

**Sunderland City Council Core  
Strategy and Development Plan**  
Report to inform Habitat Regulations  
Assessment

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# 1 Summary

- 1.1 Sunderland City Council is preparing a new Local Plan and this will set out the long-term vision for development in Sunderland over the period up to 2033. The Local Plan, which is currently being prepared, will consist of three parts:
- Part One – Core Strategy & Development Plan (CSDP)
  - Part Two – Allocations and Designations Plan
  - Part Three: International Advanced Manufacturing Park (IAMP) Area Action Plan (AAP) 2017-2037
- 1.2 Sunderland City Council is the 'competent authority', as defined under the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations), and as such it is required to ensure that the Core Strategy complies with the requirements of the Habitats Regulations. This involves undertaking a Habitats Regulations Assessment (HRA), the purpose of which is to assess the possible effects of the Core Strategy on the nature conservation interests of sites designated under the Habitats and Wild Birds Directives.
- 1.3 The purpose of this report is to inform the HRA process, i.e. to identify whether the proposed objectives, proposals and policies set out within the emerging Core Strategy, alone or in combination with other plans and projects, are likely to have an adverse effect on the integrity of any designated sites of European importance, i.e. Special Areas of Conservation, Special Protection Areas and Ramsar sites.
- 1.4 This HRA is specifically to cover the policies contained within the CSDP. A separate HRA Screening Report has been published for the IAMP AAP and a standalone HRA will be prepared for the Site Allocations and Designations Plan.
- 1.5 There are three European sites that are located within the boundary of the Sunderland City Council administrative area. These sites cover sections of the coast that extend into neighbouring Authority areas. The sites are:
- Durham Coast SAC; and
  - Northumbria Coast SPA and Ramsar site.
- 1.6 Consideration has also been given to the effects of the CSDP on Castle Eden Dene SAC, which is located outside the Sunderland City Council administrative area but close enough that impact could potentially occur.
- 1.7 Potential impact pathways that are considered to be relevant for the purposes of this assessment are as follows:
- Recreation: Increased recreational pressure including disturbance from recreational activities.
  - Urban effects: Increased effects of urbanisation including the introduction of invasive species and predation from domestic animals.
  - Coastal squeeze: Exacerbation of coastal squeeze due to increased requirement for maintenance of sea defences.
  - Water quality and resources: Changes in surface and groundwater quality and availability.
  - Changes in air quality.
- 1.8 Consideration of these impact pathways has led to the following policies being given further consideration within the Habitats Regulations Assessment, as it needed to be determined whether adverse effects on the integrity of the European sites could be ruled out following analysis of available information and evidence:

- Policy SP4: North Sunderland
- Policy SS4: North Sunderland Housing Growth Areas
- Policy VC6: Culture, Leisure and Tourism
- Policy H6: Housing in Multiple Occupation
- Policy H7: Backland and Tandem Development

- 1.9 The assessment has concluded that development of Housing Growth Areas HGA7 and HGA8, which are within 6 km of the European sites, will result in an increase in the local population and this has the potential to result in increased visitor pressure, which may in turn result in increased recreational disturbance of birds. Consequently a Stage 1 screening assessment has concluded that, in the absence of mitigation, the development of these sites is likely to have a significant effect on a European site. For this reason the assessment has been carried forward to Stage 2 'appropriate assessment'
- 1.10 It is proposed to mitigate impacts on the European sites by adopting a suite of measures that can be broadly categorised as:
- Provision of Suitable Areas of Natural Greenspace (SANG);
  - Strategic Access Management and Monitoring (SAMM).
- 1.11 In general, the costs of implementation and maintenance of SANGs and SAMM will be split proportionately amongst the developments and financial contributions sought that will cover both elements. The costs of providing SANG will need to include the on-going maintenance cost for the SANG once provided. It is proposed that a commuted sum will be paid to the Council by each developer to cover future SANG maintenance and SAMM provision for a 20 year period, after which the Council will take on maintenance of the SANG in perpetuity. Funding for Strategic Access Management and Monitoring will be obtained by securing Section 106 contributions.
- 1.12 When the proposed mitigation measures described within this report are adopted it is concluded that the development of HGA 7 and HGA 8 will not have any adverse effect on the integrity of the Northumbria Coast SPA/Ramsar sites or Durham Coast SAC. There will be no residual effects on any European sites

## 2 Introduction

### Purpose of Report

- 2.1 The Council is preparing a new Local Plan and this will set out the long-term vision for development in Sunderland over the period up to 2033. The geographic area covered by the Core Strategy is shown on Figure 1 in Section 13.
- 2.2 Sunderland City Council is the 'competent authority', as defined under the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations), and as such it is required to ensure that the Core Strategy complies with the requirements of the Habitats Regulations. This involves undertaking a Habitats Regulations Assessment (HRA), the purpose of which is to assess the possible effects of the Core Strategy on the nature conservation interests of sites designated under the Habitats and Birds Directives. These sites consist of Special Areas of Conservation and Special Protection Areas, and also include Ramsar Sites (collectively referred to as European sites). The HRA process is a key part of the preparation of the Core Strategy as objectives, proposals and policies in the plan can potentially affect European sites.
- 2.3 The purpose of this report is to inform the HRA process, i.e. to identify whether the proposed objectives, proposals and policies set out within the emerging Core Strategy, alone or in combination with other plans and projects, are likely to have an adverse effect on the integrity of any designated sites of European importance, i.e. Special Areas of Conservation, Special Protection Areas and Ramsar sites. The requirement to carry out this assessment is set out within the Habitats Regulations.

### Local Plan Process

- 2.4 Sunderland's Local Plan, which is currently being prepared, will consist of three parts:
- **Part One – Core Strategy & Development Plan (CSDP):** This will set out an overarching strategy for future change and growth in Sunderland and it includes detailed development management policies. It is a strategic plan which covers the period 2015 to 2033. The CSDP will cover the whole of the area within Sunderland's administrative boundary. Once adopted, the CSDP will become part of Sunderland's statutory planning framework, guiding decisions on all development and regeneration activity over the period to 2033. The CSDP will replace some of the saved policies of the Sunderland Unitary Development Plan (UDP) 1998 and UDP Alteration No.2 (2007), which covers the Central Sunderland area. Some saved policies will continue to be used in the determination of planning applications until such time that they are replaced by the Local Plan Part 2: Allocations and Designations Plan.
  - **Part Two – Allocations and Designations Plan:** This will set out site-specific policies for development, protection, and conservation of land in Sunderland in order to deliver the overall strategy set out within the CSDP.
  - **Part Three: International Advanced Manufacturing Park (IAMP) Area Action Plan (AAP) 2017-2037:** This sets out site-specific policies for the delivery of a large advanced manufacturing park on land to the north of the existing Nissan car manufacturing plant. Sunderland City Council worked jointly with South Tyneside Council on the preparation of the AAP, as the cross-boundary site is located within the administrative areas of both authorities. The IAMP AAP was adopted in November 2017. Planning applications within the AAP boundary will be primarily assessed against the policies within the IAMP AAP. However, where there are no specific relevant policies contained within the AAP, policies within the CSDP will apply.
- 2.5 This HRA is specifically to cover the policies contained within the CSDP. A separate HRA Screening Report has been published for the IAMP AAP and a standalone HRA will be prepared for the Site Allocations and Designations Plan.

- 2.6 The Core Strategy will provide the overarching policy framework to guide the future development within the City of Sunderland over the next 18 years (2015-2033). Work on the Core Strategy has been underway for some time. Consultation on issues and options for the City took place in late 2005 and this was used to inform the subsequent Core Strategy Preferred Options draft, which was published for public consultation, the period for which took place between December 2007 and February 2008.
- 2.7 In September 2009 the Council carried out a public consultation on its Alternative Approaches and in August 2013 the Council published its draft Core Strategy and Development Management Policies for consultation.
- 2.8 New developments and new opportunities within the City resulted in a need to review and update the Core Strategy. New evidence on the City's population has also been prepared to support this review, and this evidence has been used to inform a range of growth options that have been published for consultation.

### Reference Documents

- 2.9 This HRA report builds upon previous HRA reports that have been completed by consultants on behalf of Sunderland City Council as part of the Local Plan process. In particular the following reports have been considered:
- URS (2013). City of Sunderland LDF Core Strategy - Draft Revised Options. Habitat Regulations Appraisal: Screening Report. Published July 2013.
  - URS (2015). South Sunderland Growth Area SPD: Appropriate Assessment. Published May 2015.
  - Aecom (2016). Habitats Regulations Screening Assessment to Support Sunderland City Council's Core Strategy Growth Options 2016. Published March 2016.
  - Sunderland City Council (2015). Habitats Regulations Assessment Screening Report. Draft Interim Student Accommodation Policy. Published March 2015.
  - BSG Ecology (2019). Habitats Regulations Assessment report – Sunderland City Council:North Sunderland Sites. Published April 2019
- 2.10 Consideration has also been given to the work undertaken by neighbouring authorities in support of their Local Plan preparation. This includes HRAs that have been undertaken for key documents that have been prepared in support of each Local Plan.
- 2.11 Sunderland City Council has also published an extensive range of documents to support the Local Plan process, and a number of these have been consulted to inform the HRA where relevant to do so. The following documents have been considered during the assessment:
- Core Strategy and Development Plan Draft Consultation Document (2017)
  - Sunderland Growth Options consultation documents (2016)
  - South Sunderland Growth Area draft SPD (2016)
  - Sunderland Employment Land Review. Final Report, 9 March 2016
  - Employment Land Review Post EU Referendum Forecasting Analysis (2017)
  - Sunderland Greenspace Audit and Report (2012)
  - Green infrastructure strategy framework Report (2011)
  - Sunderland City Council Local Flood Risk Management Strategy (2016)
  - South Tyneside Local Development Framework SPD 3: Green Infrastructure Strategy, February 2013
  - Port of Sunderland Concept Plan (2006)

## Report Structure

- 2.12 This report documents the process, findings and recommendations to inform the HRA for the Sunderland Core Strategy and Development Plan. It identifies, analyses and quantifies (where possible) potential negative impacts on the relevant European sites, as well as identifying aspects of the Core Strategy where no impacts are likely. It presents measures to avoid or reduce these effects to the point at which they are no longer significant, either alone or in combination with other plans and projects.
- Chapter One: provides a summary of the outcomes of the Habitats Regulations Assessment.
  - Chapter Two: sets out the purpose of the report and provides an overview of the Local Plan process;
  - Chapter Three: describes the Habitats Regulations Assessment process;
  - Chapter Four: identifies the European sites that are receptors of the likely significant effects of the Core Strategy, together with ecological information about these sites;
  - Chapter Five: sets out the review of the screening stage of HRA and identifies those objectives, proposals and policies that have been taken through to the appropriate assessment;
  - Chapter Six: identifies the underlying trends that have been considered when establishing the baseline that has been used for the assessment;
  - Chapter Seven: sets out the results of the appropriate assessment focussing on those aspects of the Core Strategy that have the potential to impact on European sites;
  - Chapter Eight: describes the measures that are proposed to mitigate any impacts on European sites;
  - Chapter Nine: sets out how the proposed mitigation measures will be delivered, including the use of monitoring to identify any emerging issues.
  - Chapter Ten: sets out conclusions to the report.

