Habitat Regulations Assessment: Developer Guidance and Requirements in County Durham



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Executive Summary

The EU Habitats and Wild Birds Directives¹ aim to protect Europe's most important habitats and species. They primarily achieve this by requiring:

- 1. The designation and protection of a network of land and marine habitats (European Protected Sites); and
- The protection of certain animals and plants of European importance and all naturally occurring wild birds (European Protected Species)

This guidance document aims to explain the requirements relating to European Protected Sites. These requirements are transposed in England by the Habitats Regulations.²

There are nine European Protected Sites (and one pSPA) in County Durham which are predominantly located in the western uplands and along the coastline. The Council has a duty to ensure that all the activities it controls, including landuse planning does not harm any of the sites or the natural processes that support them. In order to determine whether planning proposals are likely to harm a European Protected Site(s) or not, an assessment of their effects is required. This is known as Habitats Regulations Assessment (HRA). Whilst it is the responsibility of the Council, as the competent authority, to undertake the HRA, those proposing or submitting planning applications will need to provide the Council with sufficient information and evidence to enable the assessment to be undertaken.

If following HRA, taking mitigating measures into account, it is established that harm is likely to occur, or if there is uncertainty over the effects of a planning proposal, the Council will be required to proceed on a precautionary basis and not grant consent. The Council would only be able to grant consent under these circumstances if three additional, sequential tests (known as derogations) are met. These tests must be interpreted strictly and include:

- No feasible less damaging alternative solutions to the proposal
- exist; Imperative reasons of overriding public interest can be
- demonstrated; and Compensatory measures can be secured

In practice it is likely that only a small minority of proposals will reach this stage of consideration and meet the tests.

¹ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora ("the Habitats Directive") and Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds ("the Wild Birds Directive")

² The Conservation of Habitats and Species Regulations 2017 (the "Habitats Regulations") apply in England and its seas up to 12 nautical miles from the coast.

Coastal European Protected Sites

HRA undertaken by the Council and supported by independent bird and coastal visitor surveys has established that recreational pressure could harm County Durham's coastal European Protected Sites. Development types which increase recreational pressure (e.g. residential development, visitor accommodation/attractions) falling within 6km of the coastal European Protected Sites could contribute to harmful effects. For example, the disturbance of important breeding and over wintering bird populations.

The Council has developed a coastal avoidance and mitigation strategy to implement a programme of monitoring and mitigation measures to address potential adverse effects on County Durham's coastal European Protected Sites, which can be caused from increased visitor pressures resulting from new planned residential and tourist development.

The Strategy recommends a planning contribution of £662 per net new dwelling (or equivalent) for the housing sites allocated as part of the County Durham Plan, and £756.61 per net new dwelling (or equivalent) for windfall sites between 0.4 and 6km as a straight line (as the crow flies) from the boundary of our coastal N2K sites. The contribution will fund the following avoidance and mitigation measures:

- Provision of alternate greenspaces to reduce the number of visits to the coast on a daily/weekly basis, with particular reference to high risk users as identified in the HRA of the County Durham Plan (2018), thereby reducing the levels of recreational disturbance predicted;
- A series of mitigation measures on the coast to manage visitors, and prevent disturbance levels at the point of impact;
- The implementation of a monitoring strategy to understand the impacts of the mitigation and avoidance strategy, and enable amendments to improve it where deemed necessary.

Whilst this does not obviate the necessity of undertaking an HRA for planning applications on a site by site basis, this provides the recommended mitigation to address likely increases in recreational impacts caused by increased houses and tourism development.

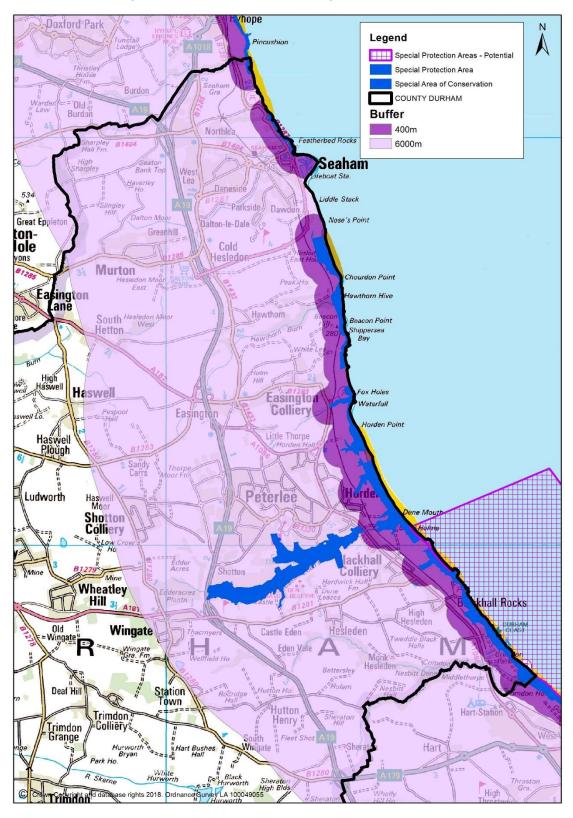
Any development with a 0.4km straight line distance of the boundary of Durham's Coastal N2K sites will be assessed on its own merits with regards to the Habitats Directive. If significant impact cannot be precluded, a detailed project-level AA must ensure no adverse effect. Within this zone a significant adverse effect can only be avoided or mitigated in exceptional circumstances, therefore there will be a general presumption against new residential development within 0.4km of the European Protected Sites boundary.

How to use this Document

This document aims to explain the responsibilities of the Council and developers in respect of HRA and sets out in greater detail the coastal avoidance and mitigation strategy. If you are able to answer yet to either questions 1 or 2 below, all sections of this guidance document are relevant. If you are able to answer yes to question 3 only, please refer to sections 1 and 2.

- 1. Is my development either within the boundary of a European Protected Site or within 0.4km of the designation boundary;
- 2. Is my development between 0.4km and 6km of a coastal European Protected Site (s) (Map 1) and likely to either increase the resident population or visitor levels to Durham's coastline;
- 3. Whether or not development is outside of the 6km buffer, does it have characteristics such as a very large size, or a major polluter, which may warrant its own HRA?

Map 1 Buffer zones - coastal European Protected Sites



Further Information

For further information on Habitats Regulations Assessment, please contact the Ecology Team on: **03000 267137**. For applicants proposing development within the 6km catchment in East Durham, the relevant Development Management Team can be contacted on: **03000 262830**

1 Introduction

- 1.0.1 The Conservation of Habitats and Species Regulations 2017, referred to as the 'Habitats Regulations' implement in Great Britain the requirements of the EU Directive on the Conservation of Natural Habitats and of Wild Fauna and Fauna, referred to as the 'Habitats Directive' (Council Directive 92/43/EEC) and protect areas classified under Directive 2009/147/EC referred to as the 'Birds Directive.' The regulations aim to protect a network of sites known as Natura 2000 that have rare or important habitats and species threatened at a pan European level in order to safeguard biodiversity.
- 1.0.2 County Durham has a number of Natura 2000 of European Protected Sites, comprising:

Special Areas of Conservation (SAC): protected because they make a significant contribution to conserving habitats and species listed in the Habitats Directive

In County Durham there are 6 whole or part SACs which are predominantly divided between the western uplands and the coastline.

- Castle Eden Dene
- Durham Coast
- Moor House-Upper Teesdale
- North Pennine Dales Meadows
- North Pennine Moors
- Thrislington

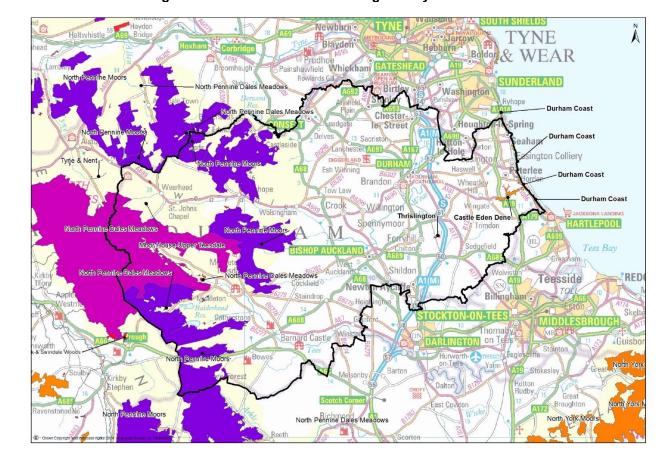


Figure 1 SAC's within and bordering County Durham

Special Protection Areas (SPA): protected because they constitute internationally important areas for breeding, feeding, wintering or the migration of rare and vulnerable species of birds listed under the Birds Directive

In County Durham there are 3 whole or part SPA's, including 1 Proposed SPA (pSPA) which are predominantly divided between the western uplands and the coastline.

- North Penning Moors
- Northumbria Coast
- Teesmouth & Cleveland Coast
- Proposed extension to Teesmouth & Cleveland Coast (pSPA)

Each SPA/pSPA has a list if qualifying bird species for which it is designated.

Land not within the SPA/pSPA but used by the qualifying bird species of the site may also be protected as 'functional land' (determined through bird surveys) utilized by and necessary to support the SPAs bird populations.

A sub-set of the coastline designated as SPA is also designated as an internationally important wetland under the Ramsar Convention of 1971 and receives the same level of protection as a European site.

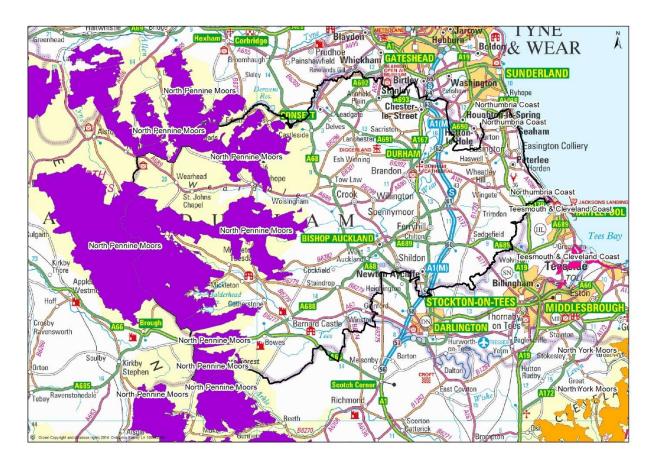


Figure 2 SPA's within and bordering County Durham

- 1.0.3 Under Regulation 63 of the Conservation of Habitats and Species Regulations 2017, the Council (as a Competent Authority) has a duty to ensure that all the activities it regulates have no adverse effect on the integrity of any of the European Protected Sites. The only exception to this arises where plans and projects are able to demonstrate Imperative Reasons of Overriding Public Interest (IROPI). The Council must assess the possible effects of a plan or project on any sites and shall agree to them (give consent), only after ascertaining that they will either not adversely affect sites or the tests of IROPI have been met. The term Habitats Regulations Assessment (HRA) has come into use for describing the overall assessment process including screening for likely significant effects and the specific Appropriate Assessment stage.
- 1.0.4 It is important to understand that the HRA will address not only the instigating plan or project but must also consider the in combination (cumulative) effect the plan or project may have along with other plans or projects which may be generated from multiple, diverse sources. Plans or projects which are geographically separate from the site but which may still have an indirect effect on the site, (for example increased air pollution, recreational use) will also need to be considered. It is also necessary to recognize that effects (including

- cumulative effects) may extend beyond administrative boundaries and that there will be a need to consult with neighbouring authorities. In Durham this will apply to all European Protected Sites along with the functional land supporting the qualifying birds of the SPA.
- 1.0.5 The precautionary approach to the HRA process means that a "significant effect" should be considered likely if it cannot be completely excluded on the basis of the available information. The absence of information is not a basis to assume no negative effect.

