part of a wider programme of replacement.</p> <p>It is less than 5km from a Natura 2000 Site (Flamborough and Filey Coast pSPA). Although it is within 5km of the above it is of a small scale and any adverse impact on those sites covered by the Habitats Regulation Assessment is likely to be negligible.</p>
HA25 – Land off Outgaits Lane, Hunmanby	3ha	60	<p>This site is opposite housing along Outgaits Lane and is currently agricultural land.</p> <p>It is less than 5km from a Natura 2000 Site (Flamborough and Filey Coast pSPA). Although it is within 5km of the above it is of only a modest scale and any adverse impact on those sites covered by the Habitats Regulation Assessment is likely to be negligible.</p>
HA26 – Land off Sands Lane, Hunmanby	3ha	60	<p>The site lies between existing housing, the railway line and industrial park beyond.</p> <p>It is less than 5km from a Natura 2000 Site (Flamborough and Filey Coast pSPA). Although it is within 5km of the above it is of only a modest scale and any adverse impact on those sites covered by the Habitats Regulation Assessment is likely to be negligible.</p>
HA27 – Land between Stonegate and Sheepdyke Lane, Hunmanby	1.6ha	20	<p>The site lies between residential development and the railway line.</p> <p>It is less than 5km from a Natura 2000 Site (Flamborough and Filey Coast pSPA). Although it is within 5km of the above it is of a small scale and any adverse impact on those sites covered by the Habitats Regulation Assessment is likely to be</p>

			negligible.
HA28 – Land to west of Napier Crescent, Seamer	3ha	60	<p>This site lies to the edge of the village adjacent to a modern housing estate.</p> <p>It is more than 5km from a Natura 2000 Site. Allied to the fact that this is a relatively modest scale development, would mean that any impact on sites covered by the Habitats Regulation Assessment is likely to be negligible.</p>
HA29 – Land to the north and east of The Nurseries, East Ayton	3.58ha	40	<p>This site lies at the entrance of East Ayton adjacent to a modern bungalow development.</p> <p>It is more than 5km from a Natura 2000 Site. Allied to the fact that this is a relatively small scale development, would mean that any impact on sites covered by the Habitats Regulation Assessment is likely to be negligible.</p>
HA31 – Land to the west of Farside Road, West Ayton	2.9ha	70	<p>This site has recently been granted planning consent.</p> <p>It is more than 5km from a Natura 2000 Site. Allied to the fact that this is a relatively modest scale development, would mean that any impact on sites covered by the Habitats Regulation Assessment is likely to be negligible.</p>
HA32 – Land to west of The Grange, High Street, Burniston	1.87ha	60	<p>The site lies to the rear of existing development along High Street.</p> <p>It is more than 5km from a Natura 2000 Site. Allied to the fact that this is a relatively modest scale development, would mean that any impact on sites covered by the Habitats Regulation Assessment is likely to be negligible.</p>
HA33 – Land to the north of Limestone Road, Burniston	1.92ha	40	<p>A planning application has now been submitted for this site and is under consideration.</p> <p>It is more than 5km from a Natura 2000 Site. Allied to the fact that this is a relatively small scale</p>

			development, would mean that any impact on sites covered by the Habitats Regulation Assessment is likely to be negligible.
HA34 – Land to the south of Limestone Road, Burniston	1.61ha	40	The site is opposite residential development along the far stretch of Limestone Road. It is more than 5km from a Natura 2000 Site. Allied to the fact that this is a relatively small scale development, would mean that any impact on sites covered by the Habitats Regulation Assessment is likely to be negligible.

Table 4 Screening of Policies

Site	Likely Significant Effect (Yes/No/Uncertain)	Indirect or Cumulative Impacts
Policy SD1 Presumption in Favour of Sustainable Development	No	On its own this policy is not considered to have an impact on Natura 2000 sites as it specifically states 'grant permission unless material considerations indicate otherwise'. Impact on a Natura 200 site would be a material consideration.
Policy SH 1 Settlement Hierarchy	No	The settlement hierarchy identifies a broad distribution of development with the majority of development been centred around Scarborough, with Whitby as the 'second' town having the next highest concentration of development and then Filey to a lesser extent. Whilst no land allocations directly affect a Natura 2000 site development in Filey will be close to the Filey Coast proposed Special Protection Area. Ultimately an increase in population could result in more people visiting the coastal areas for recreational purposes including dog walking although it is difficult to even estimate any increases. Whilst not related to planning policy, mitigation by way of information boards requesting people stick to marked routes will hopefully limit any negative impacts through trampling of vegetation and disturbance to nesting birds along with other existing and future measures including rangers, wardens and dog control by-laws.
Policy DEC1 Principles of Good Design	No	The policy is design focussed. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy DEC2 Electric Vehicle Charging	No	The policy is to facilitate the growth in electric vehicles. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.

Points		
Policy DEC3 The Efficient Use of Land and Buildings	No	The policy ensures land and buildings are not under used. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy DEC4 Protection of Amenity	No	The policy is to protect amenity. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy DEC5 The Historic and Built Environment	No	The policy is to protect the historic environment. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy DEC6 Archaeology	No	The policy is to assist the preservation and knowledge of archaeological remains and monuments. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy HC1 Supporting Housing Development	No	On its own this policy is not considered to have an impact on Natura 2000 site. The individual allocations are considered in the previous table.
Policy HC2 New Housing Delivery		<p>The policy allocates 6350 dwellings dispersed throughout the Plan areas (although it should be noted that the area to the south of Cayton will not be complete in the Plan period pushing this figure down to circa 5575 dwellings). On a locational basis, the majority of allocations are not within close proximity of any of the Natura 2000 sites including those of a smaller nature that have not been assessed in Table 2..</p> <p>Large sites have been assessed earlier in this report in respect of potential impact by recreational pressure and impact on air and water quality. This is considered cumulatively below:</p> <p>Recreation: Cumulatively there is considered to be no unacceptable impact on Natura 2000 sites from recreational pressures. All sites will accord with open space requirements to provide accessible and usable open space. In many instances the size of these Open Space Allocations is substantially larger than would be expected and will provide an alternative and closer option for recreational users and dog walkers than the protected areas of the coast. The allocation of nearly 3,500 dwellings on sites to the south of Scarborough has been assessed as a potential impact on the Flamborough and Filey Coast pSPA. This can be seen under Table 2. Sites within Whitby are smaller in nature and are not considered to have a significant adverse impact by means of recreation on the National Park protected sites. Compared to visitor numbers to the National Park the increase in population in Whitby is considered to be inconsequential</p> <p>Air Quality</p> <p>As a precautionary measure the HRA assesses the allocations of the Local Plan in combination with the Whitby Area Action Plan and the Whitby Potash Project as to their likely effect on the North York Moors SAC due to traffic generation.. Furthermore, work commissioned through AECOM sought to confirm whether or not the development</p>