### 3 Habitats Regulations Assessment

#### Legislation

- 3.1 The Conservation of Habitats and Species Regulations 2017, referred to as the 'Habitats Regulations,' transpose the requirements of the European Birds and Habitats Directives<sup>1</sup> into UK legislation. The Birds Directive aims to protect rare and vulnerable birds and the habitats that they depend upon and this is achieved in part through the classification of Special Protection Areas (SPAs).
- 3.2 The Habitats Directive aims to protect plants, habitats and animals other than birds, and this is achieved in part through the creation of Special Areas of Conservation (SACs). Article 6(1) and (2) of the Habitats Directive require that Member States establish management measures for these areas, to avoid deterioration of their ecological interest. SPAs and SACs include European Marine Sites, which are designated sites below Mean High Water.
- 3.3 The UK is also a contracting party to the Ramsar Convention<sup>2</sup>, which seeks to protect wetlands of international importance, especially those wetlands utilised as waterfowl habitat. It is UK Government policy (in England this is identified within the National Planning Policy Framework) that all competent authorities should treat Ramsar sites similarly as if they are fully designated European sites.
- 3.4 Collectively, all formally proposed and fully classified or designated SPAs and SACs, and all formally proposed or listed Ramsar sites form a pan-European Union network of protected areas known as Natura 2000. These are referred to in this report as European sites<sup>3</sup>, and this term has been adopted throughout this report.

#### Habitats Regulations Assessment Process

- 3.5 The requirements of the Habitats Regulations with regard to the implications of plans or projects are set out within Part 6 'Assessment of Plans and Projects' and specifically Regulation 61. Chapter 8 of the Habitats Regulations sets out the requirements with regard to land use plans within Regulation 102 (which apply the provisions of Article 6(3) and (4) of the Habitats Directive – see Appendix 1). The step-based approach implicit within these two regulations is referred to as 'Habitats Regulations Assessment', which is the term that has been used throughout this report.
- 3.6 It is incumbent on any public body (referred to as a competent authority within the Habitats Regulations) to carry out a Habitats Regulations Assessment where they are proposing to carry out a project, implement a plan or authorise another party to carry out a plan or project. Competent authorities are required to record the process undertaken, ensuring that there will be no adverse effects on the integrity of a European site as a result of a plan or project.
- 3.7 The Habitats Regulations are applicable to the preparation and adoption of a Local Plan (and its component documents) by the provisions of Regulations 102 to 105. In order to ensure that the Core Strategy is compliant with the requirements of the Habitats Regulations, Sunderland City Council appointed BSG Ecology to carry out analysis and reporting to inform the Habitats Regulations Assessment.

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<sup>1</sup> Council Directive on the conservation of natural habitats and of wild fauna and flora of 21st May 1992 (92/43/EEC) and Council Directive on the conservation of wild birds of 2nd April 1979 (70/409/EEC) consolidated by the Birds Directive 2009 (2009/147/EC).

<sup>2</sup> Convention on wetlands of international importance especially as waterfowl habitat, Ramsar, Iran, 2/2/71 as amended by the Paris protocol of 3/12/92 and the Regina amendments adopted at the extraordinary conference of contracting parties at Regina, Saskatchewan, Canada 28/5 – 3/6/87, most commonly referred to as the 'Ramsar Convention.'

<sup>3</sup> Tyldesley, D. and Chapman, C., (2013) The Habitats Regulations Assessment Handbook, September 2013 2013 edition UK: DTA Publications Limited.

- 3.8 Sunderland City Council is responsible for both the Local Plan and the HRA assessment because it is the plan making body and competent authority. Sunderland City Council will use this report to inform their formal consideration, conclusion and recording of the outcomes of the HRA process.

### **Assessment Stages**

- 3.9 The European Commission has developed guidance in relation to Articles 6(3) and 6(4) of the Habitats Directive<sup>4</sup>, and this recommends a four stage approach to addressing the requirements of these Articles. Taking into account this guidance the following assessment methodology has been adopted to meet the requirements of the Habitats Directive:

#### ***Stage 1 – Screening***

- 3.10 This stage identifies the likely effects of the Core Strategy on any European site, either alone or in combination with other plans or projects. Specifically this stage considers whether these effects are likely to be significant with regard to the integrity of the site. The Core Strategy will require 'appropriate assessment' if it is considered that any aspect of it will have a significant effect on any European site.

- 3.11 Stage 1 can be sub-divided as follows:

- Stage 1A: The identification of those European sites that are relevant to the assessment, which may include sites located within the plan area but may also include sites located in neighbouring authority areas. This process also includes the analysis of information relating to the European sites, in particular the reasons for their designation, factors affecting their integrity and trends affecting them.
- Stage 1B: The identification of underlying trends, i.e. external influences such as climate change, which could affect the integrity of a European site.
- Stage 1C: The analysis of the Core Strategy and its incorporated objectives, proposals and policies to determine whether they are likely to have a significant effect on the integrity of any European site. This part of the process also includes the examination of options and alternatives that avoid or reduce the identified effects.
- Stage 1D: The identification of other plans and projects that, when considered in-combination with the Core Strategy, are likely to result in significant effects.

#### ***Stage 2 – Appropriate Assessment***

- 3.12 If it is considered that a plan or project is likely to have a significant effect on the integrity of a European site, the requirements of Stage 2 are triggered. This stage considers the impacts of the Core Strategy on the integrity of a European site, alone or in combination with other plans or projects. The assessment should consider the implications for the European site in view of the site's conservation objectives. If adverse impacts are identified, this assessment should also consider measures to mitigate the identified impacts.

- 3.13 If necessary, modifications to those proposals or policies are identified to avoid any adverse effects on site integrity. If mitigation is not possible and adverse effects on a European site's integrity remain, the process must proceed to Stage 3.

#### ***Stage 3 – Assessment of alternative solutions***

- 3.14 If adverse impacts are predicted and it is not possible to fully mitigate those impacts, this stage examines alternative ways of achieving the objectives of the plan or project that avoid adverse impacts on the integrity of a Natura 2000 site.

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<sup>4</sup> European Commission (2001). Assessment of plans and projects significantly effecting Natura 2000 site. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. Published November 2001.

**Stage 4 – Assessment where no alternative solutions exist and where adverse impacts remain**

- 3.15 This stage assesses compensatory measures where it is deemed that the project or plan should proceed for Imperative Reasons of Overriding Public Interest (IROPI).
- 3.16 Within these various stages the Habitats Directive promotes the adoption of a hierarchy of avoidance followed by mitigation and ultimately compensation. Consequently the first step is to ensure that the plan and the policies presented within it avoid negative impacts on European sites. If potential negative impacts are identified and avoidance is not feasible, then mitigation measures need to be applied such that no adverse effects on the integrity of European sites remain.
- 3.17 If impacts cannot be fully mitigated then the policy should be rejected or taken forward to the final stage, i.e. assessment of compensatory measures where it is deemed that the project or plan should proceed for Imperative Reasons of Overriding Public Interest (IROPI). Current guidance (Scott Wilson *et al*, 2006<sup>5</sup>) is that stages 3 and 4 should be avoided as there will almost always be an alternative and IROPI is extremely difficult to justify in the majority of cases.
- 3.18 Table 1 summarises the detail and legislative context for the four HRA stages. In subsequent sections further detail is provided about the method that has been adopted when completing Stages 1 and 2.

**Table 1: Stages in the Habitats Regulations Assessment process**

Stage	Description	Legislative Context
Stage 1: Screening	Assessment of whether a plan or project, either alone or in combination with other plans or projects, is likely to have a significant effect on a Natura 2000 site.	Article 6(3) of the Habitats Directive Regulation 61(1) of the Habitats Regulations
	Stage 1A: The identification of European sites that are relevant to the assessment.	
	Stage 1B: The identification of underlying trends.	
	Stage 1C: The analysis of the Core Strategy and its incorporated objectives, proposals and policies to determine whether they are likely to have a significant effect on the integrity of any European site.	
	Stage 1D: The identification of other plans and projects that, when considered in-combination with the Core Strategy, are likely to result in significant effects.	
Stage 2: Appropriate Assessment	Consider the impacts of the Core Strategy on the integrity of a European site, alone or in combination with other plans or projects and with reference to the site's conservation objectives. Consider measures to mitigate the identified impacts. Prepare an Appropriate Assessment Report for consultation with key stakeholders including Natural England.	
Stage 3: Assessment of alternative solutions	Re-assessing alternatives if effective mitigation proves impossible and develop / select a different alternative that does not harm site integrity. If no such alternatives exist the process continues to Stage 4.	
Stage 4: Assessment where no alternative solutions exist and where adverse impacts remain	At this stage, plans which, after mitigation still have an adverse effect on the site(s) integrity should be dropped. Assessing whether a plan can be passed justified by 'imperative reasons of overriding public interest' (IROPI) or permitted on the grounds of human health, public safety or primary beneficial consequences for the environment.	Article 6(4) of the Habitats Directive Regulation 62 of the Habitats Regulations

<sup>5</sup> Scott Wilson, Levett-Therivel Sustainability Consultants, Treweek Environmental Consultants and Land Use Consultants (2006). Appropriate assessment of plans. Published September 2006.

### Guidance on Procedure and Method

- 3.19 This report has referred to the following published guidance and good practice:
- Department for Environment, Food and Rural Affairs, 2012, The Habitats and Wild Birds Directives in England and its seas: Core guidance for developers, regulations & land/marine managers (draft for public consultation);
  - Office of the Deputy Prime Minister Circular 6/2005, (Defra Circular 1/2005), Biodiversity and Geological Conservation: Statutory obligations and their impact within the planning system (although note that this will shortly be replaced with National Planning Practice Guidance to support the NPPF);
  - RSPB, 2007, The Appropriate Assessment of Spatial Plans in England: A guide to why, when and how to do it.
  - Guidance on the Habitats Regulations Assessment of plans published by the Countryside Council for Wales<sup>6</sup> and Scottish Natural Heritage in association with the Scottish Government<sup>7</sup>, (these methodologies are considered to be the most up-to-date and Natural England have not formally released equivalent guidance for English Planning Authorities).
- 3.20 This advice is complemented by guidance that is published and updated on a regular basis by David Tyldesley Associates (DTA<sup>8</sup>).
- 3.21 The guidance does not define the method for undertaking or recording Habitats Regulations Assessment but notes that the adopted method must be appropriate to its purpose under the Habitats Directive and Habitats Regulations, i.e. an 'appropriate assessment'.