HRA Findings

1.0.6 Previous HRA undertaken by Durham County Council and supported by independent bird and coastal visitor surveys determined that recreational pressure and associated disturbance could have a detrimental effect on the habitat and species for which County Durham's coastal European Protected sites (Durham Coast SAC, Northumbria Coast SPA and Teesmouth and Cleveland Coast SPA) were designated. These sites collectively host the only example of vegetated sea cliffs on magnesian limestone exposures in the UK, important over wintering wader populations and internationally important breeding populations of Little Tern. The research undertaken as part of the HRA has identified that development types which increase recreational pressure, (e.g. Residential development, visitor accommodation) falling within 6km of the coastal European Protected Sites are likely to contribute to detrimental effects. For further information please see Appendix C to this document and the 2018 HRA of the County Durham Plan.

Purpose of this Document

- 1.0.7 The purpose of this document is twofold and aims to:
 - Explain the stages in the HRA process and the responsibilities of developers and the Council; and
 - Outline the coastal avoidance and mitigation strategy which applicants may wish to include in the AA stage of the process to address likely impacts caused by development projects.

Sub-Regional Working

1.0.8 The coastal European Protected Sites extend into five authorities in the region³ and recreational pressure arising in County Durham or its neighbouring authorities is not limited to its own administrative boundaries. Therefore, in order to be sure of a consistent approach, Durham County Council is working jointly at a sub-regional level to implement complimentary avoidance and mitigation measures and will endeavour to continue to do so in the future.

³ Including Northumberland County Council, South Tyneside Council, Sunderland City Council, and Hartlepool Borough Council

Document Status

1.0.9 This guidance document is a working document and will be reviewed for It's effectiveness at least every 5 years or sooner if new evidence emerges or monitoring results indicate that a more urgent review is required. The Council is confident that the measures advocated will be effective, however if for some reason specific measures are not found to be working, these will be readdressed.

2 Stages in the HRA Process and Participant Responsibilities

- 2.0.1 A staged approach is adopted for undertaking an HRA:
 - Screening
 - Appropriate Assessment
 - Avoidance and Mitigation
 - Absence of alternatives, IROPI and compensation
- 2.0.2 For each of these stages it is the responsibility of the applicant or proposer of a plan or project to provide sufficient information, in a suitable format, to the Council as the competent authority. The timing and content of each stage will be agreed in advance by the proposer and Durham County Council. A flowchart showing the stages is included at Appendix A.

Stage 1 Screening

- 2.0.3 The purpose of the screening stage is to determine whether the plan or project is connected with or necessary for the management of the site and if not whether it is 'likely to have a significant effect' on a European site (either alone or in combination with other plans and projects) and therefore require appropriate assessment.
- 2.0.4 There is no formal requirement for a screening stage in the habitats legislation, however, screening is a useful assessment tool. The assessment acts as a coarse filter which should not require extensive supporting evidence to establish where Likely (is it possible, not is it probable) Significant (i.e. not trivial or inconsequential) Effects will occur. The Council will decide how screening should be applied in each case, depending on the likelihood of significant effects on a European site. Please note that the precautionary principle applies to the screening stage, therefore if Likely Significant Effects cannot be ruled out, an appropriate assessment will be required.
- 2.0.5 However, if at this stage it can be concluded that no likely significant effects arise from the plan or project then no further stages of the HRA are required. It is strongly in an applicant's interests to ensure that any need for formal screening is identified as early as possible. In practice they should seek to confirm this during pre-application discussions with the Council to help minimise delays.
- 2.0.6 Following the outcomes of recent caselaw (People Over Wind and Sweetman, 2018) changes have been made to this guidance document to reflect the new judgement. Where previously as a result of the "Dilly Lane" case. (R on the application of Hart DC) v Secretary of State for Communities and Local Government [2008].) it was concluded that mitigation or compensation measures that were part of the project could be taken into account at the screening stage of the Habitats Regulations

Assessment (HRA). If such measures were capable of avoiding or offsetting the effects on the European site, then a finding of "no significant effects" could be made at the screening stage, and a full HRA assessment would not be required. This has allowed projects which adopted adequate mitigation to proceed in the UK without full HRA.

- 2.0.7 In the new judgement (People Over Wind and Sweetman (2018)) the CJEU concluded that mitigation measures could not be considered as part of the project, and thus that the screening stage of HRA should not take account of them. This will undoubtedly be tested further in the courts in coming months and years, but it seems that the issue is whether the mitigation measures proposed can genuinely be considered as part of the project, in that they would happen in any case, irrespective of the European site. If not, then they should be considered mitigation measures, and considered at the appropriate assessment stage of HRA.
- 2.0.8 The implications of this are that all development proposals within 6km of the County Durham Coastline and associated N2K sites, would be likely in future to need to proceed to full HRA as they would be unlikely to be able to demonstrate an absence of significant effect in the absence of the proposed mitigation. In many cases, this would simply be a need to carry out further assessment work. However it could have some implications for the success of schemes in some cases, since the "test" at the appropriate assessment stage is more stringent, being "beyond reasonable scientific doubt" rather than the screening stage test "on the basis of objective information".

Stage 2. Appropriate Assessment

- 2.0.9 If, after screening, it is undetermined whether adverse effects are likely or screening process identified particular adverse effects either alone or in combination, then an assessment of only those identified effects (i.e. An Appropriate Assessment, on the qualifying features of the SAC/SPA must be carried out. The Appropriate Assessment utilizes evidence to further refine and quantify the identified effects and to consider them in combination with any proposed mitigation.
- 2.0.10 It is the responsibility of the Council to undertake the Appropriate Assessment and to determine whether there will be an adverse effect on the integrity of the European Protected Site. At the end of the assessment process Durham County Council must be certain that there will be no adverse effect on the Conservation Objectives of the European Protected Site before it can consider allowing the plan or project to proceed. It is the responsibility of the applicant or proposer to provide sufficient information and evidence in an appropriate format for the Council to carry out the assessment. This will be in the form of a "shadow" Appropriate Assessment, likely to consist of a suite of specialist surveys and desk studies including an assessment of in combination plans or projects. The Council must consult Natural England on the assessment process and have regard to any representations made. If at this stage it can

be concluded that no adverse effects arise then no further stages of HRA are required.

Stage 3. Avoidance and Mitigation

2.0.11 Where likely significant effects continue to be identified following Stage 2, avoidance measures, followed by mitigation measures should be considered further. Please note that mitigation measures should be proven to be deliverable and the Appropriate Assessment will also need to ensure that residual effects (after mitigation) do not act in combination with other plans and projects (cumulative effects). Where adverse effects are still identified, the plan or project should be altered until adverse effects are cancelled out fully.

Stage 4. Absence of alternatives, IROPI and compensation

- 2.0.12 If after stage 3 an adverse effect on the integrity of the European Protected Site(s) remains the proposal can only proceed providing the following three sequential tests are met:
 - There must be no feasible alternative solutions to the proposal which are less damaging to the affected European sites(s);
 - There must be 'imperative reasons of overriding public interest' (IROPI) for the plan or project to proceed; and
 - All necessary compensatory measures must be secured to ensure that the overall coherence of the network of European sites it protected.
- 2.0.13 The purpose of the assessment of alternative solutions is to determine whether there are any other feasible ways to deliver the overall objectives of the proposal which will be less damaging to the integrity of the European Protected site(s) affected. For the assessment to be passed the Council must be able to demonstrate objectively the absence of feasible alternative solutions. The applicant is primarily responsible for identifying alternatives. Alternative solutions are limited to those which would deliver the overall objective as in the original proposal. Please note that where housing developments are considered to adversely affect a European Protected site(s), alternative locations for housing are often available and therefore it is difficult to demonstrate the absence of alternatives.
- 2.0.14 Where the absence of alternatives can be demonstrated, and the proposal will affect a Special Area of Conservation (SAC) Annex I feature, the Council can normally only consider IROPI reasons relating to human health, public safety or beneficial consequences of primary importance to the environment. Other IROPI reasons can only be considered having obtained and had regard to the opinion of the

- European Community. In all other cases the Council can consider IROPI reasons including those relating to social or economic benefit.
- 2.0.15 Where the absence of alternatives and IROPI can be demonstrated, the ability to secure suitable compensation must also be demonstrated. The Council, with Natural England are initially responsible for ensuring that suitable compensation is identified. Such measures must offset the negative effects caused by the proposal and must be secured before consent is given and complete before the adverse effect on the European site occurs.
- 2.0.16 For further information on this stage please refer to the European Commissions Managing Natura 2000 Sites document.

HRA and the Development Management Process

- 2.0.17 It is likely that in most cases the HRA process will stop at either stage 2 or 3 above, with either avoidance or mitigation measures being applied. At this stage the developer must have provided Durham County Council with an adequate "shadow" Appropriate Assessment and the Council must be satisfied that the proposed mitigation it contains will be sufficient to completely avoid or nullify all likely adverse effects on the qualifying features of the European Protected Site(s) and will therefore not undermine the sites Conservation Objectives.
- 2.0.18 Pre application discussion with Durham County Council's Development Management team should be carried out as early as possible in the decision making process. This is needed to correctly inform the HRA process and confirm the structure and content of an Appropriate Assessment if it is required and to determine the level and nature of any subsequent mitigation required. This must be done in advance of any planning application, most effectively through Durham County Council's Development Management pre-application consultation system. Failure to do so may result in significant delays to the Development Management process.
- 2.0.19 HRA can be carried out for strategic plans and/or individual plans or projects down to the level of very small scale developments where an impact on the qualifying features of a European Protected Site has been identified. A strategic approach to HRA is encouraged where a land owner/developer owns multiple holdings for sale or development all of which may be subject to HRA. A holistic, master planning, approach will allow for efficiencies in assessment of impacts and ease of identification of appropriate mitigation at a plan level rather than the process stalling if sites are treated individually.

- 2.0.20 HRA at a strategic plan level is more efficient allowing for:
 - The early identification of plans or projects which may have an impact on European Protected Sites
 - Early stage screening to eliminate individual plans or projects
 - Early stage recognition of those individual plans or projects which will be subject to Appropriate Assessment
 - More effective assessment of in combination effects across plans or projects
 - The identification of early stage requirements for mitigation
 - Single consultation with external consultees for multiple sites in one plan
 - Cumulative mitigation proposals where possible
 - Coordinated HRA and Appropriate Assessment
 - Efficiencies in mitigation, maximizing development potential
 - Ease and speed within the Development Management process.
- 2.0.21 The following sections of this guidance document aim to outline the coastal avoidance and mitigation strategy which developers may wish to adopt to ensure that adverse effects arising as a result of coastal recreational pressure can be avoided and mitigated.

3 Coastal Avoidance and Mitigation Strategy

- 3.0.1 Recreational pressure and associated disturbance along the coast comes from two distinct pathways:
 - Residential pressure within a local catchment Residents are likely to visit frequently and consistently e.g. to walk the dog or exercise
 - Visitor pressure from a wider catchment Visitors are likely to be 'tourists' from within and outside the region and are likely to visit less frequently.
- 3.0.2 A three pronged approach to the strategy is required to avoid likely significant effects to the coastal European Protected Sites and includes:

Measure 1

General presumption against any net increase in residential development within 0.4km of the coastal sites

Measure 2

Provision/enhancement of alternate natural greenspace to reduce the frequency of visits to the coastal sites by residents and hence reduce pressure on them

Measure 3

Coastal access management and monitoring measures to reduce and monitor the effects of residents and those from a wider catchment who visit the coastal sites.

3.0.3 A 6km recreational catchment has been defined within which the strategy should be applied. Measures 2 and 3 should be applied from 0.4km from the perimeter of the coastal European Protected Sites to 6km from the perimeter of the coastal European Protected Sites as the crow flies. The following figure shows the extent of the catchment and associated buffer zones.