		<p>proposed in the Plan would generate traffic of a scale which could have a likely significant effect on the Nitrogen deposition levels in the North York Moors SAC. The conclusion was that any change of traffic flows would be well below the 1,000 AADT and the change in HGV flows would be less than 200 per day.</p> <p>This does not exceed the 1% critical level, as set by the Air Quality Technical Advisory Group (consisting of Natural England, Environment Agency and Natural Resources Wales) as the threshold below which any scheme (Plan) can be deemed to be effectively inconsequential and 'does not need to be included in an in-combination assessment'</p> <p>Water Quality</p> <p>In respect of water quality the Local Plan has sufficient other policies contained therein that will ensure that development will not have an adverse impact on water quality. Policies ENV3 and ENV4 ensure that developments that would have the propensity to adversely affect water quality will be refused. Policy ENV4 which will be a prime consideration for sites within the more vulnerable SPZs has been co-authored with the Environment Agency and Yorkshire Water to provide the highest level of protection enshrined within any Local Plan to date; re-iterating in Planning Policy the guidance and principles found within the Environment Agency document 'Groundwater Protection: Principles and Practices)</p> <p>The totality of the allocations is not, as a cumulative total, considered not to have a likely significant effect on any individual Natura 2000 site. This is as a result of the locational position of these sites; a wide geographical spread with the only concentrations of substantial housing being in the south of the Borough. The appropriate consultees of Yorkshire Water and the local Internal Drainage Board have been involved in the process and have not objected to the scale or location of development. Detailed applications will determine appropriate mitigation or, if necessary, refuse proposals that do not accord with policy (ENV3 and 4) or any further specific requirements from the relevant bodies. The sites in this location have been comprehensively assessed under Table 2 and include sufficient mitigation and protection measures (open space and the protection of other Local Plan policies) to not affect the protected sites.</p> <p>Additional water abstraction is not required for the levels of housing proposed as confirmed by Yorkshire Water. Back-up systems have been put in place to ensure security of supply with substantial investment in recent years bringing in alternative supply from the south of the Borough.</p>
Policy HC3 Affordable Housing	No	Policy requires % of affordable housing. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy HC4 Rural Exceptions Housing	No	Policy on exceptions housing near to villages. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy HC5 A Balanced Housing	No	Policy requires a mix of housing on sites. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.

Market		
Policy HC6 Older Persons Housing	No	Policy promotes specialist housing. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy HC7 Gypsy and Traveller Site Provision	No	Criteria based policy to assess sites for this use. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy HC8 Conversion of Buildings in the Rural Area for Residential Use	No	Criteria based policy for converting buildings. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy HC9 Community Facilities	No	Policy on new community facilities. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy HC10 Cemetery Provision	No	Criteria based policy for new/expanded cemeteries. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy HC11 Health Care and Education Facilities	No	Policy promotes such uses. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy HC 12 Whitby Health and Community Hub	No	This is a redevelopment of an existing site which will largely involve re-use of existing buildings. The retention of a hospital on the site would reduce the need for the local population to travel further afield for treatment particularly by use of the A171 to Middlesbrough through the North York Moors SPA and SAC.
Policy HC13 Former Rugby Club Site – Scalby Road, Scarborough	No	Although this is a land allocation, it is for a new surgery, and therefore will not result in an increased population.
Policy HC14 Site of the Former Gas Showroom – Station Approach, Scarborough	No	Although this is a land allocation, it is for a surgery expansion, and therefore will not result in an increased population
Policy HC15 Open Space and Sports Facilities	No	Policy promotes sport and recreation. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy HC16 Open Space and Sports Facility Allocations	Possible positive impact.	The provision of new areas of open space in the form of neighbourhood parks and other forms of recreational areas will not have a direct impact on the Natura 2000 sites but could, by encouraging the greater use of new areas of open space, reduce the use of protected areas by existing and future residents and visitors. Large areas of open space at the proposed housing allocation at Middle Deepdale (OS1 & OS2), Yorkshire Coast College

		<p>(OS5), Osgodby (OS6), and Whitby (OS7) are allocated that could assist in this. These areas of open space have been located (and will be designed) to be easily accessible from the housing sites and not be peripheral (or an afterthought). Early masterplanning work on Middle Deepdale has proposed easy access to the two large areas of open space and provides routes out from these locations through connecting to existing green infrastructure routes. This not only allows the use of these sites by future residents but wider access to existing residents within the wider locality. Indicative plans for the Osgodby site (OS6) also confirm its accessibility to proposed residents of the new development but will allow easy access to the wider resident population of the adjoining residential estate. Yorkshire Coast College would retain an important area of open space thereby widening its potential use by future and existing residents as it will no longer be required or associated with the college. Finally, the Whitby site proposes a substantial buffer between the housing site and the existing Waste Water Treatment Works that provides the opportunity to provide direct access to a substantial area of open space; both for the future occupants of this development site and better access to open space for the residents of the Eskdale housing estate who have recently lost Helredale pitches. The other proposed allocations are smaller in nature and with the exception of OS8 and SF1 all directly relate to a proposed housing site, thus facilitating a better relationship between the population and access to open space in an attempt to negate the need to travel further distances for such recreational requirements. The areas of open space associated with the Filey developments are considered in Table 1. The South of Cayton housing allocation which proposes substantial open space, recreational land and sports provision is not covered by the policy but addressed in Policy SGA1 which is also covered in Table 1.</p>
Policy EG 1 Supporting Industry and Business	No	<p>The majority of the land allocated is adjacent to the existing Business Park south of Scarborough and whilst it is recognised that this site lies on a Source Protection Zone, however, the Local Plan contains a bespoke policy on this matter and was agreed by EA and Yorkshire Water. This should ensure that water levels and pollutants do not adversely affect the SPZ and associated boreholes. Whilst the site is more than 20km from the River Derwent SAC it is noted that the River Hertford to the south of this site drains into the aforementioned river. Run-off rates will be an important consideration in the determination of future applications to ensure that agricultural run-off rates are retained; a standard request from the local drainage board. Subject to adhering to these requirements and meeting appropriate policy in the Plan there should be no effects on the River Derwent SAC.</p> <p>As this is an employment site it does not raise the propensity for visitors to the protected sites but may increase travel through those with roads traversing them to and from this site. This would only potentially affect the NYM SPA and SAC, however, as this site lies to the south of the town it is likely that most employees or visitors to the Business Park will be from the urban area of Scarborough or from the main connection westwards; the A64. Whilst a small number may travel from Whitby and further north this is likely to be a small number compared to current traffic on this road. As such impact on the NYM SAC and SPA is considered to be negligible.</p>
Policy EG2 Jobs and Skills and Employment Training	No	<p>This policy encourages developers to use local skills. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.</p>
Policy EG 3 Employment Land	No	<p>It is recognised that the main area of delivery is on a site that lies on a Source Protection Zone; however, the Local Plan contains a bespoke policy on this matter and was agreed by EA and Yorkshire Water. This should ensure that</p>