### Scope of Assessment

- 3.22 An important part of the HRA process is ensuring that Natural England is consulted to ensure that the scope of the assessment is appropriate for the purposes of discharging the duties set out within the Conservation of Habitats and Species Regulations 2017. HRA is an iterative process that aims to influence the development of a plan or project so as to ensure the ecological integrity of affected European sites is maintained.
- 3.23 This report follows on from assessments that have previously been prepared for the Core Strategy Draft Revised Options (URS, 2013), South Sunderland Growth Strategy SPD (URS, 2015) and the Core Strategy Growth Options (Aecom, 2016).
- 3.24 Natural England responded to the Core Strategy Growth Options HRA on 1<sup>st</sup> July 2016 noting that 'Natural England concurs with the conclusions of this report, namely that there are likely significant effects (LSEs) for Northumbria Coast Special Protection Area (SPA)/Ramsar site/potential SPA in terms of increased recreational pressure and on Durham Coast Special Area of Conservation (SAC) in terms of changes in air quality, which will need to be taken forward to the next stage of the HRA, the Appropriate Assessment. We also advise that LSEs for recreational pressure on Durham Coast SAC are assessed in more detail'.
- 3.25 Natural England also noted that the core catchment for visitors had been defined as being within 6 km from the Sunderland Coast, but that to capture 75% of visitors, this core catchment would have to be expanded to 8 km. The fact that this had not been done was highlighted as a shortcoming.
- 3.26 URS (2015) report that Natural England was consulted on a number of occasions during the preparation of the HRA for the South Sunderland Growth Strategy SPD, and these can be summarised as follows:

<sup>6</sup> Guidance for Plan Making Authorities in Wales: The Appraisal of Plans under the Habitats Directive at <http://www.ccg.gov.uk/landscape-wildlife/managing-land-and-sea/environmental-assessment/habitats-regulations-assessmen.aspx>.

<sup>7</sup> Habitats Regulations Appraisal of Plans: guide for plan making bodies in Scotland at [http://www.snh.gov.uk/policy-and-guidance/guidance-documents/document/?category\\_code=Guidance&topic\\_id=1472](http://www.snh.gov.uk/policy-and-guidance/guidance-documents/document/?category_code=Guidance&topic_id=1472).

<sup>8</sup> Tyldesley, D. and Chapman, C., (2013) The Habitats Regulations Assessment Handbook, 2013 edition UK: DTA Publications Limited. BSG Ecology is an active subscription holder for updates to the handbook and receipt of the quarterly journal.

- 3.27 26<sup>th</sup> October 2012 – Natural England provided a response to the HRA screening of SSGA SPD, and highlighted increased recreational disturbance of breeding birds (little tern) and wintering birds (turnstone and sandpiper), erosion of sea cliffs and habitat loss as areas of concern;
- 3.28 1<sup>st</sup> May 2014 – Natural England provided a further response to the HRA screening report for SSGA SPD, during which they noted that the Durham County Plan HRA found that the significant majority of visitors to the coast came from within 6 km, and advised that the Appropriate Assessment will require a robust assessment of the effectiveness and deliverability of proposed mitigation to avoid adverse effects;
- 3.29 20<sup>th</sup> October 2014 – Natural England responded to a proposed mitigation spreadsheet, noting that the HRA must determine that mitigation will be effective without relying on monitoring;
- 3.30 In 2014, additional consultations were held between SCC and Natural England which confirmed that a 6 km catchment for visitor pressure would be considered appropriate.
- 3.31 1<sup>st</sup> July 2016 – Natural England responded to the HRA for the Core Strategy Growth Options (Aecom, 2016), within which they provided advice on the scope of the assessment of water quality, air quality impacts, trampling and nutrient enrichment. It was also stressed that it is important to apply the precautionary principle at relevant stages of the HRA process.
- 3.32 2<sup>nd</sup> October 2017 – Natural England provided comments on the HRA that had been prepared by BSG Ecology for the Sunderland Core Strategy and Development Plan. This response has helped to refine the scope of the HRA, as it was recommended that the current HRA should only consider development that will be promoted as a direct result of the policies set out within the Core Strategy and Development Plan.
- 3.33 22<sup>nd</sup> July 2018 – Natural England provided further comments on the draft HRA, including the following points. Due to the unique nature of the coast Natural England considers that greenspace provision is not likely to provide an effective mitigation measure on its own. It is therefore likely that all development within the 6 km buffer area will also need to consider contributions towards access management measures. Natural England also requested clarification on which measures will be taken forward, when they will be implemented, how much they will cost and how they will be funded. Further details are also required to demonstrate how the proposed measures will be effective.
- 3.34 These comments have been referred to when defining the scope of this assessment.

## 4 Identification of Relevant European Sites

### Scope of the assessment

- 4.1 Stage 1 (see Table 1) of the HRA process requires the identification of European sites that could potentially be affected by implementation of the Core Strategy, either alone or in combination with other plans and projects. It also involves scoping out sites that do not require any further consideration together with a clear rationale for doing so. This section of the report also includes collation of relevant data on the qualifying features of the selected European sites, including reference to each site's Conservation Objectives.
- 4.2 For the purposes of this report European sites include:
- Special Areas of Conservation (SACs) and candidate Special Areas of Conservation (cSACs) [designated under the EC Habitats Directive];
  - Special Protection Areas (SPAs) and potential Special Protection Areas (pSPAs) [classified under the EC Birds Directive 1979, 79/409/EEC].
  - Ramsar sites (designated under the Convention on Wetlands of International Importance, UNESCO, 1971).
- 4.3 There are three European sites that are located within the boundary of the Sunderland City Council administrative area. These sites cover sections of the coast that extend into neighbouring Authority areas. The sites are Durham Coast SAC; Northumbria Coast SPA and Ramsar site.
- 4.4 The boundaries of the designated sites are shown on Figure 2 in Section 13. The Northumbria Coast SPA and Ramsar site share the same boundary and qualifying interest features (but the numbers of qualifying birds are different). Summary details of the European sites are provided below and their Conservation Objectives are presented in Appendix 2.
- 4.5 It is also possible that implementation of the Sunderland City Council Core Strategy could result in impacts on European sites that fall outside the City boundary. In order to decide which European sites need to be considered within this assessment it is important to identify the mechanisms by which the Core Strategy could potentially impact on any European site.
- 4.6 A previous HRA of the Sunderland City Council Core Strategy Growth Options (Aecom, 2016) identified the following potential impact pathways, which are also considered to be relevant in the context of this assessment:
- Increased recreational pressure – including disturbance from recreational activities.
  - Increased extent of urbanisation - including the introduction of invasive species and predation from domestic animals.
  - Exacerbation of coastal squeeze – due to increased requirement for maintenance of sea defences.
  - Changes in water quality.
  - Changes in air quality.
- 4.7 Taking into account potential impact pathways, a precautionary 15 km zone of influence has been adopted on the basis that none of the identified impact pathways is likely to have an effect that extends beyond this. As a result the following European sites located outside the Sunderland City Council boundary have also been considered: Castle Eden Dene SAC, the nearest part of which is located 7.5 km to the south; Thrislington SAC, the nearest part of which is located 12.0 km to the south; Teesmouth & Cleveland Coast SPA and potential SPA, the nearest part of which is located 13.6 km to the south.

- 4.8 Castle Eden Dene SAC, qualifies under Council Directive (92/43/EEC) by supporting the following habitats listed on Annex I of the Directive: *Taxus baccata* woods of the British Isles. Castle Eden Dene represents the most extensive northerly native occurrence of yew *Taxus baccata* woods in the UK. Extensive yew groves are found in association with ash-elm *Fraxinus-Ulmus* woodland and it is the only site [within the Natura 2000 site network] selected for yew woodland on Magnesian limestone in north-east England.
- 4.9 The following vulnerabilities have been reported for the SAC (source: Standard Natura 2000 Data Form, Natural England, 12/2015):
- Forest and Plantation management & use.
  - Air pollution, air-borne pollutants.
  - Invasive non-native species.
  - Problematic native species
- 4.10 In correspondence dated 1 July 2016 Natural England (Ellen Bekker, Northumbria Area Team, ref: 186285) provided the following advice with regard to air quality: “*The proposals are likely to generate additional nitrogen emissions as a result of increased traffic generation which can be damaging to the natural environment*”. “*The effects on local roads in the vicinity of the proposed development on nearby designated nature conservation sites (including increased traffic, construction of new roads, and upgrading of existing roads), and the impacts on vulnerable sites from air quality effects on the wider road network in the area (a greater distance away from the development) can be assessed using traffic projections and the 200m distance criterion followed by local Air Quality modelling where required. We consider that the designated sites at risk from local impacts are those within 200m of a road with increased traffic, which feature habitats that are vulnerable to nitrogen deposition/acidification.*” This is generic guidance that applies to all European sites.
- 4.11 The draft Supplementary Advice for Castle Eden Dene SAC (Natural England, 2016<sup>9</sup>) states that ‘This habitat type is considered sensitive to changes in air quality and critical values for atmospheric nitrogen and acidity are currently being exceeded at this SAC’. However, the current exceedance is linked to the site’s proximity to urbanised areas and existing sources of atmospheric pollution. Published research (English Nature, 2004; Highways Agency, 2009<sup>10</sup>) indicates that designated sites are only likely to be at risk from local impacts within 200m of a road with increased traffic.
- 4.12 Since the publication of this guidance, recent case law has further defined how air quality assessments should be scoped. In the case of *Wealden District Council v Secretary of State for Communities and Local Government, Lewes District Council and South Downs National Park Authority* [2017] EWHC 351, Natural England had advised that the following threshold could be applied at the screening stage: an expected increase in traffic (Annual Average Daily Traffic (“AADT”) flows) of less than 1,000 cars per day or 200 HGVs per day, or if the Joint Core Strategy would give rise to less than a 1% increase in traffic compared to that predicted at the end of the Core Strategy period, then it would have no likely significant effect on the SAC and no appropriate assessment would be required. In this case the judgement concluded that the traffic movements needed to include an assessment of predicted change in combination with the plans of neighbouring authorities. At the present time traffic movement predictions are not available for the County Durham Plan.

<sup>9</sup> Natural England (2016). European Site Conservation Objectives: Draft Supplementary Advice on Conserving and Restoring Site Features. Castle Eden Dene Special Area of Conservation (SAC). Published 28 September 2016.

<sup>10</sup> English Nature (2004). The ecological effects of diffuse air pollution. English Nature Research Report 580  
Highways Agency (2009). Design Manual for Roads and Bridges. Volume 11, Section 3, Part 1.