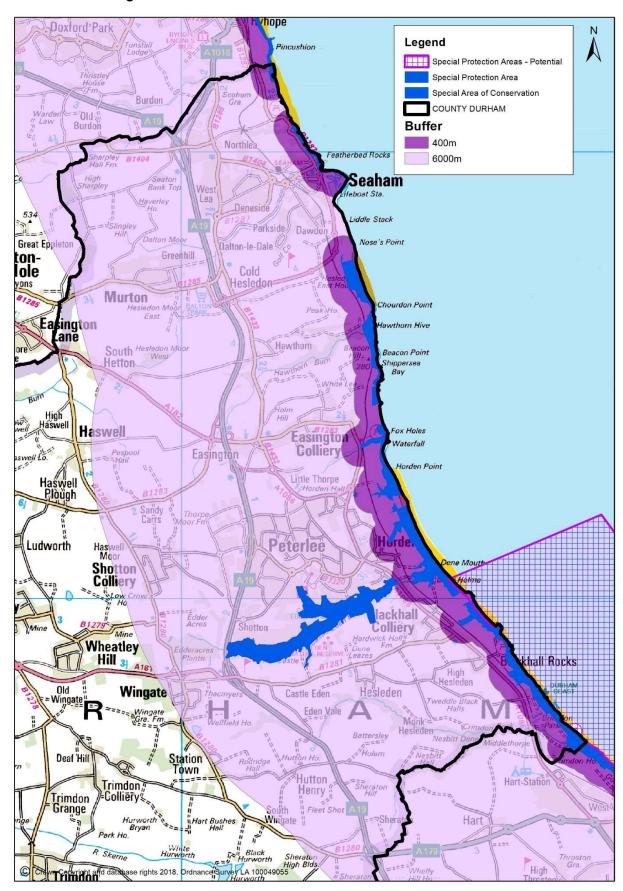


Figure 3: Recreational Catchment and Buffer Zones

- 3.0.4 Where development/project proposals fall within this 6km zone of influence, a shadow HRA or similar will be required to support the proposals, demonstrating no adverse impact on the integrity of the relevant N2K sites. The proposed Mitigation Strategy detailed below can be included where it is deemed adequate to address likely impacts identified.
- 3.0.5 The supporting information for the HRA should build upon the Council's existing evidence base, with additional supporting information and surveys where required, and including an assessment of in-combination effects and discussion with neighboring local authorities where relevant.
- 3.0.6 If either insufficient mitigation or information to support an Appropriate Assessment is supplied alongside proposals within the 0.4 6km buffer, the Council will not be able to conclude that there will be no likely significant effects to coastal European Protected sites. As a result, the Council will need to apply the precautionary approach and will seek further mitigation or information from the applicant in the first case which may delay determination of the proposal. The Council will be minded to recommend refusal of proposals in the event that either:
 - The necessary mitigation cannot be secured;
 - Evidence to inform the Appropriate Assessment is not provided which supports, to the LPA's satisfaction, a conclusion of 'no likely significant effects'; and
 - The three sequential tests of absence of alternatives, IROPI and compensation cannot be demonstrated.

3.1 Types of Development Included

- 3.1.1 This strategy largely concerns itself with the effects arising from net new development related to residential and visitor accommodation. The strategy will apply to applications for full or outline planning permission. Developers making outline planning applications will need to provide complete information on the number of dwellings / units, so that the required calculations for contributions may be made. Without this information, the Council cannot satisfy itself that the level of any proposed contribution is adequate and would be unable to grant planning permission as a result.
- 3.1.2 Reserved matters, discharge of conditions, or amendments to existing planning consents will be considered on a case by case basis by the Council. Please note that like for like replacement development is not considered to increase recreational pressure and is therefore not included in the strategy. The types of development that are included are described as follows against the relevant use classes:⁴

C1 Hotels

3.1.3 The strategy will apply to purpose built hotels, staff accommodation, boarding and guest houses and the change of use to such where levels of guest/staff accommodation are considered by the Council to increase upon any previous levels of residential accommodation provided. The strategy will also apply to extensions to existing C1 uses which increase levels of accommodation.

C2 Residential Institutions

- 3.1.4 The strategy will be applied to developments within the C2 use class (i.e. Residential care homes, hospitals, nursing homes, boarding schools, residential colleges and training centres) on a case by case basis. In general, developments such as hospitals and residential care/nursing homes will not be considered to have a likely significant effect with regard to recreational impacts but will be considered on a case by case basis taking into account potential 'in combination' effects and any associated net change in residential occupancy for carers residing on the site.
- 3.1.5 Certain types of C2 residential accommodation may also be considered not to affect recreational impacts within the 0.4km buffer of coastal European Protected Sites including:

⁴ as established through the Town and Country Planning (Use Classes) Order 1987 (as amended)

- Purpose built schemes for the frail elderly where there is an element of close care provided on site 24 hours a day. This level of care is above that of provision of an on-site wardening service provided for sheltered accommodation. It would be epected that there would normally be an age restriction of 60+ years for the occupants of the units and that the planning permission would be conditioned in such a way that the units could not become open market housing.
- 2 Purpose built schemes for the accommodation of disabled people, where by the nature of the residents' disabilities, they are unlikely to have impact on the coastal protected sites.
- 3.1.6 The use of pet covenants or other suitable legally binding agreements by LPA's are only considered acceptable by Natural England in these specific situations:
 - The nature of the establishment is such that pressure from residents to own pets is likely to be very low creating an acceptable risk;
 - In the context of a residential care home with 24 hour wardening, enforcement is seen as being achievable in terms of time taken to detect infringements and resources on site to achieve enforcement outcomes.
- 3.1.7 Relevant conditions may need to be attached to any planning permission to ensure that no significant effects can arise for the lifetime of the development including for example:
 - Preventing further changes of use within the C2 use class and ensuring that units will not become open market housing;
 - The applicant/management body will provide a biannual written confirmation to the Council detailing the compliance with the pet covenant, the number of residents and their age;
 - The applicant/management body will prevent, through design and enforcement measures, the use of onsite car parking for public use of accessing the coast.

C3 Dwelling Houses

3.1.8 The strategy will apply to dwelling houses, including affordable houses, flats, annexes, retirement and age restricted properties and the change of use to such. The strategy will apply to the extension of existing C3 uses on a case by case basis.

C4 Houses in Multiple Occupation (HMO)

3.1.9 The strategy will apply to purpose built HMO's, including proposals for large HMO's (i.e. 6 or more people sharing) which are unclassified by the Use Classes Order and are 'sui generis'. The strategy will also apply to

the extension of existing HMO's where they are considered by the Council to provide additional levels of occupancy. The strategy will apply to the change of use from C3 to C4 where levels of occupancy increase.

Other Types of Development (Sui Generis)

- Camp and caravan sites⁵ The strategy will apply to proposals for temporary, seasonal and permanent camp and caravan sites and extensions to such where the number of pitches or guest accommodation increases. This includes applications to extend temporary planning consent. If subsequently made permanent, no additional contribution will be sought.
- Mobile and temporary dwellings The strategy will apply to proposals for mobile or temporary dwellings. If subsequently made permanent no additional contribution will be sought.
- Temporary and permanent gypsy and traveler pitches The strategy will apply to proposals and temporary and permanent gypsy and traveler pitches and the extension of sites for such. If subsequently made permanent no additional contribution will be sought.
- **Visitor attractions** The strategy will apply to proposals which are considered likely to increase the visitor draw and appeal of the coast.

Permitted Development

- 3.1.10 The Government allows planning permission for certain classes of development without the requirement for a planning application, although prior approval may be required. This includes the change of use from business offices (B1a), light industrial (B1c), storage and distribution (B8), betting offices, pay day loan shop, launderette (Sui Generis) and agricultural buildings (other changes of use).⁶
- 3.1.11 Regulation 3 of the Town and Country Planning (General Permitted Development) (England) Order sets out that development described as permitted development in Schedule can be permitted subject to the provisions of the Order and the Conservation of Habitats and Species Regulations. Therefore, where it is considered that a 'significant effect' on the coastal European Protected Sites may arise, (or any other European Protected Site) the development must not commence until written approval has been received by the developer from the Council (or Natural England). In circumstances where significant effects to coastal European Protected Sites may arise, the proposed development will be subject to the avoidance and mitigation strategy.

⁵ Camping and caravan sites can include basic ridge /dome tents, yurts, tipis/teepees, geodesic domes, safari-style tents/canvas lodges, bell tents, wooden shepherds huts, wooden wigwams/cocoons/snugs, cabins, chalets, eco-pods or similar structure and caravaning (both static and touring)

⁶ Further information relating to permitted development including temporary permitted development can be found on the Planning Portal Website.

3.1.12	following sures.	sections	describe	the	three	avoidance	and	mitigation	

3.2 Measure 1: Development within 0.4km of Coastal Sites

- 3.2.1 Within 0.4km of the coastal European Protected Sites⁷ the effects of a net new increase in residential development is likely to be such that even if measures 2 and 3 of this strategy are implemented it may not be possible to conclude no adverse effect on coastal European Protected sites. This is due to the likely higher frequency of visits originating within 0.4km and the potential for increased levels of predation as a result of pet ownership/general urbanization impacts.
- 3.2.2 There is therefore a general presumption against any net increase in residential development within this 0.4km buffer zone unless information and evidence to inform the Habitats Regulations Assessment can be provided by the proposer or applicant which is able to satisfactorily demonstrate that it will not adversely affect the integrity of the coastal European Protected Site in question. For proposals falling within 0.4km it is recommended that early stage advice should be sought from Development Management Officers.

3.3 Measure 2: Provision/enhancement of suitable natural greenspace

- 3.3.1 As local visitor surveys show that dog walking is the main activity undertaken at the coast with 'convenience' and 'space for dogs to run around' cited as top reasons for choosing the coast as a dog walking location it is considered essential to tailor mitigation towards this activity given that dog walking is:
 - The main recreational activity undertaken at the coast;
 - Considered to be a greater cause of disturbance to qualifying SPA species than visitors without dogs; and
 - Can also adversely affect Durham Coast SAC.
- 3.3.2 The visitor surveys also identified that nearly two thirds of all dog walkers would utilise local green space as an alternative to walking their dog at the coast if it was available. Research also indicates that management of 'green infrastructure' sites that offer desirable habitats and enhance provision of footpaths, can mitigate recreational impacts on nearby valuable conservation areas and statutory nature designations. The provision or enhancement of greenspace for dog walking purposes is therefore considered to contribute towards reducing levels of residential visitor activity at the coast and associated disturbance.

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⁷ Measured as the crow flies from the closest perimeter of the coastal European Protected site to the closest perimeter of the development site.

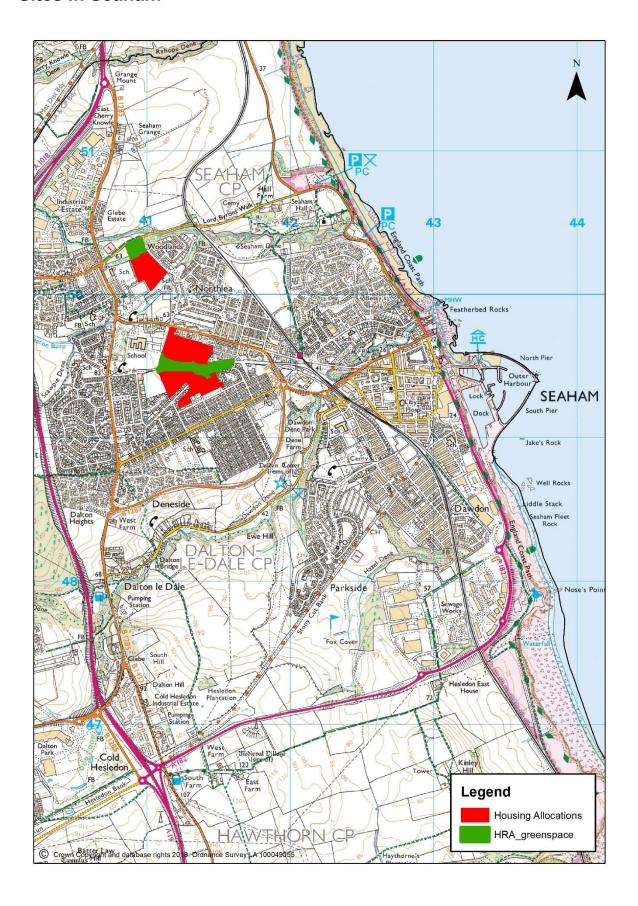
⁸ Hornigold K, Lake I Dolman P(2016) Recreational Use of the Countryside: No Evidence that High Nature Value Enhances a Key Ecosystem Service. PLoS ONE 11(11):e0165043. Doi:10.1371/journal.pone.0165043