Delivery		<p>water levels and pollutants do not adversely affect the SPZ and associated boreholes. Whilst the site is more than 20km from the River Derwent SAC it is noted that the River Hertford to the south of this site drains into the aforementioned river. Run-off rates will be an important consideration in the determination of future applications to ensure that agricultural run-off rates are retained; a standard request from the local drainage board. Subject to adhering to these requirements and meeting appropriate policy in the Plan there should be no effects on the River Derwent SAC.</p> <p>As this is an employment site it does not raise the propensity for visitors to the protected sites but may increase travel through those with roads traversing them to and from this site. This would only potentially affect the NYM SPA and SAC, however, as this site lies to the south of the town it is likely that most employees or visitors to the Business Park will be from the urban area of Scarborough or from the main connection westwards; the A64. Whilst a small number may travel from Whitby and further north this is likely to be a small number compared to current traffic on this road. As such impact on the NYM SAC and SPA is considered to be negligible.</p>
Policy EG 4 Safeguarding the Strategic Role of Scarborough Business	No	<p>It is recognised that this site lies on a Source Protection Zone; however, the Local Plan contains a bespoke policy on this matter and was agreed by EA and Yorkshire Water. This should ensure that water levels and pollutants do not adversely affect the SPZ and associated boreholes. Whilst the site is more than 20km from the River Derwent SAC it is noted that the River Hertford to the south of this site drains into the aforementioned river. Run-off rates will be an important consideration in the determination of future applications to ensure that agricultural run-off rates are retained; a standard request from the local drainage board. Subject to adhering to these requirements and meeting appropriate policy in the Plan there should be no effects on the River Derwent SAC.</p> <p>As this is an employment site it does not raise the propensity for visitors to the protected sites but may increase travel through those with roads traversing them to and from this site. This would only potentially affect the NYM SPA and SAC, however, as this site lies to the south of the town it is likely that most employees or visitors to the Business Park will be from the urban area of Scarborough or from the main connection westwards; the A64. Whilst a small number may travel from Whitby and further north this is likely to be a small number compared to current traffic on this road. As such impact on the NYM SAC and SPA is considered to be negligible.</p>
Policy EG5 Safeguarding Existing and Committed Employment Sites	No	The policy seeks to ensure adequate supply of employment land. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy EG6 Expansion of Existing Businesses in the Countryside	No	The policy assists the expansion of businesses and is criteria based. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy EG7 Conversion of	No	Criteria based policy for converting buildings. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.

Buildings in the Rural Area		
Policy TC1 Hierarchy of Centres	No	Policy sets hierarchy of Borough's towns and villages. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy TC2 Development in Commercial Centres	No	Policy on town and district centres. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy TC 3 Regeneration of Scarborough Town Centre	No	This policy allocates 2 sites within Scarborough town centre for redevelopment for town centre uses, this has no direct impact on Natura 2000 sites and indirectly it is intended to prevent the need to use greenfield sites elsewhere or reduce the need to travel for facilities and thereby reduce traffic pollution, which would have the potential to effect any Natura 2000 sites through which major transport routes pass.
Policy TC 4 Additional Site for Town Centre Uses	No	This policy allocates a site adjacent to Scarborough town centre for redevelopment for town centre uses should the town centre sites not be available. This has no direct impact on Natura 2000 sites and indirectly it is intended to prevent the need to use greenfield sites elsewhere or reduce the need to travel for facilities and thereby reduce traffic pollution, which would have the potential to affect any Natura 2000 sites through which major transport routes pass.
Policy TC5 Individual Local Shops	No	Policy to try and protect single shops. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy TOU 1 New Tourism Facilities	No	<p>New tourist facilities have the potential to impact on Natura 2000 sites by increased recreational use in their vicinity. As the coast is an attraction for visitors it is more likely that any pressure for tourist facilities will be attracted to the coast. Policy ENV 5 seeks to ensure that development does not result in an unacceptable impact on any locally nationally or internationally designated sites..</p> <p>In addition and with reference to the impact on road traffic emissions such developments should also be considered in the context of their impact on Natura 2000 sites. In this instance it would only be of relevance to the North York Moors SAC and therefore traffic travelling along the A171. There are a number of issues to note along with relevant policy safeguards. Firstly whilst new tourist attractions can attract visitors from outside of the Borough it should be noted that the opposite is also true in that such new attractions can reduce outward movement of people (and therefore vehicles) who will have a greater propensity to remain within the Borough for recreational purposes thus counterbalancing to some extent incoming visitors. This is also related solely to the A171 as any additional movements along the A64, A165 and A170 into the Borough do not pass within the prescribed distance of a Natura 2000 site (200m) which would pose a threat to that site from emissions. The work commissioned with AECOM is similarly relevant to this policy which sought to confirm whether or not the development proposed in the Plan would generate traffic of a scale which could have a likely significant effect on the Nitrogen deposition levels in the North York Moors SAC. The conclusion was that any change of traffic flows would be well below the 1,000 AADT and the change in HGV flows would be less than 200 per day.</p> <p>This does not exceed the 1% critical level, as set by the Air Quality Technical Advisory Group (consisting of Natural England, Environment Agency and Natural Resources Wales) as the threshold below which any scheme (Plan)</p>