- 4.13 Impacts on Castle Eden Dene SAC relating to traffic induced changes in air quality are not considered likely to be significant as there is only one road that crosses the site (the A1086 coast road, which crosses the eastern end of the site) and one that passes close to the site (the A19, which passes alongside the western end of the site). Whilst an increase in the residential population in the Sunderland City Council area may result in an increase in the traffic using the A19 and the A1086, the presence of broadleaf woodland alongside both roads is likely to buffer the wider SAC from the effects of traffic derived aerial pollution.
- 4.14 Demographic data analysis (Edge Analytics, 2016<sup>11</sup>) shows that 7.7% of residents of Sunderland work in County Durham, and therefore may commute in the direction of Castle Eden Dene. The analysis also shows that 12.4% of people who work in Sunderland live in County Durham. This indicates that the current commuting level from the Sunderland City Council administrative area to Castle Eden Dene is low.
- 4.15 A key objective of the Core Strategy and Development Plan is to enhance employment opportunities within the Sunderland City Council administrative area, and to complement this with new housing provision. This in turn will result in a greater proportion of people living and working in Sunderland. Consequently it is unlikely that there will be a significant increase in traffic levels to the south of the administrative area, i.e. past Castle Eden Dene; commuting patterns within the administrative area are expected to be static, i.e. no significant change. This conclusion is supported by the results of traffic modelling data<sup>12</sup>, which show that significant traffic increases are not predicted in the southern part of the area. More detailed analysis of modelling data will be carried out to inform the HRA for the Allocations and Designations Plan.
- 4.16 The earlier HRA (Aecom, 2016) concluded that increased recreational pressure is not likely to be significant if the distance between development and a European site is more than 6 km. Analysis of visitor survey data collected in 2015 reached a similar conclusion (see Appendix 3 for an explanation of how the 6 km threshold has been calculated). On this basis it is concluded that significant recreational impacts are unlikely at Castle Eden Dene SAC as a result of Sunderland's Core Strategy.
- 4.17 Impacts (direct and indirect) are also considered unlikely on the following sites: Thrislington SAC, the nearest part of which is located 12.0 km to the south; Teesmouth & Cleveland SPA and Ramsar, the nearest part of which is located 13.6 km to the south. It has been concluded that these European sites could not be affected by the Core Strategy's provisions, because of the geographical distance between them and the areas affected by the Core Strategy's provisions and the absence of potential links or pathways. Table 2 provides a summary of the screening assessment.

**Table 2: Assessment of likely effects on European sites outside the Sunderland City Council boundary**

Distance	Vulnerabilities	Rational for exclusion
Castle Eden Dene SAC ( <i>Taxus baccata</i> woods of the British Isles)		
7.5 km to the south	Increased recreational pressure	The site is sufficiently distant that significant recreational impacts are unlikely.
	Increased urbanisation	Urbanisation impacts are unlikely due to the distance from the Sunderland City Council area.
	Coastal squeeze	Coastal squeeze impacts in the Sunderland City Council area are not likely to impact on the SAC.

<sup>11</sup> Edge Analytics (2016). Sunderland: Updating the Demographic Evidence. Published October 2016

<sup>12</sup> Sunderland Local Plan: Assessment of Transport Impacts – Addendum 1.

Distance	Vulnerabilities	Rational for exclusion
	Changes in water quality	There is no hydrological link between the Sunderland City Council area and the SAC and so water quality impacts are unlikely.
	Changes in air quality	Natural England has advised that traffic related air quality impacts are likely to be limited to 200m from major roads. There are only two roads that could affect the SAC and when this is considered alongside the separation distance, significant impacts are unlikely. It is noted that there is a dense belt of trees and shrubs alongside the A19 and so a vegetated buffer is already in place (although its effectiveness is currently unknown).
Thrislington SAC (Sub-Atlantic semi-dry calcareous grassland)		
12.0 km to the south	Increased recreational pressure	The site is sufficiently distant that significant recreational impacts are unlikely. Parking is limited is only available to pre-booked groups.
	Increased urbanisation	Urbanisation impacts are unlikely due to the distance from Sunderland City Council area.
	Coastal squeeze	Coastal squeeze is not relevant given the site's location.
	Changes in water quality	There is no hydrological link between the Sunderland City Council area and the SAC and so water quality impacts are unlikely.
	Changes in air quality	Natural England has advised that traffic related air quality impacts are likely to be limited to 200m from major roads. The SAC is 340m to the west of the A1.
<p>Teesmouth &amp; Cleveland Coast SPA and Ramsar and potential SPA and proposed Ramsar site</p> <p>This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following Annex 1 species:</p> <p>During the breeding season; little tern <i>Sterna albifrons</i>; common tern* <i>Sterna hirundo</i>, avocet* <i>Recurvirostra avosetta</i></p> <p>(*additional pSPA features)</p> <p>On passage; sandwich tern <i>Sterna sandvicensis</i></p> <p>This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:</p> <p>On passage; ringed plover <i>Charadrius hiaticula</i>, ruff <i>Philomachus pugnax</i> (*additional pSPA features)</p> <p>Over winter; knot <i>Calidris canutus</i>; redshank <i>Tringa totanus</i></p> <p>The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl</p>		

Distance	Vulnerabilities	Rational for exclusion
13.6 km to the south	Increased recreational pressure	The site is sufficiently distant that significant recreational impacts are unlikely.
	Increased urbanisation	Urbanisation impacts are unlikely due to the distance from Sunderland City Council area.
	Coastal squeeze	Coastal squeeze impacts in the Sunderland City Council area are not likely to impact on the SPA / pSPA.
	Changes in water quality	There is no direct hydrological link between the development that is being brought forward by the Core Strategy and the SPA / pSPA. As any foul drainage or surface water arising from sites will be intercepted and treated prior to discharge, no water quality impacts are likely.
	Changes in air quality	Traffic related air quality impacts are unlikely to be significant on the coastal / intertidal habitats used by the birds that are the reason for designation of the site (ref: <a href="http://www.apis.ac.uk/srcl">http://www.apis.ac.uk/srcl</a> ).

### Northumbria Coast SPA

#### Qualifying features

- 4.18 This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:
- 4.19 During the breeding season;
- Little Tern *Sternula albifrons*, 40 pairs representing at least 1.7% of the breeding population in Great Britain (5 year peak mean 1991/2 - 1995/6).
- 4.20 This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:
- 4.21 Over winter;
- Purple Sandpiper *Calidris maritima*, 763 individuals representing at least 1.5% of the wintering Eastern Atlantic - wintering population (5 year peak mean 1991/2 - 1995/6).
  - Turnstone *Arenaria interpres*, 1,456 individuals representing at least 2.1% of the wintering Western Palearctic - wintering population (5 year peak mean 1991/2 - 1995/6).
- 4.22 Since the Northumbria Coast SPA was classified in 2000, the colony of Arctic terns *Sterna paradisaea* at Newton Links/Long Nanny has undergone a sustained increase, and now meets qualification criteria on the basis of the latest 5-year mean, as the site supports 2.9% of the GB population of this Annex I species. In parallel with the designation of the Northumberland Marine SPA to protect important areas of sea for foraging terns from the Northumberland SPAs, breeding Arctic tern has been added as a new qualifying feature to the Northumbria Coast SPA. Arctic tern is not likely to be affected by implementation of the CSDP as the nesting site is more than 60 km to the north of the plan area.

**Conservation objectives**

- 4.23 The Northumbria Coast SPA / Ramsar site conservation objectives are, subject to natural change, as follows:
- 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;
    - The structure and function of the habitats of the qualifying features;
    - The supporting processes on which the habitats of the qualifying features rely;
    - The populations of each of the qualifying features; and
    - The distribution of the qualifying features within the site.
- 4.24 Natural England has not yet produced Supplementary Advice to support these objectives.

**Site condition**

- 4.25 By reference to the condition of the underlying SSSI management units comprising the SPA (<https://designatedsites.naturalengland.org.uk>, accessed 21 November 2016, based on an assessment carried out by Natural England in 2009) it is apparent that:
- 61.92% of all SSSI units were in favourable condition (the whole SPA / Ramsar covers a large area of which the Sunderland City Council area is only a small part);
  - 38.08% of all SSSI units were in unfavourable recovering condition;
  - 100% of constituent SSSI units within the Sunderland City Council area were in favourable condition;
  - The only reported negative factor concerning birds was observation of recreational disturbance (dog-walking and rock-pooling) in SSSI unit 16 (which is at Seaham, outside of the Sunderland City Council area).
- 4.26 It should be noted that the SSSI condition assessment was carried out by Natural England in July 2009 and so the results are likely to be of limited value in terms of assessing the condition of the SPA due to the age of the data. Natural England commissioned wintering bird surveys covering the winter period 2015/2016, and these involved high tide counts and low tide counts at 10 existing Wetlands Bird Surveys (WeBS) sectors along the Durham Coast between South Shields and Seaham. Natural England has advised that funding was only available for one season's monitoring, which is not enough to allow a robust condition assessment to be completed (Ruth Oatway, Natural England, email dated 17 November 2016).
- 4.27 Although the data from the winter period 2015/2016 are not considered to provide a robust basis for a condition assessment, they do allow a comparison to be made with the baseline and target figures for Durham Coast SSSI (Table 3). Total baseline populations of 26 purple sandpiper and 294 turnstone were recorded: when these are compared with Natural England's minimum target populations (which equate to 50% of the baseline population), turnstone exceeds the target (65% of baseline population) but purple sandpiper misses it (12% of baseline population). These results are broadly in line with the results of other surveys carried out during the winters of 2014/15 and 2015/16 (Arcus Consultancy Services, 2015; BSG Ecology, 2016).

**Table 3: Results of wintering bird surveys 2015/2016 (Ruth Oatway, Natural England)**

Species	Baseline population	Minimum target population	2015/16 population estimate
Purple sandpiper	218	above 50 % of the baseline = 109 birds	26 birds - fail
Turnstone	449	above 50 % of the baseline = 224 birds	294 birds - pass

**Webs data**

- 4.28 The BTO has previously been consulted regarding Wetland Bird Survey (WeBS) data for the section of coast extending from the Tyne Estuary south as far as Seaburn. This revealed that they held an incomplete data set for the most recent 5-year period and that this would not substantially add to other available data.

**Cadwallender bird data**

- 4.29 Survey work has previously been carried out during the period December 2011 to March 2012 (Cadwallender & Cadwallender, 2012) and the period December 2012 to March 2013 (Cadwallender & Cadwallender, 2013) along the coast from Salterfen Rocks south as far as Hartlepool. The survey methodology was largely based on the BTO WeBS survey. A maximum of 22 turnstones was found at Salterfen Rocks in 2011/12. The maximum number of purple sandpiper was only 6 in 2011/12, and these were also recorded at Salterfen. No high tide roosting areas were found near the Sunderland City Council area.

**TNEI bird data**

- 4.30 A survey of foraging and roosting wintering birds was carried out from January to March 2013 and this covered the section of coast from Salterfen Rocks to Byron's Dene (north of Seaham). This survey included diurnal high tide and low tide counts and nocturnal high tide counts. During each visit counts were made approximately hourly for two/three hours either side of high/low tide. A maximum of 13 turnstones at low tide and a peak of 6 at high tide were recorded. The maximum number of purple sandpiper was 9, recorded at high tide. High tide roosting areas were found at Ryhope Dene and Ryhope Nook outflow pipe, supporting turnstone and purple Sandpiper.