- 3.3.3 There are two ways for applicants to provide or enhance suitable natural greenspace:
 - Make a payment contribution towards suitable alternative greenspace sites identified by the LPA either through the planning process or in support of housing allocations in the County Durham Plan; or
 - Make onsite provision based upon the principles within this guidance document (this is more likely to apply to large residential proposals e.g. 100+ dwellings).
- 3.3.4 In order to be effective, green space provision or enhancement of such needs to replicate, as far as possible the recreational qualities of the designated sites to make them attractive to potential users. Whilst it is not possible to replicate the coastal environment, green space can replicate aspects of coastal land that makes it attractive to dog walkers and include other desirable habitats. In addition to the findings of local visitor surveys, studies from all over the UK repeatedly show that the three most important amenities dog owners seek are:
 - Off lead access;
 - Close to home; and
 - Away from traffic.
- 3.3.5 Taking this into consideration together with Natural England's Suitable Alternative Natural Greenspace (SANG) guidelines, the County Council's Open Space Needs Assessment (OSNA) and Hampshire County Council's Planning for Dog Ownership in New Developments design guidance (2013), the following greenspace criteria are recommended:

- Sites should be semi-natural in appearance in order to provide a similar natural experience as the Durham Coast;
- They should be a minimum of 3ha per 1000 persons and include sufficient sized areas to enable users to walk their dogs off lead without any conflict/fear for their safety (smaller sites would also be considered if they were close to and had good links to other smaller sites, to form a larger total area/network);
- Sites should ideally aim to allow a minimum dog walking penetration of 784m from starting point and a circular dog walk of 2.7km, or link with other sites which together provide this;
- The design of the site, if near to a designated site, should not inadvertently increase access to the designated site, but rather should be self-contained;
- Sites should be within 400 500m of the target audience/new-housing, unless a larger fit for purpose site is created which has a larger catchment area, with sufficient capacity for additional users;
- They should have adequate car parking if they are larger than 10ha, and would therefore aim to have a larger catchment area;
- Existing green spaces should be assessed to ensure that the proposed use
 of the site is compatible with its existing use and that there is available
 carrying capacity.
- 3.3.6 Where existing areas of green space are not already at carrying capacity or have conflicting uses, suitable green space may be created from existing areas of green space where they:
 - Meet the criteria outlined above with no existing public access or limited public access, which for the purposes of mitigation could be made fully accessible to the public; or
 - They are already accessible but could be changed in character so that it is more attractive to dog walkers who might otherwise visit the coast.
- 3.3.7 In certain circumstances it may be possible to satisfy both the requirements of the coastal avoidance and mitigation strategy and planning requirements regarding green infrastructure provision alongside new development e.g. Meeting targets for semi natural greenspace provision/biodiversity net gains.
- 3.3.8 Recent amendments to required housing numbers within the County Durham Plan has reduced the proposed allocations within the 6km zone of influence/buffer to just 2 sites in Seaham, and 1 in Peterlee. Suitable alternate

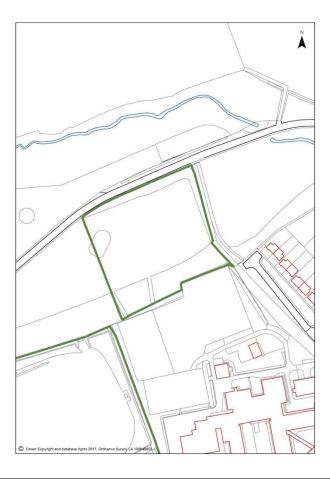
recreational greenspaces have been identified for these sites, which are deemed to have capacity for use by additional residents. These are detailed below:

Sites in Seaham



Lodge Field Plantation

Lodge Field Plantation is a small site which is connected to a wider belt of woodland, just south of Lord Byron's Walk, to the north of Seaham. It is owned by the County Council, and comprises primarily amenity mown grass, with a school sports pitch to the immediate west, Seaham School of Technology to the South and a broadleaved woodland to the east.

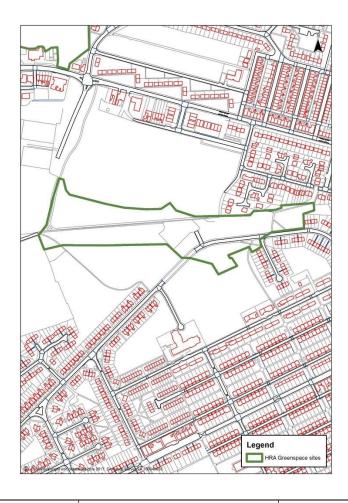


Proposed enhancements	Benefits	Cost estimate
Wildflower meadow creation with mown footpath through	Increase diversity of site.	£2500
Fencing and gates	To provide increase in security for off lead use by dog walkers.	£2000
Tree/scrub planting	To increase variety of habitats and site and create interest	£500

Malvern Crescent

The site forms part of a larger site which has been designated for housing. It consists of a large area of primarily amenity mown grass. A single surfaced path runs through part of the site and leads to well used allotments. Malvern Crescent runs through the southern part of the site. A small area of hardstanding remains in the centre of the site, and a palisade fence with hedgerow cuts through the northern part of the site, forming the original boundary with the former Colliery site.

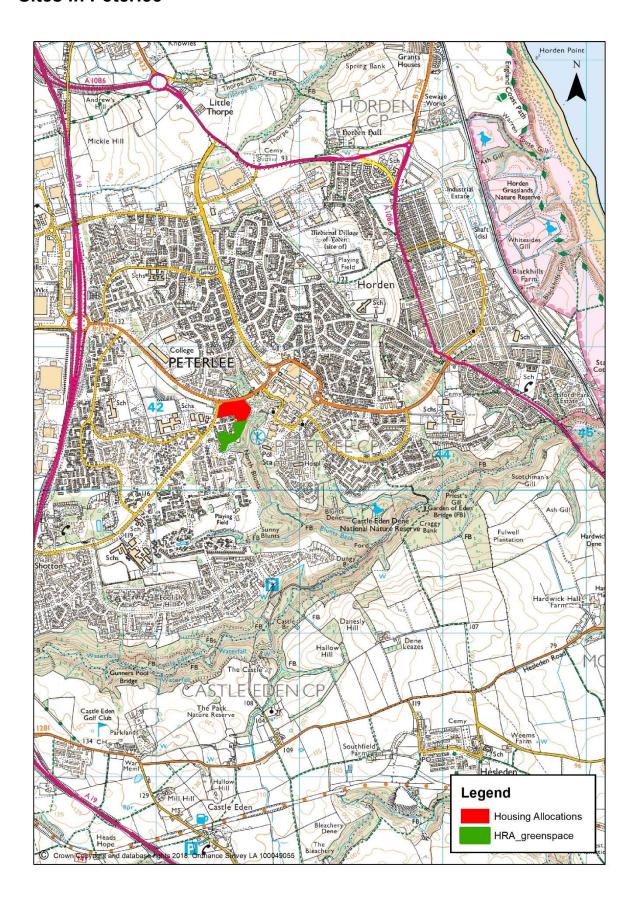
An area of tree planting and over grown shrubs provide a screen for housing to the north east of the site.



Proposed	Benefits	Cost estimate		
enhancements				
Surfaced and unsurfaced	Provide all weather	£36 000		
footpath creation,	access, as well as			
including circular routes	multiple options for users.			
through site				
Woodland/tree planting	To create a variety of	£2000		
	habitats and increase			
	aesthetics of the site.			
Wildflower grassland	As above	£13 800		
areas				

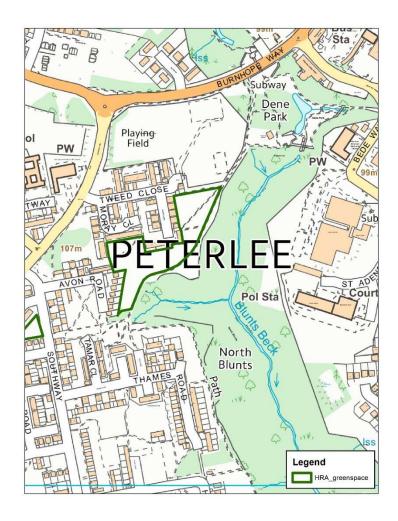
Fence removal	To allow the joining up of	£1000
	the site, and enable better	
	access route creation.	
Signage/interpretation	To inform, raise	£5000
panels	awareness and create	
	interest on site, assist in	
	navigation through site.	
Fencing to encourage off-	To create a 'safe'	£3000
lead use by users	environment to	
	encourage off-lead use by	
	dogwalkers.	

Sites in Peterlee



Tweed/Moray Close

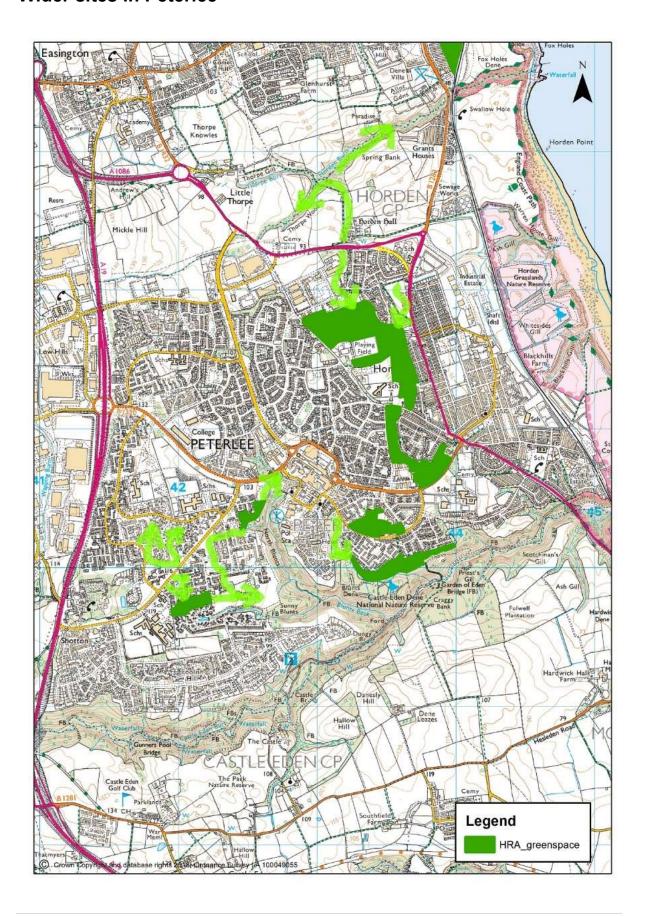
Area of informal greenspace dominated by amenity mown grass with scattered broadleaved trees. Links in with wider informal greenspace areas which are typical of the development structure in Peterlee.



Proposed enhancements	Benefits	Cost estimates	
Wildflower meadow creation	Provide a variety of habitats for diversity as well as creating a more attractive site.	£4000.00	
Tree/scrub planting	As above	£200	
Mown paths through grassland	To create a variety of access routes through the site.	Already maintained site, no additional cost envisaged.	