		<p>can be deemed to be effectively inconsequential and 'does not need to be included in an in-combination assessment'</p> <p>Finally, the Plan does include a relevant policy safeguard under ENV3 requires that proposals will be expected to mitigate against the implications of environment risk; with air quality being listed under this policy. The supporting text confirms that development should not result in unsatisfactory air quality for the locality or wider area. Such proposals that are shown to have an unacceptable negative impact on air quality, and this includes on Natura 2000 sites, will not be permitted unless there are over riding benefits/issues that would warrant such a decision. Proposals will therefore be considered in light of their potential impact both in respect of recreational pressure and air quality on Natura 2000 sites.</p>
Policy TOU 2 North Bay Leisure Parks	No	<p>This policy is intended to attract tourists to a particular site not located near any protected sites; it may have the effect or creating a honeypot which may protect coastal protected sites by reducing visitor numbers to these other sites.</p> <p>The comments attributed to the previous Policy (TOU1) with reference to emissions from vehicles are similarly relevant to this policy. It is possible on this policy to refer to proposed and emerging plans. This site is currently being developed for an indoor water park and a cinema is also proposed in the coming months. This will provide a more sustainable option for residents of the town to access this type of attraction/facility. To access such facilities currently (with the exception of a traditional swimming pool in Scarborough), residents must leave the Borough to travel a substantial distance. The main destination is York but outward travel to Hull and Middlesbrough to the north are alternative options. The latter of these currently requires travel along the A171 through the North York Moors SAC. Any developments delivered through TOU2 (as has been detailed above) will likely lead to a reduction in vehicular movements and therefore emissions in proximity to the aforementioned SAC. Such developments are unlikely to attract additional visits from the north of the Borough (Middlesbrough) as there are existing attractions of a similar ilk within the town itself.</p> <p>Notwithstanding the above, in a similar manner to TOU1 the relate safeguard of ENV3 exists and will be a consideration in any future proposal. Proposals will therefore be considered in light of their potential impact both in respect of recreational pressure and air quality on Natura 2000 sites.</p>
Policy TOU3 Change of Use of Visitor Accommodation	No	<p>Policy about change of use of hotels and guest houses. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.</p>
Policy TOU 4 Visitor Accommodation and Facilities in the Countryside	No	<p>Natura 2000 sites will be protected from any direct impact by Policy ENV 5 of the plan. It is harder to control any indirect impacts but depending on the location of any proposed development these would be assessed at application stage.</p>
Policy TOU5 Amusement Arcades	No	<p>Policy on location of amusement arcades. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.</p>

Policy ENV1 Low Carbon and Renewable Energy	No	Policy on renewable technologies. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy ENV 2 Wind Energy	No	The policy does not seek to allocate areas for potential wind generation but to assess small scale proposals which are not site specific. Therefore there is no direct impact on protected sites and any indirect impacts would be assessed as part of any proposal.
Policy ENV3 Environmental Risk	Yes Potential for positive impact	This is an indirect relationship but by protecting areas such as those at risk of coastal erosion from development it will restrict development at or near to those protected areas (Natura 2000 sites) that sit along the coastline of Scarborough Borough.
Policy ENV4 Groundwater Protection	Yes Potential for positive impact	By incorporating such a comprehensive policy on groundwater protection (specifically for drinking water abstraction) it could also benefit the wider environment from a reduced risk of groundwater pollution. Whilst not directly associated with this zone, the propensity to adversely affect Natural 2000 sites (however slim) a considerable distance away (but potentially downstream of any underground watercourses) is an additional benefit of the policy.
Policy ENV5 The Natural Environment	Yeas Potential for positive impact	The policy specifically sets out that development should not have an unacceptable impact on any locally, nationally or internationally designated site.
Policy ENV6 Development Affecting the Countryside	No	Criteria based policy for developments outside development limits. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy ENV7 Landscape Protection and Sensitivity	No	Policy to protect landscape. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy ENV8 Green Infrastructure	Yes Potential for positive impact	The policy specifically sets out to protect the coast and the River Derwent, hence there is a potential benefit to Natura 2000 sites concentrated around these locations.
Policy INF1 Transport	No	Policy is aimed at improving transport linkages and promoting sustainable travel. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy INF2 Highway Schemes	No	Allocation of a small piece of land to allow future junction improvement and is therefore not considered to have an impact on Natura 2000 sites.
Policy INF3 Sustainable Transport and Travel Plans	No	Policy is aimed at promoting sustainable travel. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy INF4 Cinder Track	Uncertain	Policy is to improve access to the cinder track and its use as a recreational asset and potential sustainable commuting route. The policy is not a land based allocation and will not in of itself increase the population of the area. It could, however, increase the use of the cinder track if it was improved in terms of access or its overall quality. As this runs along the coast from Scarborough to Whitby there is a minor risk of increasing access from this

		asset through existing footpaths to areas along the coast that are protected (Beast Cliff SAC). However these routes already exist and the potential improvements to the Cinder Track within the defined area of the Scarborough Borough Local Plan as a direct result of development (namely at Scalby in Scarborough and Broomfield Farm at Whitby) are considered to have a negligible impact on Natura 2000 sites.
Policy INF5 Delivery of Infrastructure	No	Policy to ensure delivery of education, health and other infrastructure requirements. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy INF6 Telecommunications Development	No	Policy to consider telecoms development. It is not land or allocation based and is therefore not considered to have an impact on Natura 2000 sites.
Policy SGA1 South of Cayton Strategic Growth Area		This policy refers to an area of housing and related development for circa 2500 dwellings. It is considered under Table 1: Screening of Allocations.

7. Appropriate Assessment

North York Moors SAC

7.1 It has been concluded that although the Local Plan is not directly connected with, or necessary to the management of the North York Moors SAC, it is potentially likely to have an effect on some or all of the qualifying features of that site (either alone or in-combination with other plans and projects). As a precautionary route this section therefore contains the appropriate assessment of the implications of the Plan in view of the Conservation objectives for the European Site (as required by Regulation 61 of the Habitats Regulations).

7.2 The qualifying features on which there are potential significant effects are listed below:

- Northern Atlantic wet heaths
- European dry heaths
- Blanket bog

Conservation Objectives

7.3 The conservation objectives for the site are, subject to natural change, to maintain or restore:

- The extent and distribution of 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;

Explanatory Notes: European Site Conservation Objectives

7.4 European Site Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2010 (the “Habitats Regulations”) and Article 6(3) of the Habitats Directive 1992. They must be considered when a competent authority is required to make a ‘Habitats Regulations assessment’ including an Appropriate Assessment, under the relevant parts of the legislation.

7.5 These conservation objectives are set for each habitat or species of a SAC. Where the objectives are met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving favourable conservation status for that species or habitat at a UK level.