**Other bird data**

- 4.31 Data provided by Durham Bird Club (DBC) (see Aecom, 2016) for the period 2006-2009 included peak counts of 7 purple sandpiper and 30 turnstone at Salterfen. High tide roosts were found at Sunderland dock/marina with a peak count of 100 turnstones in 2006 on New South Pier.

**Arcus bird data**

- 4.32 Arcus completed non-breeding season bird surveys between October 2014 and March 2015, the survey area extending the Tyne Estuary south as far as Seaham. This survey included diurnal high tide and low tide counts that were carried out on a monthly basis.
- 4.33 Purple sandpipers were recorded feeding and roosting along the rocky shore north of Whitburn Steel. This species was also recorded feeding along the south-west breakwater at Port of Sunderland. During the same survey turnstone was recorded at the same locations but was also recorded at Parson's Rocks, on Roker Pier, North Pier and New South Pier, and along the shore at Grangetown to the north and south of Salterfen Rocks.
- 4.34 In Table 4 the total counts for turnstone and purple sandpiper recorded within the survey area are presented for each survey month and for high tide and low tide.

**Table 4: Total counts for turnstone and purple sandpiper recorded in 2014 / 2015 (Arcus Consultancy Services, 2015)**

Month	Turnstone		Purple sandpiper	
	Low Tide	High Tide	Low Tide	High Tide
October	367	174	44	12
November	104	160	12	23
December	139	236	14	13
January	204	247	18	31
February	155	275	29	33
March	100	256	12	59

**BSG Ecology**

- 4.35 In 2015 / 2016 BSG Ecology repeated the survey work carried out by Arcus in 2014 / 2015. During these surveys purple sandpiper was recorded along the rocky shore north of Whitburn Steel but was not recorded to the south of Port of Sunderland. The highest peak count of 24 individuals was recorded at Whitburn Steel during the low tide survey in November 2015. Turnstone was recorded at the same locations but was also recorded at Parson's Rocks, on Roker Pier, North Pier and New South Pier, and along the shore at Grangetown to the north and south of Salterfen Rocks. A peak count of 88 turnstones was present at Whitburn during both the low and high tide survey visits completed in December 2015.
- 4.36 In Table 5 the total counts for turnstone and purple sandpiper recorded within the survey area are presented for each survey month and for high tide and low tide.

**Table 5: Total counts for turnstone and purple sandpiper recorded in 2015 / 2016 (BSG Ecology, 2016)**

Month	Turnstone		Purple sandpiper	
	Low Tide	High Tide	Low Tide	High Tide
October	154	202	0	6
November	209	133	34	20
December	250	236	11	19
January	74	191	3	18
February	128	121	4	31
March	137	200	1	2

### Bird Trends

- 4.37 BTO WeBS report online provides annual trend data for both purple sandpiper and turnstone for England for the period 1975/75 to 2014/15<sup>13</sup>. In summary, this shows that purple sandpiper numbers peaked in 1988/89 but since then there has been a decline with numbers now at a level that was previously seen in the late 1970s. Turnstone numbers peaked in 1987/88 but have also declined since then. Current numbers are at their lowest since 1975/76.
- 4.38 The BTO WeBS report online also provides total counts for purple sandpiper and turnstone for the Durham Coast for the period 2010/11 to 2014/15. These counts are shown in Table 6.

**Table 6: Annual counts of purple sandpiper and turnstone for Durham Coast (2010/11 to 2014/15)**

Species	10/11	11/12	12/13	13/14	14/15	5 yr average
Purple sandpiper	51	68	29	65	59	54
Turnstone	121	147	110	105	88	117

- 4.39 The total counts obtained by BSG Ecology are broadly in line with the WeBS data (Table 5).

### Vulnerabilities

- 4.40 The Conservation Objectives and Favourable Condition Tables for the Northumbria Coast SPA provide an indication of the site's vulnerabilities, as does the Standard Natura 2000 Data Form for the site. Further information is available from Natural England's Views About Management (VAM) which covers the component SSSIs.
- 4.41 As previously noted, Natural England has not yet produced Supplementary Advice for the SPA and so, in the absence of this document, reference has been made to Regulation 33(2) advice published by English Nature (English Nature, 2000<sup>14</sup>). The Regulation 33(2) advice states that the important bird populations require a naturally functional intertidal habitat for roosting, breeding and feeding. The most important factors related to this are considered to be:
- Current extent and distribution of suitable feeding and roosting habitat (e.g. rocky shores, sand beaches and artificial high tide roosts);
  - Current extent of suitable breeding habitat (sandy beaches);
  - Sufficient prey availability (e.g. small fish, crustaceans and worms);
  - Minimal levels of disturbance.
- 4.42 The following vulnerabilities have been reported for the SPA / Ramsar sites (source: Standard Natura 2000 Data Form, JNCC, Version 1.1, 05/05/06):
- 4.43 *'Little terns are vulnerable to disturbance by tourists in the summer causing reduced breeding success. The National Trust employs wardens each summer to protect the little tern colony at Beadnell Bay.'*
- 4.44 There are two little tern nesting sites within the Northumbria Coast SPA and these are located at Beadnell and Crimdon, both of which are beyond the 6 km visitor pressure catchment within which recreational impacts are being considered (Crimdon is the closer of the two locations and this is c.16 km from the Sunderland City Council area: Beadnell is more than 60 km to the north). Consequently nesting little terns are not considered further as it is considered highly unlikely that implementation of the Core Strategy will impact on either nesting site.

<sup>13</sup> <http://app.bto.org/webs-reporting/>.

<sup>14</sup> English Nature (2000). Northumbria Coast European marine site: English Nature's advice given under Regulation 33(2) of the Conservation (Natural Habitats &c.) Regulations 1994.

- 4.45 The Regulation 33(2) (Conservation (Natural Habitats, &c.) Regulations 1994) conservation advice identifies noise / visual disturbance and physical loss of habitat as the key vulnerabilities for wintering purple sandpiper and turnstone. Survey work carried out in 2014/15 (Arcus Consultancy Services, 2015) and 2015/16 (BSG Ecology, 2016) has confirmed that recreational disturbance is a key vulnerability, with both surveys reporting disturbance of purple sandpiper and turnstone. Habitat damage, toxic/non-toxic contamination and biological disturbance are also potential vulnerabilities.

#### **Northumbria Coast Ramsar**

##### ***Qualifying features***

- 4.46 The Northumbria Coast qualifies as a Ramsar site under Ramsar criterion 6: species/populations occurring at levels of international importance. The Ramsar site boundary is contiguous with the SPA boundary and both sites are noted for the same qualifying species (although the number of species at the time of designation differs).
- 4.47 Species regularly supported during the breeding season:
- Little tern, *Sternula albifrons albifrons*, W Europe, 43 apparently occupied nests, representing an average of 2.2% of the GB population (Seabird 2000 Census)
- 4.48 Species with peak counts in winter:
- Purple sandpiper, *Calidris maritima maritima*, E Atlantic – wintering 291 individuals, representing an average of 1.6% of the GB population (5 year peak mean 1998/9-2002/3).
  - Ruddy turnstone, *Arenaria interpres interpres*, NE Canada, Greenland/W Europe & NW Africa 978 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3).

##### ***Conservation objectives***

- 4.49 As reported above for Northumbria Coast SPA.

##### ***Site condition***

- 4.50 As reported above for Northumbria Coast SPA.

##### ***Vulnerabilities***

- 4.51 As reported above for Northumbria Coast SPA.

#### **Durham Coast SAC**

##### ***Qualifying features***

- 4.52 The Annex I habitat that is a primary reason for the selection of this site is 'Vegetated sea cliffs of the Atlantic and Baltic Coasts'. The description of this habitat provided on the site citation is as follows:
- 4.53 "The Durham Coast 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 phytogeographic 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".

**Conservation objectives**

- 4.54 The Durham Coast SAC conservation objectives are, subject to natural change, as follows:
- Ensure that the integrity of the site is maintained or restored as appropriate, and
  - Ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:
    - The extent and distribution of qualifying natural habitats;
    - The structure and function (including typical species) of qualifying natural habitats;
    - The supporting processes on which the qualifying natural habitats rely.
- 4.55 Natural England has not yet produced Supplementary Advice to support these objectives.
- 4.56 The site condition assessment for the component units of Durham Coast SSSI provide useful background information about the vegetation that is a key reason for the designation of both the SSSI and the SAC, although it is important to note that the assessment was completed in 2009 and so the results need to be treated with caution as they are 8 years old. The descriptions provided below relate to those units that are located within the Sunderland City Council area and within the 6 km visitor catchment that has been applied to the SAC.

**Site condition**

- 4.57 By reference to the condition of the underlying SSSI management units comprising the SAC (obtained from the Natural England website in January 2015 and indicating that the latest assessment was mostly in 2009 except for two units on the south side of Seaham assessed in 2013) it is apparent that:
- 64% by area of constituent SSSI units (50% by number of constituent SSSI units) within 6 km of the SSGA was in favourable condition at the last assessment;
  - The remainder of the constituent SSSI units were in unfavourable recovering condition.
- 4.58 The various constituent SSSI management units that are present within the Core Strategy area and within 6 km of the boundary of that area are mostly described as 'favourable' (Table 7 – more detail information is provided in Appendix 4) but are primarily of interest for the rocky shore and associated non-breeding birds (including turnstone and purple sandpiper). Units 20 and 23 to the south of Seaham (which falls within the 6 km visitor pressure catchment) is described as 'unfavourable recovering'.

**Table 7: Condition assessment for the constituent SSSI units of the Durham Coast SAC (within the Sunderland City Council area).**

SSSI unit	Section	Description	Condition assessment
6	The Bents to Whitburn Rifle Ranges	Littoral rock (34.6 ha)	Favourable. No negative issues were identified for the coastal bird habitat
10	The Bents to Whitburn Rifle Ranges	Lowland grassland (13.4 ha)	neutral Favourable.
13	Parsons Rocks	Littoral rock (4.5 ha)	Favourable. The only negative factor on the unit was the amount of dog walking occurring on the accessible parts of the unit. The birds are forced to the seaward edge of the rocky shore so the amount of useable habitat during these times is reduced.