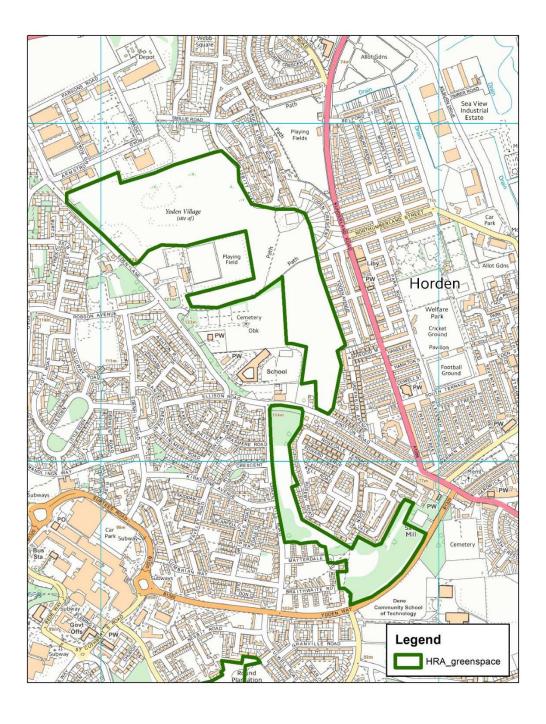
- 3.3.9 All of the sites detailed above are owned by the County Council, and currently managed as informal amenity greenspaces. It is therefore anticipated that they will continue to be managed as such in perpetuity.
- 3.3.10 In addition to these, additional greenspaces have been identified, which have potential capacity to absorb additional recreational users, if enhanced to improve their attractiveness for use by dog walkers. It is envisaged that these sites have the opportunity to be brought forward with the estimated windfall development within 6km of the Coastal N2K sites, where appropriate.
- 3.3.11 The majority of these sites have accessible green interlinking space which feeds into the wider greenspace network. This has been indicated with lighter green lines, as shown in the maps below.

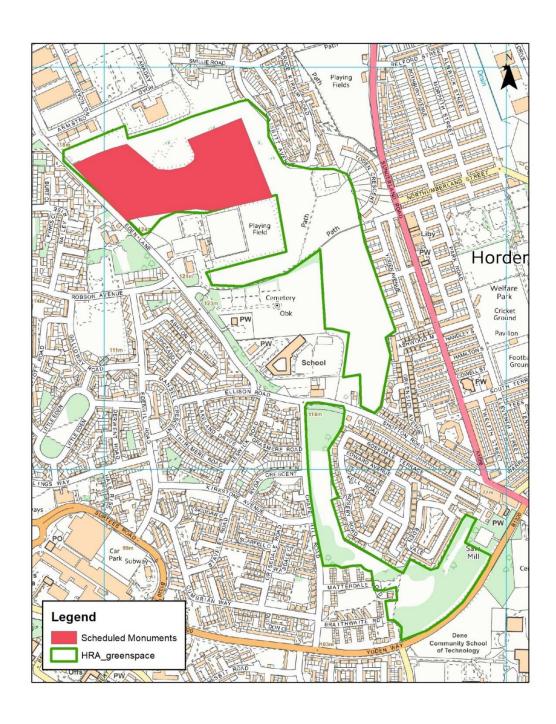
Wider sites in Peterlee



Medieval Village of Yoden, and associated linking greenspaces

The site comprises 2 areas of informal greenspace, predominantly amenity mown with scattered broadleaved trees. The Medieval village of Yoden (the larger of the two sites) incorporates a geological SSSI (Yoden Village Quarry) and well as a Scheduled Ancient monument to the north of the site (Yoden medieval settlement).



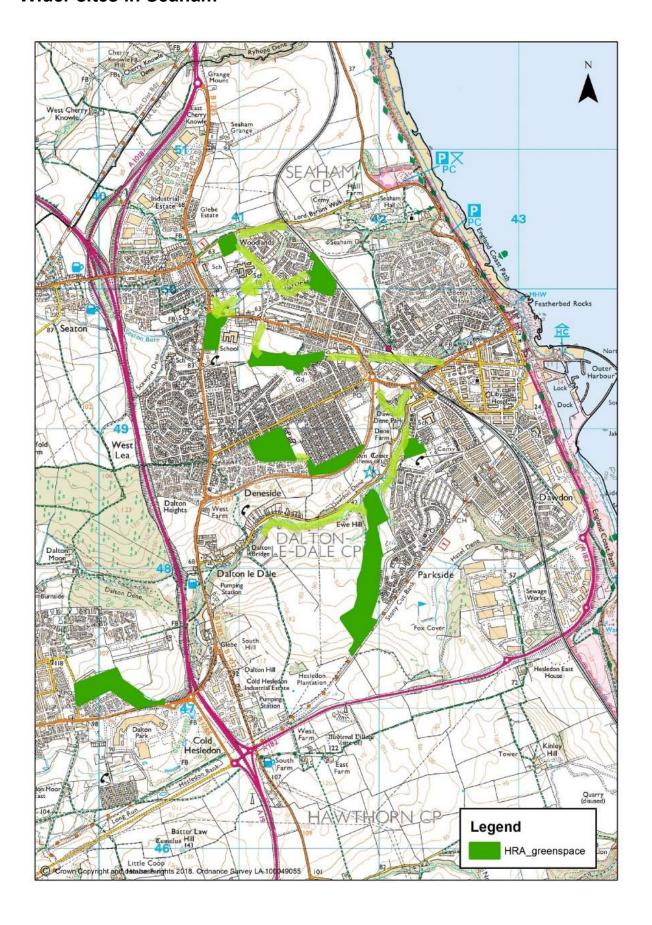


Proposed enhancements	Benefits	Cost estimate
Footpath creation Approx. 2km surfaced	Increase access through the site, including creation of circular routes favoured by users.	£120 000
Wildflower meadow creation Approx. 4.8ha	Increase biodiversity and aesthetic interest of site/variety of seminatural habitats.	£33 000

Tree/scrub planting & woodland management	Increase variety of habitats on site to create a more attractive environment to walk in and enjoy. Helps to create the illusion of 'space' and increase capacity of site.	£10 000
Interpretation panels, and signage/way markers	To help inform and raise awareness/educate.	£10 000
Web-based educational resource to create an identity for the site.	Educational awareness for local schools/community groups and other initiatives (geological and archaeology and ecology)	£30 000
Creation of entrance feature and enhanced car parking, including fencing to secure site from roads.	To enable use by visitors further afield thereby increasing visitor catchment. Allowing off lead use by dog walkers.	£500 000



Wider sites in Seaham



The Lawns

Predominantly amenity mown grass which was laid down after the former terraces were demolished. The former streets and street lamps are still present on site.



Proposed enhancements	Benefits	Estimated costs
Removal of tarmac roads/and associated infrastructure.	Creates a more natural environment.	£31 200
Wildflower meadow creation	Provides variety in habitats which dog walkers look for.	£5000
Surfaced footpath creation	Sited to provide circular routes through the site, enabling all weather access.	£20 000
Tree/scrub planting	To enhance aesthetic value of the site, and create a variety of habitats.	£300

Interpretation panels/signage	To raise awareness and value of the site.	£3000
Pond/wetland creation.	To enhance aesthetic value of the site, and create a variety of habitats.	£500



Haven House

Large area of amenity mown grass. A single surfaced path runs through the site from north to south.

A railway line forms the eastern boundary, whilst a housing estate surrounds the site along the other boundaries.



Proposed enhancements	Benefits	Cost estimate
Circular footpath route (surfaced) and links to wider network.	Provides all weather route for users.	£15,000
Unsurfaced/mown paths through long grass as alternatives.	Gives alternative route to avoid other walkers if needed.	No cost as site already mown.
Tree/scrub planting	To partly screen railway and provide a more attractive site for recreational enjoyment.	£300

Creation of long and short	To enhance diversity of	£9000 (not including
grass areas (wildflower	site and to provide	future management)
meadow creation)	aesthetic interest/variety	
	of habitats.	
	_	



3.4 Measure 3: Coastal Access Management and Monitoring

- 3.4.1 The third measure is coastal access management and monitoring. The principles of such measures include:
 - Recognition of highly sensitive areas, particularly bird roosting sites
 - Rationalisation of access points and footpaths, to avoid highly sensitive areas
 - New signage diverting people away from sensitive areas and towards alternative areas
 - Community engagement and wardening
 - Educational initiatives which raise awareness of the vulnerabilities of qualifying species and associated responsible visitor behavior
 - Monitoring of changes in the qualifying species and habitats
 - Monitoring changes in recreational use

3.4.2 The measures have been divided into two tiers:

- Tier 1 mitigation measures are those that allow the public to continue to be able to enjoy visiting the SPA for recreation, in ways that do not damage the sensitive/qualifying habitats or species for which the site is designated. The aim is to reduce unauthorized activity, guide and educate visitors to reduce preventable disturbance and to focus on protection of the most sensitive areas, and at the most sensitive times of year. The Tier 1 CAMMS measures are targeted upon specific identified areas along the coast that are subject to high levels of disturbance; by prioritising action at these locations the Tier 1 CAMMS will deal with the most pressing issues of recreational impact at the coast. It is appropriate that housing allocations are used to deliver solutions to known recreational conflicts at the coast, especially as the spatial distribution of the housing allocations links well with the most sensitive areas. These will therefore be paid for by the County Durham Plan allocations;
- Tier 2 secondary measures have been identified which provide general mitigation across the wider area, through raising awareness and changing behavior over time. It is deemed that these measures will be paid for by Windfall development and this approach is considered appropriate as the specific geographical location of windfall sites cannot be predicted, and specifying CAMMS at given locations at this point in time is not regarded as being a sound approach. The CAMMS are informed by data from coastal bird and visitor surveys and as such additional specific locations for CAMMS may be identified in the future. It is possible that windfall development may tie in geographically with an identified sensitive area in the future and in such cases geographically specific CAMMS may then apply.
- 3.4.3 The measures are required **in addition** to the provision/enhancement of alternate greenspace in order to address the identified impacts of all

- recreational users of the coast, including those associated with visitor pressure from a wider catchment.
- 3.4.4 It is acknowledged that some windfall sites coming forward may not be within adequate proximity to a suitable alternate greenspace, however enhancements to the wider network of greenspaces within the 6kmn buffer zone may be regarded as appropriate greenspace provision in these cases. In all cases contributions will be expected to fund the Coastal Access Management and Monitoring measures.
- 3.4.5 Monitoring will be crucial in providing a method of fine-tuning of the avoidance measures to increase their effectiveness and maximize benefits.

4. Implementation and Monitoring

The Strategy recommends a planning contribution of £662 per net new dwelling (or equivalent) for the housing sites allocated as part of the County Durham Plan, and £756.61 per net new dwelling (or equivalent) for windfall sites between 0.4 and 6km as a straight line (as the crow flies) from the boundary of our coastal N2K sites.

4.0.1 This has been calculated by simply dividing the number of likely net new dwellings (from allocated sites coming forward through The Plan) within 6km of our coastal N2K sites, by the total cost of measure 2 *plus* 3 as detailed above.

Measure
$$2 + 3$$
 (Tier 1) $/ 495 = £662$

4.0.2 For *Windfall* sites we have calculated a total figure based on historic rates of delivery in the catchment over the last 5 years. This is divided this by the total cost of mitigation measures for Tier 2 Coastal Access Management and Monitoring Measures.

4.0.3 If appropriate, planning permission will be granted subject to conditions.

Proposers/ land owners of small scale residential developments (less than 10 dwellings) will be given the choice as to whether to enter into either a Section

106 agreement or a unilateral undertaking. Where Section 106 agreements are required, these are to be agreed and entered into, prior to the determination of a planning application. Any payments made to the Council by Section 106 agreements should be paid no later than the commencement of the development to ensure that mitigation is in place prior to occupation. If the development is likely to be built in major phases, payment by instalment will be considered.

- 4.0.4 Where specific measures and/or works (by the developer or, by others who are better placed to provide) are needed to avoid and mitigate the effect that occupiers of a development will have on a coastal European Protected Site(s), these should be undertaken and in place before or in conjunction with those occupiers moving in. Consequently, in some cases the Council will, by planning condition or obligations, restrict the occupation of a development until related avoidance and mitigation measures and/or works are complete.
- 4.0.5 Where contributions are secured and paid under a Section 106
 Agreement with the Council, the receipt and use of contributions can be tracked and information on spending will, on request from a contributing developer, be made available subject to the Council's reasonable costs being met.

Tourism Development

4.0.6 Where proposed tourism development is identified as having, in itself, a potential significant adverse impact on the Natura 2000 sites, permission will be subject to the specific provision of suitable mitigation measures appropriate to the circumstances. Due to the type of impact, and unknown location of proposals which are likely to come forward, it is likely that proposals will contribute to the Coastal Access and Management Measures. The amount and type of CAMMS and the level of financial contribution will be calculated on a site by site basis by utilizing a range of data including coastal bird data and information on the likely increases in users of the coast. This approach will ensure that bespoke CAMMS are identified to deal with specific impacts arising from any tourism development.