Table 5 Housing Allocations and Whitby Business Park Area Action Plan in combination with components of the Whitby Potash Mine

Likely Significant Effect	Magnitude	Consideration of the potential for adverse effects on Integrity	Conclusion
<p>Damage to SAC qualifying habitats dry heath, wet heath and blanket bog from nitrogen deposition.</p>		<p>The only perceived in combination effect could be an increase in traffic on routes through the SAC mainly the A171 and the A169. Further work commissioned through AECOM sought to confirm whether or not the development proposed in the Plan would generate traffic of a scale which could have a likely significant effect on the Nitrogen deposition levels in the North York Moors SAC. The conclusion was that any change of traffic flows would be well below the 1,000 AADT and the change in HGV flows would be less than 200 per day.</p> <p>This does not exceed the 1% critical level, as set by the Air Quality Technical Advisory Group (consisting of Natural England, Environment Agency and Natural Resources Wales) as the threshold below which any scheme (Plan) can be deemed to be effectively inconsequential and 'does not need to be included in an in-combination assessment'</p>	<p>Adverse effects on the integrity of the SAC can be ruled out.</p>

Flamborough and Filey Coast proposed Special Protection Area (pSPA)

- 7.6 Whilst the Flamborough and Filey Coast pSPA is still proposed the advice is it should be treated in the same way as a designation.
- 7.7 It has been concluded that although the Local Plan is not directly connected with, or necessary to the management of the Flamborough and Filey Coast pSPA, it is potentially likely to have an effect on some or all of the qualifying features of that site (either alone or in-combination with other plans and projects). As a precautionary route this section therefore contains the appropriate assessment of the implications of the Plan in view of the Conservation objectives for the European Site (as required by Regulation 61 of the Habitats Regulations).
- 7.8 The qualifying species on which there are potential significant effects are listed below:
- Black-legged Kittiwake
 - Northern Gannet
 - Common Guillemot
 - Razor Bill
 - Seabird assemblage – The site qualifies under article 4.2 of the Directive (2009/147/EC) as it is used regularly by over 20,000 seabirds in a season.

Conservation Objectives

- 7.9 These are to maintain, in favourable condition, the habitats for the populations of seabirds that contribute to the breeding seabird assemblage of European importance, with particular reference to:
- Coastal cliffs and caves
 - Kittiwake
- 7.10 In addition, it is sought to maintain, in favourable condition, the habitats for the populations of seabirds that contribute to the breeding seabird assemblage of European importance, with particular reference to:
- Coastal cliffs and caves.
- 7.11 The main vulnerabilities to these qualifying bird species is from changes that adversely affect food availability, particularly during the breeding season. In particular, changes in fish stocks from fishing or toxic contamination from agriculture or industry would be detrimental. Population decline may also be exacerbated by any physical damage to the cliff faces or inter tidal chalk platforms, for example by recreational diving, fishing activity or increased erosion as a result of coastal defence structures. An increase in recreational disturbance of the site, especially during the breeding season, could also be damaging.

7.12 The Flamborough and Filey Coast Site Improvement Plan which covers the Flamborough and Filey Coast pSPA and Flamborough Head SAC has identified priorities and issues. These are:

- Changes in species – decline in Black-legged kittiwake
- Marine and freshwater fishery – potential impacts of fishing
- Public access/Disturbance – prevent bird disturbance
- Invasive species – investigate the impact of invasive species

Table 6 Housing Allocations to the south of Scarborough

Likely Significant Effect	Magnitude	Consideration of the potential for adverse effects on Integrity	Conclusion
Disturbance to pSPA qualifying species from recreational disturbance.	Marginal	<p>The Plan allocates housing land to the south of Scarborough which has a total expected yield of 3,400 dwellings which would be expected to be developed over the plan period. As approximately 24% of households own dogs this could result in 816 of the new households having dogs. A number of studies have shown that birds are affected more by people with dogs than by people alone, with birds flushing more readily, more frequently, at greater distances and for longer.²⁹ Interview surveys have shown that a median distance to travel for activities include 2.7km for walking and 1.2km for dog walking³⁰. Dog walkers wanting to use the coast tend to gravitate to the beaches due to the availability of space to allow the dogs to run. Dogs have not been recorded as a disturbance in the pSPA area³¹ Whilst the provision of adequate open space within or adjacent to developments may not dissuade all dog owners from using the coast it would provide an attractive alternative. The lack of provision of open space would lead to an increase in coastal dog walkers and associated levels of disturbance.</p> <p>In all the Plan housing allocations that are proposed within 6km of the pSPA, the scale of open space provision is higher than the normally required ratio of 2.45ha per 1,000 population. This will provide adequate areas to allow dog users off their lead without conflict/fear for their safety.</p> <p>Whilst walking of dogs can be a disturbance to birds, a greater disturbance in this location due to cliff nesting is by other forms of recreation, water bourn, fishing from the cliffs and aircraft.</p> <p>The recorded instances of disturbance in the Flamborough and Filey Coast pSPA show that most originate from landings to the south of Flamborough. Certain mitigation measures are currently in place for the SPA which aims to control disturbance including codes of conduct and other byelaws to regulate recreation. The intention is to extend these measures to include the pSPA area.</p>	Adverse effects on the integrity of the pSPA can be ruled out.

²⁹ Gill J.A. et al. The consequence of human disturbance for estuarine birds RSPB Conservation Review 12:67-72

³⁰ Footprint Ecology

³¹ Heather Davison – Flamborough Projects Officer

		East Riding of Yorkshire Council has already implemented certain byelaws and codes of conduct with interest groups to reduce/remove the instances of disturbance. It is the intention that Scarborough Borough Council will replicate these controls or advice. ³²	
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³² 2016-2-21 Flamborough Head European Marine Site Management Plan.

8. Mitigation

- 8.1 Mitigation can be defined as ‘measures’ that avoid or reduce overall potential adverse effects on the integrity of a Natura 2000 sites and should be taken into account during the Appropriate Assessment of the impacts of a plan or allocation.’
- 8.2 Where effects have been identified that would, or could, harm the integrity of Natura 2000 sites within or outside of the Local Plan area it is necessary to identify mitigation measures. Whilst the Assessment concluded that the Plan would not have a likely significant effect there are a number
- 8.3 The Assessment has concluded that the scale of housing and specific site allocations for housing and employment is unlikely to have a significant effect on any Natura 2000 sites. Notwithstanding this, prior to development taking place planning permission will still need to be secured. This will enable the specific nature of the uses proposed, including such issues as traffic and transport and emissions, to be assessed in more detail. The Local Plan contains policies to protect Natura 2000 sites. The text of these is contained in Table 7.
- 8.4 In terms of mitigating any effects from increased use of the SACs and SPA for recreation, it is not considered that there is currently any widespread harm to the Natura 2000 sites from disturbance or trampling – any current negative effects are very limited and very localised.