SSSI unit	Section	Description	Condition assessment
14	Promenade at Grangetown to Halliwell Banks	Littoral rock (13.5 ha)	Favourable. No negative features or actions were affecting the unit.
15	Halliwell Banks to south of Ryhope Dene	Littoral rock (15.8 ha)	Favourable. No negative features or actions were affecting the unit with the exception of some historic dumping areas seen on the cliff slopes.
20	Nose's Point to Shot Rock	Calcareous grassland (16.4 Ha)	Unfavourable recovering. Mine waste is constraining coastal erosion, therefore exposing less bare ground for pioneer communities.
23	Nose's Point to Shot Rock	Littoral sediment (45.2 Ha)	Unfavourable recovering See unit 20

### **Vulnerabilities**

- 4.59 The following vulnerabilities have been reported for the SAC (source: Standard Natura 2000 Data Form, Natural England, 12/2015):
- Fertilisation;
  - Human intrusions and disturbances;
  - Invasive non-native species;
  - Human induced changes in hydraulic conditions; and
  - Abiotic (slow) natural processes.
- 4.60 A previous assessment (Aecom, 2016) identified the following likely vulnerabilities for the Durham Coast SAC, which expands upon the list provided by Natural England: erosion (natural or human through e.g. recreational activity), pollution (including nutrient input from agriculture and former landfill), interference with natural coastal processes and loss to coastal development.
- 4.61 The SAC vegetation has developed as a result of various factors including soil type, underlying geology, marine influence, drainage etc as well as the eroding nature of the rock faces on which the vegetation is located. As noted in a previous assessment (Aecom, 2016) the various natural processes that are taking place may help to prevent the dominance of more competitive grassland species that might otherwise reduce species diversity. However, the need to control coastal erosion and flooding to prevent damage to existing assets means that there is some disruption of natural processes or there is likely to be in the future.
- 4.62 Within the Sunderland City Council administrative area and the 6 km visitor pressure catchment, a 'hold the line' policy is being adopted for the majority of the coast. From Hendon Seawall to Pincushion the proposal is for 'retreat or realignment' and from Pincushion to Seaham the proposal is for 'no active intervention' (Royal Haskoning, 2007<sup>15</sup>).

<sup>15</sup> Royal Haskoning (2007). Shoreline Management Plan 2: River Tyne to Flamborough Head. Prepared on behalf of North East Coastal Authorities Group. February 2007.

- 4.63 The cliff-top line south of Pincushion is unstable (eroding) and is gradually moving inland. Cliff retreat by natural erosion is predicted to be  $1.0 \text{ m.yr}^{-1}$  at Salterfen and  $0.4 \text{ m.yr}^{-1}$  at Pincushion (Royal Haskoning, 2007). Erosion processes have created a coast that is characterised by eroding cliffs in many areas. Consequently access along the cliff top is typically via the existing well-defined pathway: observations made during the recreational surveys carried out in 2015 / 2016 (BSG Ecology, 2016) indicated that the majority of walkers and cyclists used the available paths or grassland areas set back from the cliff tops (Steven Betts, BSG Ecology, pers. comm.). People and dogs rarely approached the cliff edge, which in many areas has fracture lines and other signs of on-going erosion.
- 4.64 With regard to underlying SSSI units 20 and 23 south of Seaham, the northern parts of which are within the 6 km catchment, the SSSI condition assessment reports that cliff erosion is inhibited by colliery waste on the beach, causing a reduction in expected pioneer plant species which depend on freshly eroded substrate. In other words, the status of the habitat is influenced by historic industrial waste rather than recent development.
- 4.65 Magnesian limestone grassland is present within the area of mown grassland between the cliff and dismantled railway at the north end of SSSI unit 20 (southern edge of Seaham). Whilst this grassland may be vulnerable to the effects of trampling, there is no evidence that this is occurring (URS, 2015). It is considered likely that additional visitors to this area who have travelled from development sites within the SSGA (which is towards the limit of the 6 km catchment), would continue to use the existing path network (part of both the Durham Coast Path and England Coast Path) (Aecom, 2016).
- 4.66 With respect to possible eutrophication from dog faeces, this is also considered unlikely at significant levels given that the nearest public car park is 400m from SSSI unit 20. Consequently dog defecation is likely to occur before reaching the SAC as research indicates that dogs typically defecate within 400m of a start point (Taylor et al., 2005<sup>16</sup>). It is therefore considered that significant effects on SAC vegetation as a result of trampling or dog fouling within the 6 km catchment are unlikely.
- 4.67 The occasional use of off-road motorised vehicles (such as motor bikes) has been reported (Aecom, 2016), and occasional activities of this sort can exacerbate existing natural erosion or create new areas of erosion. Aecom (2016) concluded that motor vehicle disturbance is unlikely to have a significant effect on the SAC and there is no reported evidence that such impacts are occurring.

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<sup>16</sup> Taylor, K., Anderson, P., Taylor, R. P., Longden, K. & Fisher, P. (2005). Dogs, access and nature conservation. Research Report. English Nature, Peterborough.

## 5 Screening for Likely Significant Effects

### The 'Screening' process

- 5.1 The term 'screening' is routinely adopted to describe the initial stages of the Habitats Regulations Assessment. The purpose of screening is to:
- 5.2 Identify all aspects of the Core Strategy that are not likely to have a significant effect on a European site, either alone or in combination with other aspects of the Core Strategy or other plans or projects. These can then be screened out from further assessment.
- 5.3 Identify those aspects of the Core Strategy where it is likely to have a significant effect on a European site, either alone or in combination with other plans or projects. These aspects will require 'appropriate assessment' and mitigation measures may need to be introduced.

### Likely significant effects

- 5.4 Current guidance defines a 'likely' effect as one that cannot be ruled out on the basis of objective information. In the Waddenzee case the European Court of Justice provides further clarity on this point, advising that a project (and a plan) should be subject to appropriate assessment 'if it cannot be excluded, on the basis of objective information, that it will have a significant effect on the site, either individually or in combination with other plans and projects'<sup>17</sup>. Therefore, 'likely' should be interpreted as a significant effect, objectively, cannot be ruled out.
- 5.5 An effect may be significant if it undermines the conservation objectives for the European site. The assessment of whether a potential effect is significant for the site's interest features must consider, amongst other things, the characteristics and specific environmental conditions of the site concerned. The Advocate General's Opinion for the Sweetman case<sup>18</sup> provides further clarification, stating that consideration of the likelihood of a significant effect is simply a case of determining whether the plan or project is capable of having a significant effect.
- 5.6 A second recent HRA judgment (Holohan & Ors. v An Bord Pleanála, 7 November 2018, C - 461/17) has also been considered within this assessment. In summary this judgement provides further clarification about the scope of an assessment, requiring that all habitats and species associated with a European site must be considered (irrespective of whether or not they are qualifying features) if impacts on those habitats and species are liable to affect the conservation objectives of the site.

### Refining the scope (screening out)

- 5.7 It is possible to screen out some types of policies and proposals in the Core Strategy, on the basis that there is no potential mechanism by which an effect can occur or if any effect is not likely to be significant (and in the absence of mitigation). Policies that may be screened out from further assessment can broadly be categorised as follows:
  - Administrative text, general aspirations or Plan vision, goals and objectives.
  - General policy statements and general criteria based policies: These policies set out strategic aspirations with regard to certain issues. Policies of this type are not likely to have any effect on a European site as they only establish general aspirations or objectives.
  - Projects or proposals referred to in, but not proposed by, the Core Strategy: Whilst the Core Strategy may refer to large projects, it may not be feasible or necessary to assess the effects these projects (which are not proposed by the plan). Nevertheless, it may become necessary to consider these projects in combination with the effects of other plans or projects.

<sup>17</sup> See paragraph 45 of European Court of Justice case C-127/02 dated 7th September 2004, 'the Waddenzee ruling'.

<sup>18</sup> Sweetman v. An Bord Pleanála, Case C-258/11, CJEU judgment 11 April 2013.

- Other aspects of a plan that could have no likely significant effect on a site, either alone or in combination with other aspects of the same plan, or with other plans or projects: Policies and proposals can be screened out if they are not likely to have a significant effect on a site, alone or in combination with other aspects of the same plan, or with other plans or projects. Effects may be direct, such as land take, or may be indirect, such as through disturbance or hydrological changes.

5.8 The Core Strategy and its incorporated objectives, proposals and policies, has been analysed to determine whether they are likely to have a significant effect on the integrity of any European site (Stage 1C). The results of this screening are summarised in Table 8 below: a more detailed assessment of each policy is provided in Appendix 5.

**Table 8: Aspects of the Core Strategy that are not likely to have a significant effect on a European site and are proposed to be screened out**

Section in Core Strategy	Rationale for screening in or out
Spatial Vision and Strategic Priorities	The Plan lists fourteen Strategic Priorities covering eleven themes. Each of these Strategic Priorities is a general policy statement that is not considered likely to have a significant effect on a European site.
Spatial Strategy	Policy SP1 establishes the principles of sustainable development and commits to protecting Sunderland’s environmental assets. These principles are expected to safeguard European sites.
Area Strategies	<p>This section of the Plan includes five strategic policies (SP2-SP6) and seven strategic site allocations (SSI-SS7).</p> <p>Policy SP2 promotes office, retail and mixed use development as well as tourism, and includes SS1 (Vaux site), which establishes the principles of mixed residential and non-residential development, but already benefits from planning permission and consequently has previously been assessed.</p> <p>Policies SP3, SS2 and SS3 relate to Washington, which is sufficiently distant that significant effects are not likely on any European site.</p> <p>Policy SP4 relates to North Sunderland and promotes regeneration at Marley Potts and Carley Hill. SS4 includes Housing Growth Areas (HGA) at North Hylton (HGA7) and Fulwell (HGA8). These sites fall within 6 km of the European sites.</p> <p>Policy SP5 relates to South Sunderland and includes the Port of Sunderland (SS5) and South Sunderland Growth Area (SS6). SS5 seeks to maintain and expand the commercial importance of the port and it is expected that this will necessarily be subject to a separate requirement for HRA. Notwithstanding this any development at the port will be required to undertake HRA under policy NE2. The SSGA has previously been subject to a separate HRA.</p> <p>Policies SP6 and SS7 relate to the Coalfield area, which is sufficiently distant that significant effects are not likely on any European site.</p>
Health, Wellbeing and Social infrastructure	This section of the Plan includes strategic policy SP7 that seeks to improve health and wellbeing within the population. It is underpinned by four policies (HS1-HS4) which set out the Council’s aspirations for growth whilst ensuring that the provisions of SP7 are met. Policy HS1 relates to quality of life and amenity, HS2 relates to noise, HS3 relates to contaminated land and HS4 relates to areas with special health and safety requirements. None of these policies is considered likely to have a significant effect on a European site.