Measure 2: Greenspace provision

4.0.7 The provision or enhancement of alternate greenspace should be funded by developer contributions unless adequate onsite provision is being made. The calculation of costs will be undertaken on a case by case basis and will take account of acquisition costs if required, cost of

⁹ A unilateral undertaking is a legal document made pursuant to Section 106 of the Town and Country Planning Act 1990. This document provides that if you receive planning permission and decide to implement the development, you must make certain payments to the Council in the form of planning contributions.

- enhancement measures and maintenance, and management costs in perpetuity.
- 4.0.8 There will be a general presumption against any development on an alternate greenspace that has been enhanced/identified as mitigation to address likely impacts due to an increase in recreational disturbance by a development proposal, within 6km of the Durham Coast and associated Natura 2000 sites. Any developed proposed on these sites will be subject to a full HRA

Measure 3: Coastal Access Management and Monitoring

4.0.9 Developer contributions will be used to fund the actions identified within the following tables:

Table 9 Tier 1 Access Management and Monitoring Measures

No.	Action	Justification	Cost	20 year present value (PV @3.5 %) cost.
1	Monitor the nature conservation interest in SPAs every 3 years	Action is directly linked to the future management of the SPA's. Monitoring provides confidence that should populations and their distribution decline, the measures within this action plan can be amended accordingly.	Bird surveys £2,500 every 3 years	£12, 098
2	Monitor the SAC and the adjacent reversion areas every 6 years	Action is directly linked to the future management of the SAC. Monitoring provides confidence that should recreational trampling/nitrification of qualifying habitat increase the measures with this action plan can be amended accordingly.	£12,000 every 6 years	£34,581
3	Monitor recreational usage of the SAC and SPA (summer	Action is directly linked to the future management of the	£10,000 every 3 years	£50,147

4	and winter) every 3 years Hide tide roost areas Fence off/advise against public access (particularly during the autumn/winter months) the high tide roosts as identified in the Coastal Bird study, i.e.	SAC and SPA's. Monitoring provides confidence that should recreational disturbance increase the measures within this action plan can be amended accordingly. Positive effects derived – restricting access to sensitive areas and influencing responsible visitor behavior.	£80,000	£80,000
5	 Noses Point; Blackhall Rocks; and Blackhall Colliery Introduce highly sensitive areas where visitors are not encouraged through: Provision of interpretation; Removal of carparks where 	Positive effects derived – restricting and controlling access to areas which have been identified as sensitive through supporting surveys.	£60,000	£60,000
6	deemed necessary. Develop and deliver opportunities to diffuse visitor pressure inland from SAC and SPA. Path network exists, requires promotion of existing network through production of leaflets to diffuse visitor use away from SPA/SAC and to key mitigation sites. Promotional publications will include New home packs 'introduction of Beachcare key messages, Codes of Practice and Dog Control behaviors.	Potential for positive effects in tourism of raising awareness of SAC/SPA and responsible visitor behavior.	£21,076	£21,076

Table 10 Tier 2 Coastal Access Management and Monitoring Measures

No. Action Justification	on 20 year present value (PV @3.5 %) cost.
1 Beachcare and Wardening programme: Funding of an Easington to Crimdon Warden (Scale 9)¹¹0 to include SAC and SPA wardening and to act as little tern warden. General awareness raising and engagement, rationalization of ad hoc paths, path and fence maintenance & volunteer management. Positive effective visitor behave influencing visitor behave visitor behave derived – aivence and the control of the control	ects £280,702 aising and responsible vior. ects ims to use of path ay from eas of the

Monitoring

4.0.10 Whilst developer contributions will be sought towards the cost of monitoring as part pf measure 3, the following table and explanatory note explains how the Council intends to monitor the effectiveness of all measures advocated:

¹⁰ Funding for an Easington to Seaham Harbour Warden has already been secured.

Relevant Natura 2000 Site(s)	Mitigation Measure	How will the Measure be monitored?	How will the Outcome be Monitored?	When will the measure be monitored?	Trigger for Review of Measure	Actions to rectify potential failure of mitigation
Durham Coast SAC, Northumbria Coast SPA, Teesmouth and Cleveland Coast SPA.	Application of 0.4 – 6km buffer	Housing consents/completions within the buffer zone Tourism type development consents/completions within the buffer zone	Number and size of dwellings approved Number of tourism type developments approved	Monthly through existing development management systems	No trigger – this monitoring element provides baseline information for the measures below	The necessary actions are detailed in the rows below
	Greenspace provision/enhancement and Coastal Access Management Measures	Average household size	Based on the results of the 2011 Census	Via Census 2021 data (the initial analysis of the census will provide this information and could be expected to be published before the end of 2020 based on the analysis of the 2011 census)	Significant change (more than 0.1 per household)	Review the extent to which this changes either the need for open space provision or funding of coastal access management measures.
		Funding received	Reported from Council finance	Kept as a live spreadsheet	Receipts are insufficient to deliver open space provision/enhancements or access management measures in tandem with housing delivery/tourism development	Increase mitigation rate for future schemes
		Funding spent	Reported from Council finance	Kept as a live spreadsheet	Payments to deliver open space provision/enhancements or access management measures are falling below actual housing	Either: Bring other greenspaces on stream Introduce conditions

				delivery/tourism development	regarding phasing of housing or refuse consents until sufficient open space capacity/access management measures are in place.
Greenspace Provision/Enhancement	Green Space Provision/Enhancement	Area of open space provided/improved	Kept as a live spreadsheet	The provision of green space capacity falls below the rate at which residents are increasing in the locality	Either: Bring other greenspaces on stream Introduce conditions regarding phasing of housing or refuse consents until sufficient open space capacity/access management measures are in place.
Coastal Access Management Measures	Implementation of coastal access management measures	Measure delivered	Kept as a live spreadsheet	Decrease in bird population and/or deterioration in habitat due to recreational pressure	Either: Introduce other mitigation measures such as byelaws restricting dog walking Introduce conditions regarding phasing of

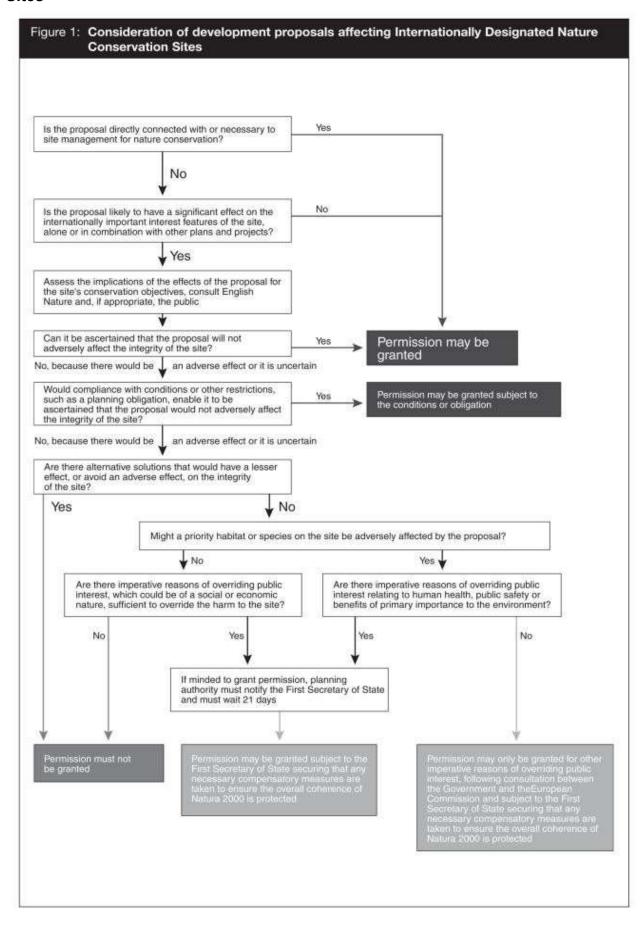
Greenspace	Visitor data	Use of coastal	Automated	Evidence that green	housing or refuse consents until sufficient open space capacity/access management measures are in place.
Provision/Enhancement and Coastal Access management Measures		sites (numbers and location) Use of green species provided/enhanced (numbers and location)	counters at green spaces provided/enhanced and key coastal sites Face to face surveys every 2-3 years.	spaces provided/enhanced are not being used Decrease in bird population and/or deterioration in habitat due to recreational pressure	Bring other green space on stream Introduce other mitigation measures such as byelaws restricting dog walking Introduce conditions regarding phasing of housing or refuse consents until sufficient open space capacity/access management
Greenspace Provision/Enhancement and Coastal Access management Measures	Bird data	WeBs data if available Bird surveys	WeBs data annually Bird surveys every 3 years	Subject to natural change, evidence that qualifying bird populations are either consistently decreasing or are being forced into	measures are in place. Either: Amend or implement further access management measures

				smaller areas over an 8 year trend period	Introduce other mitigation measures such as byelaws restricting dog walking.
Greenspace Provision/Enhand and Coastal Acce management Mea	ess	Condition of habitat within the SAC and SPA	Every 6 years	Subject to natural change, deterioration or change in the habitat	Either: Amend or implement further access management measures
					Introduce other mitigation measures such as byelaws restricting dog walking, targeted enforcement
					activity in relation to dog fouling.

Explanatory Note

- Housing consents/completions and tourism development within 0.4 6km the aim of this row is to provide a clear understanding of where new housing and tourism development is being delivered
- Average household size The mitigation needs to focus on the number of people who are being diverted from the coast and how to best manage local populations (in addition to visitors) when they do access the coast. This information, when combined with row 2, will give a clear understanding of where, and by how much the population within the coastal zone is increasing.
- Funding received This will enable the Council to track whether the payments are coming in as anticipated.
- Funding spent This will enable the Council to track whether funds are being spent in a timely manner.
- Green space provision/enhancement This will enable the Council to track the amount of open space that is being provided/enhanced and the capacity of each site.
- Coastal access management measures This will enable the Council to track whether measures are being implemented that correspond with associated access points to the coast from new housing/tourism development
- Visitor data Information collated will be used to determine how the coast and alternate green spaces are being used. This will help to continue to justify/modify the recreational catchment and mitigation measures as necessary.
- Bird data Information collated will be used to determine health of populations and areas that are being used. Mitigation measures can be modified as necessary in response to trends identified.
- Habitat monitoring Information collated will be used to determine the health of associated SAC/SPA habitat. Mitigation measures can be modified as necessary in response to trends identified.

Appendix A: Process for Considering Development Proposals Affecting European Protected Sites



Appendix B: Description of Coastal European Protected Sites

This section aims to provide an introduction to and overview of the coastal European Protected Sites comprising:

- Durham Coast SAC
- Northumbria Coast SPA and Ramsar
- Teesmouth and Cleveland Coast SPA and Ramsar, including proposed extension (pSPA)

B1: Durham Coast SAC

Durham Coast SAC was designated in April 2005 and covers an area of approximately 394 hectares. Durham Coast SAC is the only example of vegetated sea cliffs on magnesian limestone exposures in the UK. These cliffs extend along the North Sea coast for over 20 km from South Shields southwards to Blackhall Rocks. Their vegetation is unique in the British Isles and consists of a complex mosaic of paramaritime, mesotrophic and calcicolous grasslands, tall-herb fen, seepage flushes and wind-pruned scrub. Within these habitats rare species of contrasting photogeographic distributions often grow together forming unusual and species-rich communities of high scientific interest. The communities present on the sea cliffs are largely maintained by natural processes including exposure to sea spray, erosion and slippage of the soft magnesian limestone bedrock and overlying glacial drifts, as well as localised flushing by calcareous water.