Table 7 Mitigation Measures

Consequence	Mitigation Measures
Increase in vehicular movements	<p>New developments on the allocated sites would require planning permission. This would provide an opportunity to look more precisely at predicted vehicle movements and seek to mitigate these through the Travel Plan. The need for any site specific Appropriate Assessment would be triggered via the planning application process. Planning permission would not be granted for any development which would harm the integrity of the Natura 2000 sites, in accordance with the Habitats Directive.</p> <p>Police ENV 5 of the Local Plan states: ‘Proposals should respond positively and seek opportunities for the enhancement of species, habitats or other assets thereby resulting in a net gain in biodiversity by</p> <ol style="list-style-type: none"> a. ensuring that development does not result in an unacceptable impact on any locally, nationally or internationally designated sites unless the impact can be outweighed by a greater benefit as commensurate to the designation; b. considering how any potential adverse impacts on

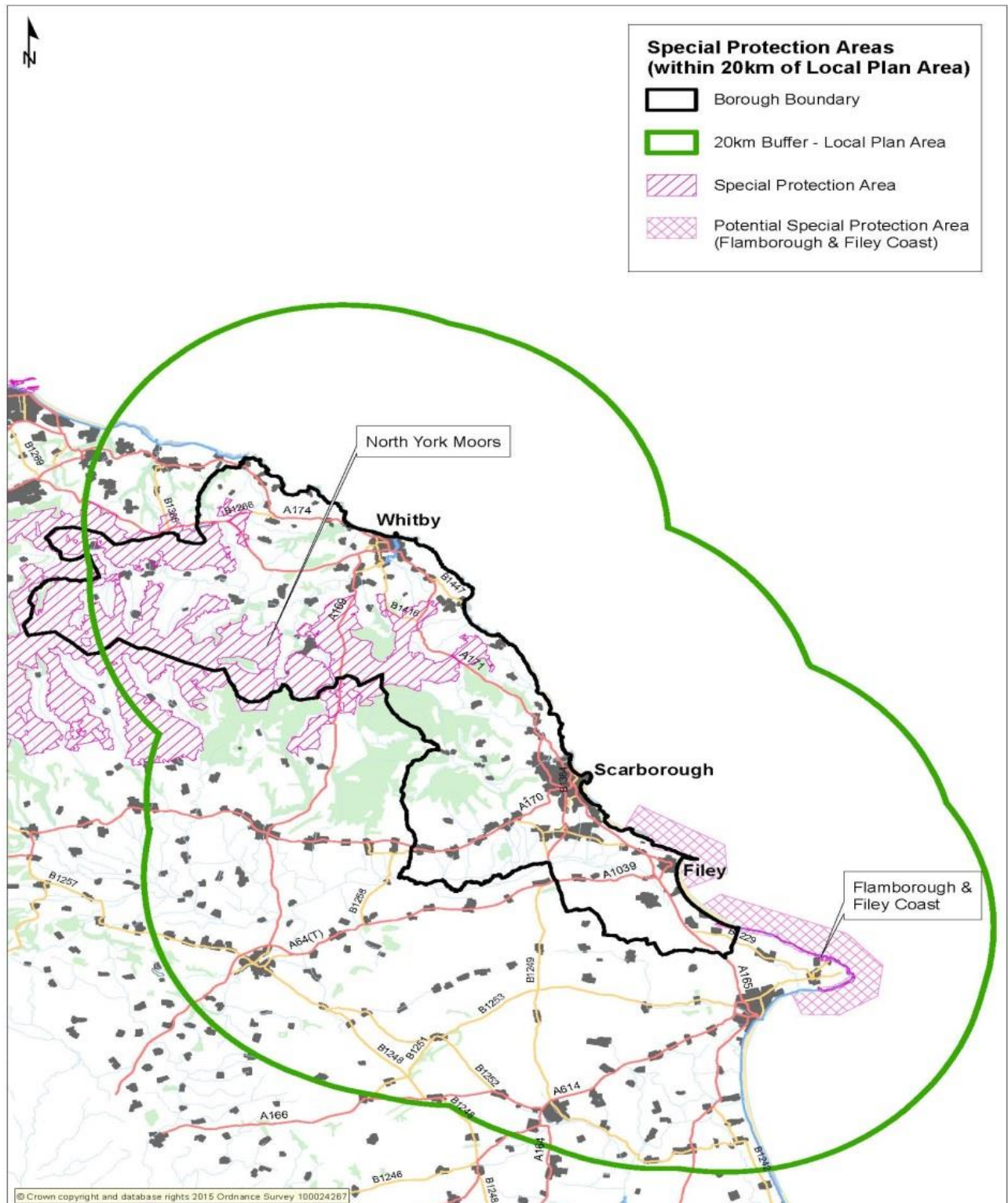
	<p>species and habitats can be successfully mitigated and supporting the recovery of priority species and habitat creation as identified in the Scarborough Borough Biodiversity Action Plan (2005) or any subsequent update;</p> <ul style="list-style-type: none"> c. increasing trees and woodland through ensuring new developments include appropriate tree planting whilst retaining and integrating healthy, mature trees and hedgerows and maintaining those which make an important contribution to the setting and character of an area; and d. ensuring that development does not result in deterioration in the ecological status of surface, ground or coastal waterbodies.' <p>Developments would have to accord with Policy INF 3</p> <p>Sustainable Transport and Travel Plans</p> <p>Proposals will be required to contribute to sustainable transport. Proposals will be supported that:</p> <ul style="list-style-type: none"> a. improve transport choice and encourage travel to work and school by public transport, cycling and walking; b. minimise the distance people need to travel; c. contribute positively to a demand management strategy to address congestion, environmental and safety issues including managing car parking provision and prioritising bus routes in urban areas; d. encourage the use of Park and Ride. <p>The Local Planning Authority will support the preparation and implementation of Travel Plans, Travel Assessments and other schemes and agreements to promote the use of sustainable transport for the journey to work and to school. Proposals that have potential significant impacts should be accompanied by a Travel Plan where appropriate.</p> <p>Where a Travel Plan or Travel Assessment is required, the need for electric vehicle charging infrastructure should be considered.</p>
Environmental Risk	<p>There is a specific policy within the Plan which requires proposals to mitigate against the implications of environmental risk.</p> <p>Policy ENV 3</p> <p>Proposals will be expected to mitigate against the implications of environmental risk and the effects of climate change. This will be achieved by</p> <ul style="list-style-type: none"> a. avoiding development in high flood risk areas by following a sequential approach in giving priority to lowest risk areas as identified by the North-East