Section in Core Strategy	Rationale for screening in or out
Homes	<p>Strategic policy SP8 sets out the council's objectives with regard to housing supply and delivery. This is a general policy statement that is not considered likely to have a significant effect on a European site.</p> <p>This section of the Plan includes seven policies (H1-H7). Policies H1 and H2 establish the principles of housing provision and sets out the Council's general aspirations / objectives.</p> <p>Policy H3 relates to student accommodation and this policy was previously subject to a separate HRA, which concluded that there was no likely significant effect.</p> <p>Policy H4 relates to travelling showpeople, gypsies and travellers. The allocations identified within the policy are all within the Coalfield area, which is sufficiently distant that significant effects are not likely on any European site.</p> <p>Policy H5 seeks to support the reuse of empty housing and restrict the loss of residential housing stock and is not considered likely to have a significant effect on a European site.</p> <p>Policies H6 (Housing in multiple occupation) and H7 (Backland and tandem development) are screened in as there is the potential for impacts to arise in combination with other plans and projects.</p>
Economic Growth	<p>This section of the Plan includes seven policies (EG1-EG6). The policies collectively establish the principles of non-residential development and are considered unlikely to have a significant effect on a European site.</p>
Vitality of Centres	<p>This section of the Plan includes six policies (VC1-VC6) all of which seek to support the vitality and viability of key urban centres. The policies collectively establish a framework for the future development of centres and are considered unlikely to have a significant effect on a European site. However, it is noted that policy VC6 seeks to promote leisure and tourism proposals at Seaburn and Roker seafront, which is close to designated European sites. Policy SP9 sets out the requirements for retail floor space, which is unlikely to have an effect on any European sites.</p>
Built and Historic Environment	<p>This section of the Plan includes nine policies (BH1-BH9) all of which seek to protect and enhance the built and historic environment. The policies cover design, advertising, public realm, historic environment and heritage assessments and are considered unlikely to have a significant effect on a European site.</p>
Natural Environment	<p>This section of the Plan includes twelve policies (NE1-NE12). All of the policies seek to protect the environment and are therefore not likely to have a significant effect on a European site. Policy NE2 Biodiversity and Geodiversity does not include any specific requirement for Habitats Regulations Assessment, but this requirement is noted within the supporting text for the policy. This text acknowledges the possibility that distant development can nevertheless result in indirect impacts on European sites. Natural England has advised that the policy or supporting text needs to refer to the mitigation measures that are proposed in the relevant HRAs.</p>

Section in Core Strategy	Rationale for screening in or out
Waste, water and energy	This section of the Plan includes ten policies (WWE1-WWE10) that establish the principles for energy generation, flood risk and coastal management, surface, ground and bathing water protection, drainage, waste recovery and processing. The policies are considered unlikely to have a significant effect on a European site.
Sustainable transport	Strategic policy 10 seeks to improve connectivity and enhance the city's transport network. It is underpinned by three policies (ST1-ST3) all of which set out the Council's aspirations to improve transport links and connectivity around the City. Phases 1 & 2 of SSTC have now been completed and Phase 3 has planning permission (and therefore any HRA impacts have already been considered as part of that). Only Phases 4 and 5 are outstanding, which are the Wessington Way link from the new bridge to the A19 and the new port access. Impacts on European sites have been considered as part of previous phases. None of the policies are likely to have a significant effect on a European site.
Minerals	Strategic policy 11 sets out the council's approach to mineral extraction. This section of the Plan includes four policies (M1-M4) which set out the Council's aspirations to control minerals development. All of the policies are general policy statements that are not considered likely to have a significant effect on a European site.
Infrastructure and Delivery	This section of the Plan includes two policies (ID1-ID2) that set out the Council's aspirations for infrastructure delivery and establish the role of planning obligations. None of these policies is considered likely to have a significant effect on a European site.

5.9 The policies listed below are therefore given further consideration within the following sections of the Habitats Regulations Assessment, as it needs to be determined whether adverse effects on the integrity of the European sites can be ruled out following analysis of available information and evidence:

- Policy SP4 / SS4: Housing Growth Areas HGA7 and HGA8
- Policy H6: Housing in Multiple Occupation
- Policy H7: Backland and Tandem Development
- Policy VC6: Culture, Leisure and Tourism

5.10 As previously noted, Policy H3 (Student accommodation) has previously been subject to a separate HRA (Sunderland City Council, 2015). This concluded that the policy was not likely to have a significant effect on a European site, either alone or in combination with other plans and projects. The rationale for reaching this conclusion is set out within the HRA as follows:

5.11 *'[the] policy focuses on avoiding an over-supply of student accommodation and directing it towards the city centre and existing campuses, away from other areas of the city. In addition, the policy will most likely result in a shift of where students live, with students moving away from traditional HMOs in areas closer to the coast than the city centre, therefore it may assist in reducing trips to the coastal areas. Further, the university has a predominantly local recruitment focus and the level of dog ownership (which is a driver for trips to the coast) is likely to be low amongst the student population compared to the general population'*. The policy has been re-assessed and the original conclusion is considered to still apply; consequently this policy has been scoped out of the assessment. Furthermore, the policy does not allocate any student accommodation, and so an assessment of potential impacts can be deferred to the project level if any applications are made.

- 5.12 Potential impact pathways have previously been identified (Aecom, 2016) and these are considered to be relevant for the purposes of this assessment:
- Recreation: Increased recreational pressure including disturbance from recreational activities.
  - Urban effects: Increased effects of urbanisation including the introduction of invasive species and predation from domestic animals.
  - Coastal squeeze: Exacerbation of coastal squeeze due to increased requirement for maintenance of sea defences.
  - Water quality and resources: Changes in surface and groundwater quality and availability.
  - Changes in air quality.

- 5.13 It is possible that some of the above policies may result in impacts on a European site via one or more of these pathways. Each pathway is considered briefly below.

#### **Recreation**

- 5.14 It is likely that, in the absence of mitigation, any development within 6 km of the coast that results in an increase in the population, will have a significant effect on a European site. Work undertaken by Sunderland City Council and neighbouring authorities indicates that there is already a high level of recreational pressure on parts of the coast and this could increase if the residential population increases.

#### **Urban effects**

- 5.15 The development proposed within the Core Strategy may result in increased urbanisation effects in close proximity European sites. In particular, effects such as lighting, noise, litter, spread of invasive species and vandalism could increase with increased development in close proximity to a European site. The Core Strategy will only bring forward sites that are sufficiently distant that urban effects are very unlikely.

#### **Coastal squeeze**

- 5.16 Increased development close to the coast could result in a requirement to change the coastal defence strategy, thereby resulting in interference with the natural processes that are responsible for the development of the internationally important coastal vegetation within the European sites. The Core Strategy will bring forward sites that are inland from the coast (and separated from the coast by existing development). The existing coastal defence strategy is based on the extensive development that is already present and so it is very unlikely that the Core Strategy will influence coastal protection.

#### **Water quality**

- 5.17 The proposed new housing development has the potential to impact on surface and groundwater quality, which may in turn have an effect on European sites. Impacts on water quality are very unlikely as the development sites that will be brought forward by the Core Strategy are located in areas where foul and surface water drainage and treatment infrastructure is already in place.

#### **Air quality**

- 5.18 It is possible that increased traffic levels arising from future population growth could result in changes in air quality. Aerial pollutants can impact on sensitive vegetation, potentially resulting in the loss of some plant species. In the absence of mitigation it is concluded that the Core Strategy could have a significant effect on European sites as a result of changes in air quality.

**Summary**

- 5.19 As there are uncertainties at the initial screening stage regarding the likelihood of effects to occur, these elements of the Plan therefore require more detailed consideration and analysis. The next stage of the Habitats Regulations Assessment is a more detailed analysis of the potential issues, having regard for any information available or reasonably obtainable (the appropriate assessment). To inform the 'appropriate assessment' it is firstly necessary to identify the underlying trends that are affecting the environment within the Plan area.

## 6 Identifying Underlying Trends

6.1 When assessing the effects of a plan on the integrity of a European site, it is important to establish a robust baseline against which any change can be measured. It is possible that certain underlying trends may have an effect on a European site beyond those that might arise as result of the objectives, proposals and policies of the Core Strategy. The following trends have been identified as being relevant to the Habitats Regulations Assessment process:

- Air quality
- Water quality and hydrology
- Tourism and recreation
- Climate change
- Non-native invasive species

6.2 The changes in the baseline that have arisen or might reasonably be expected to arise as a result of each of these factors is considered in more detail in the following sections.

### Air Quality

6.3 The UK Government reports that between 1970 and 2014 there has been a long term decrease in the emissions of the following air pollutants: ammonia, nitrogen oxides, particulate matter (PM10, PM2.5) and sulphur dioxide<sup>19</sup>. These pollutants are considered in Table 9 below.

**Table 9: Significant aerial pollutants in the UK**

Pollutant	Source and trends	Impact mechanism	Other considerations
Sulphur Dioxide SO <sub>2</sub>	Processes that burn large quantities of fossil fuels, e.g. power stations.  Emissions of sulphur dioxide have fallen by 95.1 per cent since 1970 to 0.31 million tonnes in 2014	Wet and dry deposition of SO <sub>2</sub> causes acidification of soils and fresh waters. Can affect plants that are intolerant of more acid conditions.	Impact significance depends on deposition levels and the buffering capacity of the receiving environment. The basic soils of the Core Strategy area are likely to have a higher buffering capacity.
Nitrogen Oxides NOx (nitrate (NO <sub>2</sub> ), nitrogen oxides (NO <sub>3</sub> ) and nitric acid (HNO <sub>3</sub> ))	Mainly produced by combustion, e.g. power stations, vehicle exhausts  Emissions of nitrogen oxides have fallen by 69 per cent since 1970, to 0.95 million tonnes in 2014	Deposition of NOx causes acidification of soils and fresh waters. Can affect plants that are intolerant of more acid conditions.	Can also lead to the eutrophication of soils and waters, which can result in the competitive exclusion of sensitive species as more vigorous ones take advantage of the increased nutrient levels

<sup>19</sup> Defra National Statistics Release: Emissions of air pollutants in the UK, 1970 to 2014 ([https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/486085/Emissions\\_of\\_air\\_pollutants\\_statistical\\_release\\_2015\\_-\\_Final\\_\\_2\\_.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/486085/Emissions_of_air_pollutants_statistical_release_2015_-_Final__2_.pdf)).