Qualifying Features

Vegetated sea cliffs of the Atlantic and Baltic coasts

Conservation Objectives

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

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
- Structure and function (including typical species) of qualifying natural habitats, and
- Supporting processes on which the qualifying natural habitats rely

Reported Threats / Pressures

The Natura 2000 Standard Data form for the site outlines the following threats and pressures which are ranked as high:

- Human induced changes in hydraulic conditions;
- Invasive non-native species;

- Other human intrusions and disturbances;
- Abiotic (slow) natural processes; and
- Fertilisation

Natural England's Site Improvement Plan for the Durham Coast expands upon the issues identified as currently impacting or threatening the condition of the features as follows:

Threat/pressure	Description
Natural changes to site conditions	Development and arable land use already come very close to the existing cliff top in many places, constraining the ability of the cliff top habitats to roll back as the cliffs naturally erode. It is uncertain whether there is enough space for natural migration of the SAC habitat (Coastal squeeze).
Inappropriate coastal management	Decades of deposition of colliery spoil at the base of the cliffs has formed an artificial raised beach along much of the Durham coastline which prevents waves reaching the cliff foot. This has slowed the erosion of the cliffs and changed their profile, reducing the slumping which exposes fresh substrate and creates niches for the development of different successional stages of vegetation. It has also reduce the influence of salt spray on the cliff vegetation. The constraint of these natural processes has degraded the diversity of the vegetation, its uniqueness and its scientific interest, and upset the ecological balance allowing scrub and ruderal species to encroach into more sensitive habitats. Deposition of colliery spoil ceased in the 1980s and there have been significant efforts to clean up the beaches since. The remaining spoil is being naturally eroded back by the sea to act directly on the cliff base again. New coastal defenses that interfere with erosional process could have a similar negative impact on the vegetated sea cliffs.
Invasive species	Where scrub is encroaching too far into grassland areas, this is detrimental to the interest feature. This is due to a lack of management e.g. Grazing, and/or because the natural coastal processes which keep the scrub in check, such as erosion and exposure to the elements are constrained. Bracken is spreading into the good grassland in some areas, especially at the mouths of the denes, and sycamore and invasive species like Himalayan Balsam are also most problematic where the denes meet the coast, as the watercourses bring in the seed. Cultivated species from caravan parks and gardens have also colonized parts of the coast and need to be kept in check. Unauthorized burning of scrub makes it more difficult to treat.
Fertiliser use	Many of the wet flush/fen areas have become degraded by nutrient enrichment from fertilizer run-off from arable land. Where the hinterland to the SAC has been reverted to low input grassland the issue should resolve over time, though there may be a long lag. In specific areas there is still arable land immediately adjacent to the SAC where run-off is occurring and reversion to grassland would benefit the SAC feature.

Vehicles: illicit	Illegal use of motorbikes, quadbikes and 4X4s occurs in specific areas along the coast, especially around soft cliffs and dunes, causing erosion and damage to vegetation and soils.
Changes to site conditions	There are at least two or three sites on the coast where contaminated/toxic waste has been landfilled into old quarries and as the cliffs erode this is now being exposed. This could lead to pollution of the cliff habitats and changes in vegetation. Also, schemes to address the problem, e.g. by slowing coastal erosion, could be damaging to the SAC in themselves by interfering with natural processes. Rock armoring has already been used in some locations.
Public access	In public access hot spots e.g. close to housing and car parks, dog fouling leads to increased nutrients which can change the species composition of areas of a site, favoring more pernicious species.

Key Environmental Conditions

The key environmental conditions required to support site integrity comprise the following:

- Overall length and/or area of cliff habitat to be maintained taking into account natural variation
- There should be no increase in area constrained by introduced structures or landforms
- The range of physical conditions supporting the habitats, and the range of maritime grasslands and other communities should be maintained
- There should be no increase in species untypical of the communities that define the feature
- Reduced risk of trampling/nutrient input.



B2: Northumbria Coast SPA and Ramsar

Northumbria Coast SPA and Ramsar was designated in February 2000 and covers an area of approximately 1,108 hectares. The site comprises several discrete stretches of the coastline in North East England between Spittal in the north of Northumberland to Crimdon Dene in County Durham. The site consists of rocky shore with associated bolder and cobble beaches. These support a rich algal flora and associated fauna and form an important feeding area for wading birds. The areas of sandy beach within the site support a flora which includes *Ammophila arenaria*; marram and *Honkenya peploides*; sea sandwort.

A diverse range of recreational activities takes place along the coast including walking, camping, sea angling, bird watching, water sports (water-skiing, sailing, windsurfing and canoeing) and general use of amenity beaches. As well as attracting a large number of day trippers, a sizable population of summer visitors stay in caravan sites and other accommodation along the coast. The site also includes parts of three artificial pier structures and a small section of sandy beach

The designated stretches in Durham consist of approximately 55 hectares and broadly pertain to Seaham's coastal area and harbour in the north east of the County and the area of coastline between Blackhall Rocks and Crimdon Dene in the south east of the County. The habitat of the SPA is predominantly classified as Shingle, Sea Cliffs and Islets.

Qualifying Features (Natura 2000 and Ramsar)

- Calidris maritima (Purple sandpiper) wintering
- Arenaria interpres (Ruddy turnstone) wintering
- Sterna albifrons (Little tern) breeding

Conservation Objectives

With regard to the SPA (and Ramsar) and the individual species and/or assemblage of species for which the site has been classified and subject to natural change;

Ensure that the integrity of the site is maintain or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring the;

- Extent and distribution of the habitats of the qualifying features
- Structure and function of the habitats of the qualifying features
- Supporting processes on which the habitats of the qualifying features rely
- · Population of each of the qualifying features; and
- Distribution of the qualifying features within the site.

Reported Threats / Pressures

The Natura 2000 Standard Data form for the site outlines the following threats and pressures which are ranked as high:

- Outdoor sport and leisure activities, recreational activities;
- Change in biotic conditions;
- Pollution to marine waters;
- · Human induced changes to hydraulic conditions; and

• Other human intrusions and disturbances

Natural England's Site Improvement Plan for the Northumberland Coastal area which includes the SPA/Ramsar expands upon the issues identified as currently impacting or threatening the condition of the features as follows:

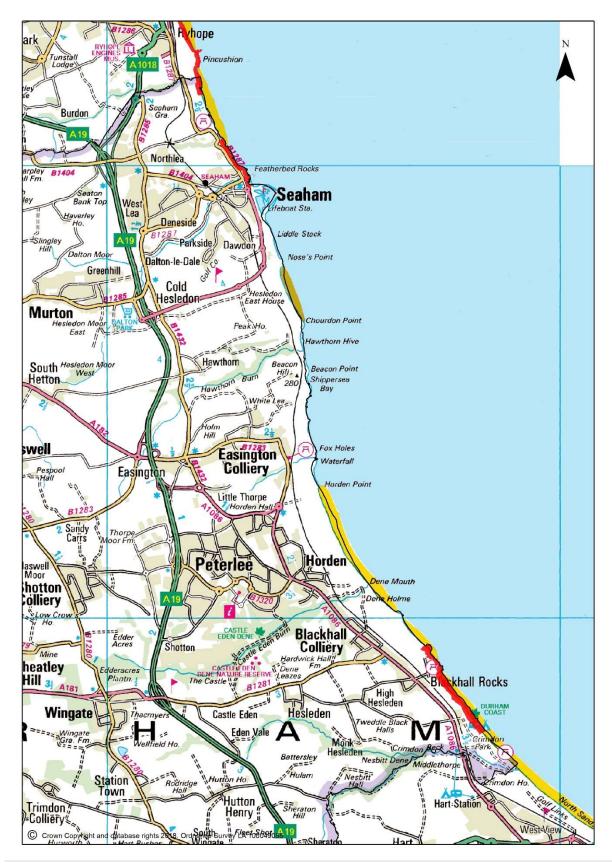
Threat/Pressure	Description
Public access / disturbance	Little terns are a particularly high priority in relation to disturbance affecting condition. Wintering waders and other species are also at risk. Wildlife tourism is identified as a moderate threat in Northumbria Coast SPA, due to loss of
	foraging habitat for birds, and there is also disturbance/displacement of birds by dog walkers, light aircraft and watersports.
Changes in species distributions	Populations of the qualifying bird species in Northumbria Coast SPA have declined or changed but it is unclear if this site specific or driven by wider trends in distribution.
Predation	Predation on terns by raptors and other predators
Coastal squeeze	There is loss of irreplaceable habitat caused by the cumulative effect of small scale impacts resulting from existing and new developments adjacent to Northumbria Coast SPA.
Direct impact from third party	Wildlife crime occurs in Northumberland Coast SPA e.g. Egg theft
Fisheries	Dredges (Inc. hydraulic), benthic trawls and seines and shore-based activities are categorized as 'Red' for these interest features as part of Defra's revised approach to commercial fisheries management in EMS's, and requisite mechanisms are being or will be implemented by Northumberland Inshore Fisheries and Conservation Authority (NIFCA). Commercial fishing activities such as potting categorized as 'amber or green' under Defra's revised approach to commercial fisheries in EMS's require assessment and (where appropriate) management. This assessment will be undertaken by NIFCA. For activities categorized as 'green', these assessments should take account of any in combination effects of amber activities, and/or appropriate plans or projects, in the site.

Key Environmental Conditions

The key environmental conditions required to support site integrity comprise the following:

- Freedom from disturbance
- Extent and availability of habitat (no decrease) breeding, feeding areas, roost sites

- Food availability (marine fish, crustaceans, worms and molluscs; epibenthic invertebrates amongst rolling seaweed; surface and sub-surface invertebrates)
- Open landscape
- Protection from predation and human interference.



B3: Teesmouth and Cleveland Coast SPA, pSPA and Ramsar

Teesmouth and Cleveland Coast SPA and Ramsar was designated in August 1995 and covers an area of approximately 1,247 hectares. Teesmouth and Cleveland Coast comprises intertidal sand and mudflats, rocky shore, saltmarsh, freshwater marsh and sand dunes. The Tees Estuary has been much-modified by such activities as land-claim, construction of breakwaters and training walls, and deep dredging. The remaining intertidal areas within the estuary are composed of mud and sand, with some Enteromorpha beds in sheltered areas. Outside the estuary mouth, and sandflats predominate, but with significant rocky foreshores and reefs at both Redcar and Hartlepool and anthropogenic boulder beds at South Gare. Moderately extensive sand dune systems flank the estuary mouth, while a smaller dune system lies north of Hartlepool. Surviving saltmarsh is very limited in extent. Behind the dunes and sea-defences a number of significant areas of grazing marsh are found. The site it also referred to as a European Marine Site (EMS) as it consists of areas continuously or intermittently covered by tidal waters or any part of the sea in or adjacent to Great Britain up to the limit of territorial waters.

The designated stretch within County Durham's administrative boundary is approximately 1km in length and covers an area of approximately 22 hectares. The area is located between Crimdon Dene and Hartlepool Borough Council's administrative boundary an predominantly consists of coastal sand dunes and sand beaches.

Qualifying Features

Scientific Name	Common Name	Туре	Qualifying species (Natura 2000 and/or Ramsar)
Calidris canutus	Red knot	Wintering	Natura 2000 and Ramsar
Tringa tetanus	Common redshank	concentration	Natura 2000 and Ramsar
Sterna sandvicensis	Sandwich tern	concentration	Natura 2000
Sterna albifrons	Little tern	Re-producing	Natura 2000
N/A	Waterbird assemblage	Wintering	Natura 2000 and Ramsar

Conservation Objectives

With regard to the SPA (and Ramsar) and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed above), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring the;

- Extent and distribution of the habitats of the qualifying features
- Structure and function of the habitats of the qualifying features
- Supporting processes on which the habitats of the qualifying features rely
- Population of each of the qualifying features, and,

• Distribution of the qualifying features within the site.

Reported Threats / Pressures

The Natura 2000 Standard Data form for the site outlines the following threats and pressures which are ranked as high:

- Outdoor sport and leisure activities, recreational activities;
- Pollution to marine waters;
- Human induced changes to hydraulic conditions;
- Industrial or commercial areas; and
- Fishing and harvesting aquatic resources.