	<p>Yorkshire Strategic Flood Risk Assessment or any subsequent update or replacement. Where the Sequential Test cannot be passed, the Exception Test should be utilised in order to demonstrate how any flood risk can be fully mitigated;</p> <ul style="list-style-type: none"> b. seeking opportunities from new development that may help to reduce the causes and impacts of flooding; c. ensuring water supply and water resources are managed and water efficiency measures are incorporated to reduce resource need, in line with the Environment Agency's licensing strategies; d. using mitigation measures such as Sustainable Drainage Systems where possible in order to facilitate development in areas of sensitive drainage and to meet the requirements of the Water Framework Directive; e. ensuring development has adequate provision for foul and surface water disposal in advance of occupation; f. ensuring development does not lead to pollution of controlled waters in line with the requirements of the Water Framework Directive; g. requiring development to manage waste from the site (both during construction and operation) in a sustainable way consistent with the waste hierarchy; h. requiring the remediation or mitigation of contaminated or unstable land to reduce unacceptable risks to the environment through development; i. monitoring and seeking to maintain good ambient air quality standards; and j. ensuring development does not contribute to or exacerbate coastal erosion and/or landslip and ensuring development is not exposed to the risks of coastal erosion and/or coastal flooding.
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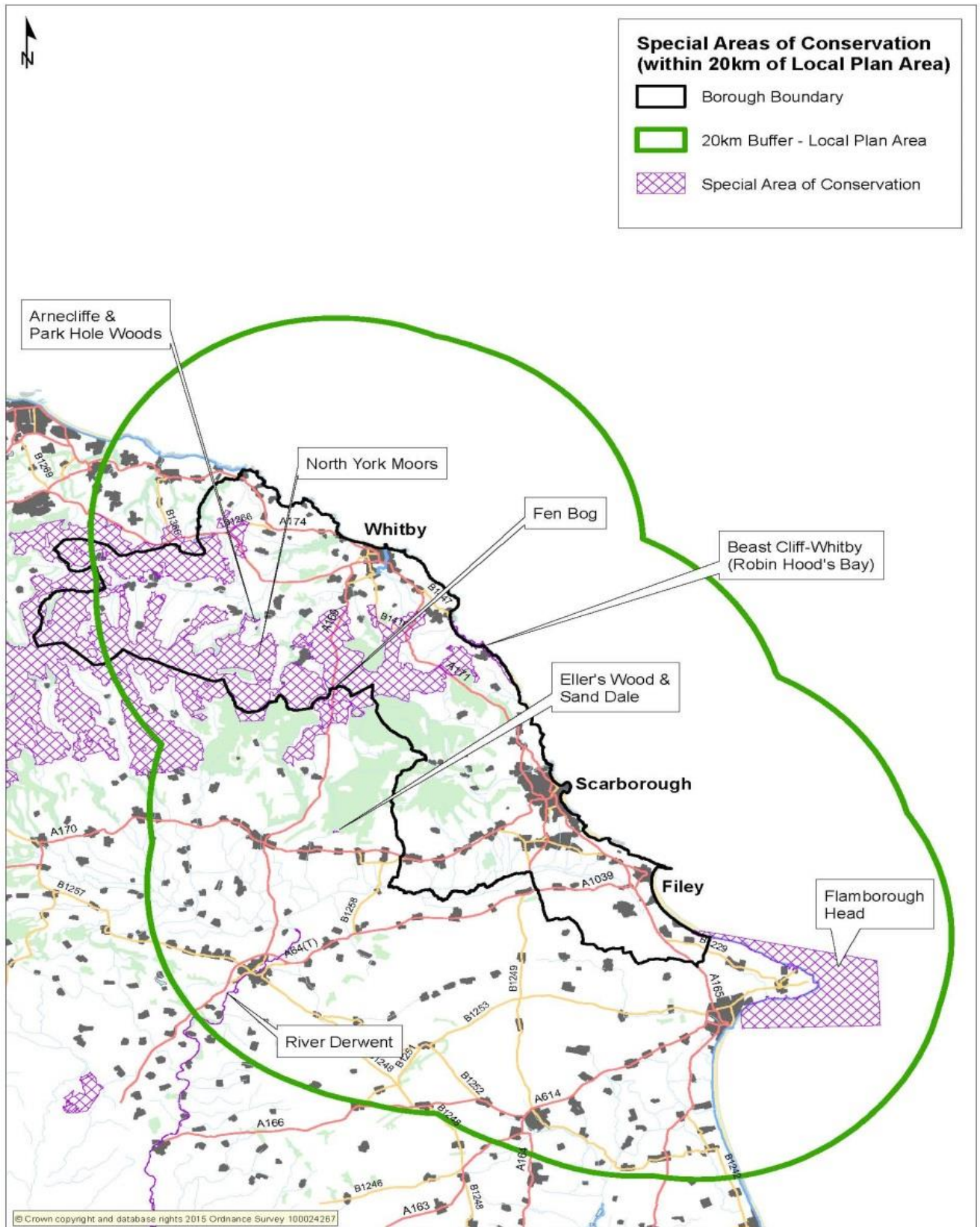
9 Conclusion

- 9.1 Is the Scarborough Local Plan 2015 likely to have a significant effect 'alone or in combination' on Natura 2000 sites in the area?
- 9.2 HRA is required by Regulation 21 of the Conservation of Habitats and Species Regulations 2010 (as amended) (the Habitats Regulations) for all plans and projects which may have adverse effects on international sites. There are a number of international sites within the Plan area or within a reasonable distance (20km) (detailed in Section 5). The HRA has assessed whether the policies included in the Submission Draft of the Plan (including housing and employment allocations) are likely to lead to significant effects on the international sites and what these likely impacts are.
- 9.3 The HRA has identified two international sites which may be vulnerable to effects from policies or allocations in the Local Plan. These are the North York Moors SAC which may be sensitive to Nitrogen deposition caused by increases in traffic and the Flamborough and Filey Coast pSPA due to disturbance through increased visitor numbers. Appropriate Assessments have been carried out in relation to those concerns.
- 9.2 Following application of the mitigation measures the Authority is satisfied that the Scarborough Borough Local Plan will not give rise to any significant effects that would harm the integrity of the Natura 2000 sites. The Authority will refer back to the mitigation measures identified in this report in delivering the policies of the Local Plan.

Appendix 1: Maps
SPA's Located Within 20Km of Scarborough Borough Local Plan Area



SACs Located Within 20Km of Scarborough Borough Local Plan Area



Appendix 2: AECOM Response on Air Quality of NYMNP SAC and SPA.



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4th August 2016

Mr David Hand
Senior Planning Policy Officer
Scarborough Borough Council
Town Hall, St Nicholas St
Scarborough
YO11 2HG

Dear Mr. Hand,

Scarborough Local Plan traffic flows, as they relate to European sites

In correspondence with the Council, Natural England asked for an analysis to be undertaken to support the Local Plan HRA, which specifically examined the potential for likely significant effects of Local Plan associated traffic on North York Moors SAC.

In order to inform this assessment the first step is a scoping analysis as set out in the Design Manual for Roads and Bridges³³, which is intended to determine whether the air quality contribution of a scheme or plan would be sufficiently small that it can be scoped out of assessment entirely, even in combination with other projects and plans. Paragraph 3.12 of Chapter 11 of DMRB instructs the assessor to ‘*Obtain traffic data for the Do-Minimum [i.e. without the scheme] and Do-Something [with the scheme, or in this case, the plan] scenarios for the years to be assessed. Identify which roads are likely to be affected by the proposals. Affected roads are those that meet any of the following criteria...*’. Most of the criteria that are listed would not apply to the Local Plan but the two relevant ones are:

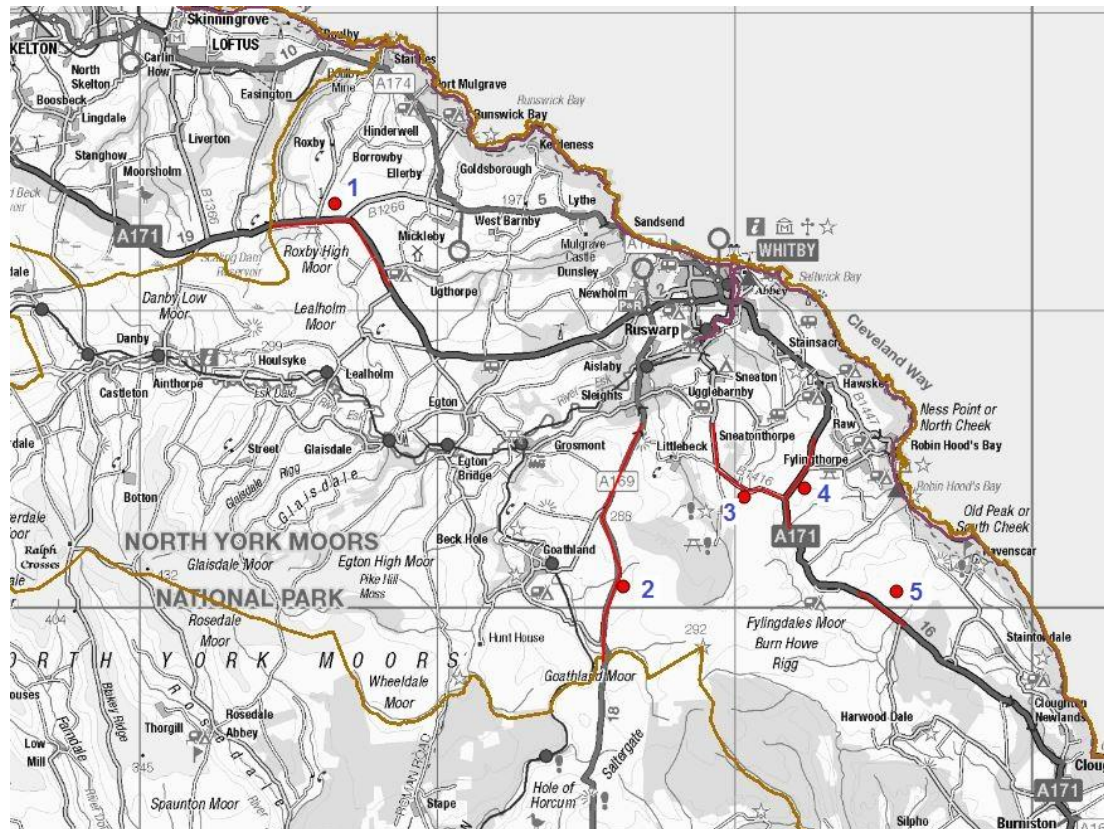
- Change in total vehicle flows of more than 1,000 Annual Average Daily Traffic (AADT); and
- Increase in Heavy Duty Vehicle movements of more than 200 per day.

So, if the difference between the Do Minimum and Do Something Scenarios (i.e. the contribution of the plan) falls below these two thresholds, then ‘*the impact of the scheme [plan] can be considered to be neutral in terms of local air quality and no further work is needed*’. This is because experience tells us that a change in flows of less than 1,000 AADT (or 200 AADT for HDVs) will not result in an air quality change within 200m of the roadside that exceeds 1% of the critical level (for NO_x) or 1% of the critical load (for nitrogen deposition). The 1% threshold has been set by the Air Quality Technical Advisory Group

³³ Volume 11, Section 3, Part 1 (HA207/07)

(consisting of Natural England, Environment Agency and Natural Resources Wales) as the threshold below which any scheme can be deemed to be effectively inconsequential and 'does not need to be included in an in-combination assessment'³⁴.

Forecast Local Plan development traffic flow data were obtained from Jacobs for the North York Moors SAC within 200m of the A169, A171 and B1406 (for completeness) at the five links indicated by red lines on the plan overleaf:



Jacobs were only able to supply PM peak hour flow data. These data therefore had to be factored to 12 hours by AECOM transport modellers based on measured flow data provided by North Yorkshire County Council, before applying the standard AADT calculation method as set out in the Design Manual for Roads and Bridges³⁵. The results for each link are presented below.

	Site 1	Site 2	Site 3	Site 4	Site 5
Additional Traffic from Local Plan 24 Hour AADT	13	115	155	84	249

In all instances the change in flows is expected to be well below 1,000 AADT and the change in HDV flows will be less than 200 per day (since HDVs constitute a relatively small percentage of traffic on these roads). Jacobs confirmed that the links in question were on the periphery of their transport model due to the distance from the key population centres in Scarborough Borough. Coupled with the fact that the data had to be factored from modelled PM peak flow data this means that there are uncertainties over the precision of the forecast

³⁴ AQTAG position regarding In-combination guidance and assessment. Correspondence between AQTAG and PINS. March 2015
³⁵ Volume 13, Section 1, Part 4

flows. However, even if the actual change in flows was more than double these forecasts (which would be a cautious assumption) the change in flows on all links would still be well below 1,000 AADT. There is therefore a fair basis to conclude that *'the impact of the scheme can be considered to be neutral in terms of local air quality and no further work is needed'* and thus that a likely significant effect would not arise.

Yours sincerely

for **AECOM Infrastructure & Environment UK Limited**

SIGNATURE REDCATED

Dr James Riley
Associate Director