Natural England's Site Improvement Plan for Teesmouth and Cleveland Coast expands upon the issues identified as currently impacting or threatening the condition of the features. The issues that are considered relevant to Durham's coastal stretch of the SPA/Ramsar are identified in the following table:

Threat/Pressure	Description
Public access/disturbance	Both breeding Little tern and non-breeding waterbirds are disturbed by recreational beach users. These include walkers, dog walkers and kite surfers.
Direct land take from development	Undesignated land that supports SPA birds ('functional habitat') has been negatively affected by development in the recent past.
Water quality	Improvements to wastewater treatment and catchment management and the closure and relocation of wastewater discharges have significantly reduced the inputs of nutrients and organic matter to the Tees. These improvements in water quality have reduced the biomass of the benthic fauna that the estuary supports, and hence the food supply of a number of bird species.
Fisheries	Commercial fishing activities categorized as 'amber or green' under Defra's revised approach to commercial fisheries in EMSs require assessment and (where appropriate) management. This assessment will be undertaken by Northumberland Inshore Fisheries and Conservation Authority (NEIFCA).
Undergrazing	Some of the undesignated land that is used by non- breeding waterbirds is being encroached by scrub and coarse vegetation. Consequently these areas are becoming unsuitable for foraging or roosting
Predation	The little tern colony has suffered from predation in recent years, including from sparrowhawk, kestrel, hedgehog and fox. A large number of eggs were stolen from the site in 2013.
Coastal squeeze	Coastal squeeze will reduce the area of intertidal and upper shore habitats, which are used for foraging and

	roosting by non-breeding waterbirds and for nesting Little tern.
Changes to site conditions/air pollution.	Sand dunes are accreting along sections of the coast. This may result in some former Little tern breeding sites becoming unsuitable. Nutrient enrichment through nitrogen deposition is likely to encourage vigorous growth of vegetation in embryo.

Key Environmental Conditions

The key environmental conditions required to support site integrity comprise the following:

- Food availability (small fish, crustaceans, worms and molluscs, seed bearing plants, surface and sub-surface invertebrates
- Vegetation structure
- Limited disturbance

Teesmouth and Cleveland Coast pSPA/proposed extension

Natural England is currently consulting on a potential extension of the SPA (the pSPA) which will include additional areas of land. The pSPA would include additional interest features of breeding Common tern (Sterna hirundo) and Avocet (Recurvirostra avosetta). These are both Annex I species which are present in nationally-important populations, though neither currently breeds in County Durham.

The proposed boundary extension would include foraging areas for Little tern (Sternula albifrons) and Common tern; as well as include additional terrestrial areas within the SPA to protect breeding colonies of Common tern and Avocet, and non-breeding waterbirds.

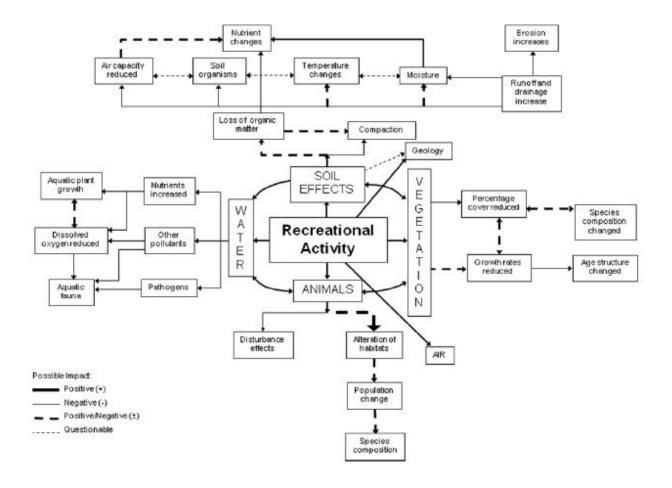
The possible marine extension for Little tern foraging areas has been identified on the basis of shore-based and boat-based surveys of marine waters around the colony at Crimdon Dene. This possible extension reaches 5km in both directions along the coast from the colony; between Hartlepool Headland and Castle Eden Dene mouth, and extends up to 3.5km offshore.

For similar reasons, another extension to protect foraging areas for Common tern has also been identified. These include the main channel of the River Tees below the barrage, estuary waters, and marine areas between Marske-by-the-Sea in the south and Crimdon Dene in the north, extending up to 6km offshore.

Appendix C: Impact of Recreational Pressure

European protected sites are subject to different types of recreational pressure and have differing vulnerabilities. Studies across a range of species have shown that recreational effects can be complex with a range on interrelating impacts as demonstrated by the following diagram.

Figure 7: Interrelationships between recreational impacts (adapted from Wall and Wright, 1977)



This section aims to outline the potential pathways by which increased recreational pressure could adversely affect the coastal European Protected Sites and associated qualifying species.

Durham Coast SAC

Durham Coast SAC supports the only example of vegetated sea cliffs on magnesian limestone exposures in the UK. The species rich vegetation community of the cliffs is reliant upon the combination of sea spray, coastal winds, calcareous flushes and the dynamic nature of the cliffs with slippage of the soft limestone bedrock and overlying glacial drifts.

The formal description of the qualifying habitat type, in accordance with Annex I of the Habitats Directive is 'vegetated sea cliffs of the Atlantic and Baltic coasts.' Whilst the site is designated for a single interest feature, it is important to note that the habitat type is a complex mosaic of grassland, fen, flushes and scrub. It is highly sensitive to impacts that change the conditions of the site, including nutrient enrichment and direct habitat damage.

Increased recreational activity by foot or by vehicle can lead to trampling of qualifying vegetation, erosion and soil compaction. This in turn can lead to the reduction in vegetation cover and the overall health of species in addition to changes to species composition. Walkers with dogs also contribute to pressure on sites through nutrient enrichment via dog fouling.

Durham Coast SAC's vegetated sea cliffs are of very limited extent and in some cases only a few metres in width and are highly vulnerable to the impacts from the passage of walkers, horse riders and cyclists. These plant communities are fragile and already under high environmental stress, from among other factors, drought, thin soils and natural sub-aerial erosion. Though highly susceptible to such wear the habitats location on generally steep slopes or dangerous cliff edges, are by their position relatively safe. However, there are some localities where the sea cliff plant community is adjacent to or even on the inland side of the coast path, such as Blackhills Gill, Horden, Beacon Point and Noses Point, but here there is a surfaced footpath that directs and in most parts, confines walkers to the route. There are however many other desire line, and footpaths, some linking back to the main towns along the coast, especially evident at Crimdon, Blackhall Colliery, and Castle Eden Dene in addition to heavy and sustained walking pressure, especially along the coast path.

Many studies on the effects of trampling, by feet, horses, cycles and vehicles and on the impacts of soil enrichment including dog fouling are cited in the literature. A useful compendium of this varied research is given in the Natural England (formerly English Nature) commissioned reports relating to the implementation of the Countryside and Rights of Way Act (Lowen et al, 2008, Penny Anderson Associates, 2001). For example, the commissioned report into the effects of access on foot identified that; impacts are greater on wet ground or steep slopes; sensitive species disappear on and beside paths with impacts extending up to 50 metres on either side of the path and about 400 passages per year can result in 50% loss of cover and species.¹¹

Findings from a variety of experiments and research, and in various localities also support the view that low productivity turf (eg. Magnesian limestone/calcareous grassland) is more prone to trampling than more productive grassland and that recovery from such damage is slower. Even with quite modest pressure it can result in changes in plant composition, reduction in biodiversity, reduction in soil invertebrates, and in soil compaction. Even where diversity appears to be

¹¹ Penny Anderson Associates (2001) Scientific research into the effects of access on nature conservation: Part 1: access on foot. Natural England Commissioned Report NECR012

maintained, there can be a shift to more resilient and generalised species rather than the characteristic species of calcareous grassland.

In addition to trampling effects, low nutrient sites, typical of many semi-natural habitats including limestone grassland, are especially susceptible to the addition of fertilizer. Sources include atmospheric deposition (mainly nitrogen and ammonia), agricultural run off and dog faeces and urine (phosphorus and nitrogen). Studies show that the eutophication effects of faeces and urine can impact upon overall species composition and diversity¹². For example, at Burnham Beeches National Nature Reserve over one year the total amount of urine was estimated at 30 000 litres and faeces at 60 tonnes¹³.

Northumbria Coast and Teesmouth and Cleveland Coast SPA/Ramsar

In respect of the Coastal SPA sites an increase in recreational activity through both local visitors and tourism by foot or by vehicle is considered likely to increase levels of disturbance to qualifying features and may increase trampling of eggs. 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/death.

Recreational activity will often result in a flight response (either flying, diving, swimming or running) from the animal that is being disturbed. This carries an energetic cost that requires a greater food intake. Concern regarding the effects of disturbance on wintering 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 feeding. ¹⁴ Disturbance of winter birds therefore risks increasing energetic output while reducing energetic input, which can adversely affect the 'condition' and ultimately survival of the birds at a time when food is scarce. 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 birds.

Disturbance can also affect roosting birds over high tide periods when the birds' feeding grounds are submerged, again putting a demand on energy reserves. These impacts can affect winter survival, particularly during periods of cold weather. In addition, displacement of birds from one feeding/roosting site to another can increase the pressure on the resources available

¹² Asken Ltd and Penny Anderson Associated Ltd (2005) <u>Dogs</u>, <u>access</u> <u>and</u> <u>nature</u> <u>conservation</u> Natural England (formerly English
Nature) Reports Number 649

¹³ Barnard, A. (2003) <u>Getting the Facts - Dog Walking and Visitor Number Surveys at Burnham Beeches and their implications</u>

¹⁴ Riddington, R et al. 1996 <u>The impact of disturbance on the behaviour and energy budgets of Brent geese Bird Study 43:269-279</u>

within the remaining sites, as they have to sustain a greater number of birds. Increased nest predation by natural predators can also occur as a result of adults being flushed from the nest and deterred from returning to it by the presence of people and dogs, leading to an overall reduction in breeding success.

A number of studies have also shown that birds are affected more by dogs and people with dogs than by people alone, with birds flushing more readily, more frequently, at greater distances and for longer.¹⁵ This is because fast-moving and loud disturbances such as the running and barking of unleashed dogs is generally thought to be more disturbing.¹⁶

In relation to the qualifying species of the SPA's, in their assessment of the England Coast Path, Natural England acknowledge that Purple Sandpiper and Turnstone could be sensitive to increased access to the rocky shore habitats they use for foraging and roosting and that waders like Turnstone can be very sensitive to disturbance from recreational activity and especially dogs. Natural England also acknowledge that as with overwintering birds generally, the response to disturbance is highly variable between sites, even within species and the same species may demonstrate different responses or exposure to disturbance at different times. ¹⁷

In relation to Little Tern, these tend to nest in colonies on open beaches (either sand or shingle) and there are a range of studies indicating clear impacts of disturbance, with disturbance affecting both the nesting distribution (Ratcliffe et al. 2008) and breeding success (Medeiros et al. 2007, 2012). Disturbance has also been suggested as a reason for population declines of Red Knot (KL Borgmann 2010) and in the presence of people, birds such as the Redshank, (Curlew and Oystercatcher) will significantly delay their arrival times at low water feeding sites with departures from these feeding sites significantly earlier for the Redshank and Oystercatcher when disturbed (Fitzpatrick and Bouchez,

1998) reducing the time available for feeding. Sandwich Tern very easily desert a breeding site and move to a new area if disturbed in any way (Cullen, 1960).

¹⁵ Gill, J.A. et al. <u>The consequences of human disturbance for estuarine birds RSPB Conservation Review 12:67-72.</u>

¹⁶ Burger, J. (1981) <u>The</u> effects <u>of human activity on birds at a coastal bay</u> Biological Conservation 21: 231-241

¹⁷ Natural England (2018) Appraisal of possible environmental impacts of proposals for England Coast Path – The Wash: Sutton Bridge to Gilbraltar Point and Natural England (2017) Access and Sensitive Features Appraisal – Coastal Access Programme: South Bents to Amble. Please note it was not possible to locate a similar report for the North Gare to South Bents section which covers the Durham Coast.