Pollutant	Source and trends	Impact mechanism	Other considerations
Ammonia (NH <sub>3</sub> )	Decomposition of animal wastes, and adverse effects are caused by eutrophication  Emissions of ammonia have fallen by 13.4 per cent since 1980, to 281 thousand tonnes in 2014	Intensive livestock rearing is thought to contribute to the problem	Agri-environment schemes may lead to a reduction of outputs
Particulate matter	Combustion processes including motor vehicles  Emissions of PM <sub>10</sub> have fallen by 72.6 per cent since 1970, to 148.4 thousand tonnes in 2014.  Emissions of PM <sub>2.5</sub> have fallen by 76 per cent since 1970, to 105.1 thousand tonnes in 2014	Particulate matter is linked to acidification effects and toxic effects of ozone. Can affect plants that are intolerant of more acid conditions.	Road vehicles are likely to be the main contributing source within the Sunderland City Council area.
Low Level Ozone O <sub>3</sub>	A secondary pollutant generated by photochemical reactions from NO <sub>x</sub> and volatile organic compounds	Direct toxic effects	Concentrations of O <sub>3</sub> exceeding 40 ppb are toxic to humans and wildlife, altering the species composition of semi-natural habitats

- 6.4 It is possible that vehicle use in Sunderland may increase in line with underlying trends in car ownership, increasing levels of economic activity and increasing levels of tourism, although population growth is weak, which may result in an overall neutral effect. The Highways Agency Design Manual for Roads and Bridges (Highways Agency, 2009) includes an equation describing the characteristic decrease in pollutant concentrations with increasing distance from roads. Based on this and other research, it is considered that NO<sub>x</sub> emissions generated within 200m of a European site which has interest features which are vulnerable to nitrogen deposition need to be considered in Habitats Regulations Assessments.
- 6.5 The Air Pollution Information System (APIS<sup>20</sup>) provides a searchable database and information on pollutants and their impacts on habitats and species. Data available for the Durham Coast SAC (Table 10) indicate that the site's qualifying interest (Vegetated sea cliffs of the Atlantic and Baltic Coasts) is potentially vulnerable to nitrogen deposition, nitrogen oxide (NO<sub>x</sub>) and ammonia (NH<sub>3</sub>). Critical loads are provided for NO<sub>x</sub> (critical annual mean 30 µg/m<sup>3</sup>) and SO<sub>2</sub> (critical level annual mean 10-20 µg/m<sup>3</sup>).
- 6.6 The APIS database also includes concentration and deposition levels for the SAC, and the data show that the current average level of each of the pollutants is below the critical level for the habitat.

<sup>20</sup> <http://www.apis.ac.uk/srcl>.

**Table 10: APIS data for Durham Coast SAC (concentration and deposition levels)**

	Nitrogen deposition	Acid deposition		Ammonia concentration	Nitrogen oxide concentration	Sulphur dioxide
		Nitrogen keq H+	Sulphur ha/yr			
	kgN/ha/yr	Nitrogen keq H+	Sulphur ha/yr	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Maximum	18.62	1.33	0.23	1.45	25.63	6.06
Average	14.63	1.05	0.20	1.01	10.60	4.25
Minimum	11.90	0.85	0.18	0.65	14.01	2.45

6.7 The APIS database also includes information on the susceptibility of the Northumbria Coast SPA and its interest features, i.e. little tern, turnstone and purple sandpiper (Table 11). For the purposes of this assessment little tern has been scoped out due to the locations of the nesting sites at Beadnell and Crimdon, which are more than 60 km and 16 km away respectively.

6.8 APIS states that for nitrogen, acidity, ammonia, NO<sub>x</sub> and SO<sub>2</sub> there are no expected negative impacts on turnstone and the broad habitat that they use, i.e. littoral rock. It also notes that there may be a potential positive impact on the species from some pollutants by enhancing the species' food supply. No impacts on purple sandpiper's broad habitat are predicted.

**Table 11: APIS data for Northumbria Coast SPA – turnstone and purple sandpiper (concentration and deposition levels)**

	Nitrogen deposition	Acid deposition		Ammonia concentration	Nitrogen oxide concentration	Sulphur dioxide
		Nitrogen keq H+	Sulphur ha/yr			
	kgN/ha/yr	Nitrogen keq H+	Sulphur ha/yr	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Maximum	15.96	1.14	0.44	1.33	39.45	4.77
Average	11.60	0.83	0.27	0.69	6.1	1.86
Minimum	8.82	0.63	0.16	0.37	10.84	0.40

### Water Quality

6.9 Whilst high water quality is an important factor in terms of maintaining the integrity of some European sites, the conservation objectives for the Durham Coast SAC and the Northumbria Coast SPA and Ramsar sites do not highlight water quality as being of importance. The habitats of the SAC have developed on an underlying geology that is typically free-draining and there is no evidence to indicate that hydrological links are significant in terms of maintaining the vegetation within the SAC. Nevertheless, fertilizer application in close proximity to the SAC could impact on vegetation directly by affecting species that are unable to tolerate high nutrient levels, or indirectly by encouraging the growth of more vigorous species.

6.10 The Northumbria Coast SPA and Ramsar sites are noted for wintering birds that utilise intertidal habitats, which are considered to be less susceptible to the quality of freshwater discharges due to the dilution and mixing associated with discharges to the marine environment.

- 6.11 Notwithstanding this Natural England has provided the following advice regarding sewage discharges (Ellen Bekker, Natural England, 1 July 2016): *'We advise that the discharge of untreated sewage via Whitburn Steel pumping station and the discharge of untreated surface water are also considered as part of the screening assessment for LSEs on European sites.'* It is understood that Northumbrian Water is planning to implement a £8M scheme to upgrade the sewer network in parts of South Tyneside and Sunderland and this will result in fewer occasions when waste water is discharged into the sea at Whitburn Steel.
- 6.12 Improvements in treatment of sewage arising from coastal settlements in order to meet Urban Waste Water Treatment Directive obligations will help to ensure that increasing numbers of residents and visitors do not contribute to the eutrophication of intertidal and subtidal habitats.

### **Hydrology**

- 6.13 As with water quality, water supply is an important factor in terms of maintaining the integrity of some European sites, however the conservation objectives for the Durham Coast SAC and the Northumbria Coast SPA and Ramsar sites do not highlight water quality as being of importance in terms of maintaining the integrity of any of the sites. The habitats of the SAC are not reported to be dependent on hydrological links to maintain their interest. The SPA and Ramsar sites are strongly influenced by the marine environment.

### **Tourism and Recreation**

- 6.14 The coast is an important visitor attraction including the section that is within the Core Strategy area. Some sections tend to be favoured more than others, hotspots including the promenade and beaches at Roker, Seaburn and Grangetown (Arcus Consultancy Services, 2015; BSG Ecology, 2016). Furthermore, there are initiatives to promote coastal regeneration, such as at Seaburn and Roker (Policy HWS3). Whilst the coast attracts people on vacation, there are also shorter duration visits, typically by local residents, who wish to participate in recreation at the coast.
- 6.15 Disturbance can arise from coastal recreation, and this has the potential to have an adverse impact on the SPA birds, i.e. nesting and feeding little tern, feeding and roosting migratory and wintering waders. There is also the potential for impacts on fragile coastal plant communities. Dogs, especially those that are off the lead, have been shown to increase the effect of disturbance of birds (Arcus Consultancy Services, 2015; BSG Ecology, 2016). The risk of disturbance occurring is greatest in the winter when the SPA / Ramsar birds are present.

### **Climate Change**

- 6.16 It is now widely accepted that the climate is changing as a result of man's influence, but the nature and magnitude of the resultant changes are difficult to predict. Nevertheless, there is increasing evidence that climate change in the UK will result in increasingly warm dry summers and mild, stormy winters along with rising sea levels. These changes may, in turn, result in impacts on European sites.
- 6.17 Climate change has the potential to result in a wide range of effects including coastal erosion, fluvial and coastal flooding, and changes in species distribution.

### **Coastal Erosion**

- 6.18 Parts of the Sunderland coast are prone to erosion and it is likely that there will be increased pressure to slow or stop the erosive processes to protect human land uses on the landward side. This is likely to affect some coastal European sites due to the loss of sensitive vegetation and intertidal habitat used by birds.
- 6.19 The River Tyne to Flamborough Head Shoreline Management Plan 2 (Royal Haskoning, 2007) indicates that up to 2025 a 'hold the line' policy is to be adopted between South Bents and Hendon Seawall. From Hendon Seawall to Pincushion the proposal is for 'retreat or realignment' and from Pincushion to Seaham the proposal is for 'no active intervention' over the same timeframe.

- 6.20 Concerns have previously been expressed that the former landfill site at Halliwell Banks is at risk of being breached by coastal erosion. Soils contaminated with coal tar and gas works waste were removed from the landfill site in October 2006; however, an area along the eastern edge of the landfill runs close to the cliff edge and is considered to pose a pollution risk. Groundwater and coastal erosion is currently being monitored on site.

### ***Flooding***

- 6.21 In general, rivers and wetlands are expected to be increasingly affected by low flows in summer and floods in winter. There are few watercourses that discharge into the sea (and hence may impact on the European sites) along the Sunderland City Council coast: the River Wear flows through the City itself before discharging into the sea at Roker; Ryhope Dene flows into the sea at the southern edge of the Sunderland City Council area. Consequently climate change effects on rivers and wetlands within the Sunderland City Council area are not considered to be significant.
- 6.22 The River Wear is considered to present both fluvial and tidal flood risk in North Sunderland, however as the Flood Zones are constrained mainly to the channel banks, the flood risks are low and there are relatively few properties at risk<sup>21</sup>.
- 6.23 The risk of coastal flooding is low with both Flood Zones 3 and 2 mainly following the Mean High Water Spring Level due to high ground and cliff frontage. The coastline is protected by coastal defences for the majority of its coast. Whilst assets are generally in good condition overtopping often occurs, particularly when spring tides coincide with strong onshore wind and wave conditions, this leads to flooding of Marine Walk, Roker, the promenade at South Bents and Dykeland Road, Seaburn. There is a risk of increased overtopping during climate change events.

### ***Species distribution***

- 6.24 There may be changes in the distribution of certain species in response to climatic changes, which may, for example, result in species relocating to areas that have more suitable conditions. This may not directly impact on any of the species that are the cited interest of any European site in the Plan area; however, there could be indirect impacts, for example as a result of changes in prey availability.
- 6.25 Climate related changes could also result in increasing rates of colonisation by new species, including non-native species, pests and diseases. This in turn may impact on species within European sites, for example due to species competition, altered food sources and availability.
- 6.26 Predicting species responses to climate change is likely to be challenging, and consequently habitat manipulation to mitigate these changes is also likely to be challenging, not least due to uncertainty about its' effectiveness. Restoring existing habitats to good condition may help to mitigate the effects of climate change, and increasing ecological connectivity habitat networks may help species populations adapt to climate change. It is possible, however, that any benefits may only be effective in the short-term.

### ***Invasive Species***

- 6.27 Many non-native species have now become established in the UK, following their intentional or accidental introduction. Some non-native plants have adapted very well to local conditions and have become highly invasive as a result, potentially displacing native vegetation and sometimes forming dense monocultures. Some animals have also become highly invasive, displacing native species, for example as a result of direct competition or diseases that they carry. There are currently no known issues relating to non-native species that are affecting the Durham Coast SAC and the Northumbria Coast SPA and Ramsar sites.

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<sup>21</sup> Sunderland City Council (2016). Local Flood Risk Management Strategy. March 2016.

## 7 Appropriate Assessment

- 7.1 In the 'screening' stage of the assessment the objectives, proposals and policies of the Core Strategy have been examined to identify those that are likely to have a significant effect on a European site. Where it is concluded that an objective, proposal or policy is likely to have a significant effect, it is necessary to progress to the next stage (Stage 2), which is the completion of an 'appropriate assessment'.
- 7.2 The appropriate assessment involves a re-evaluation of each objective, proposal or policy that has been carried through, against each European site's conservation objectives. Using the evidence available the likely effects have been quantified or refined further to establish whether there is a likely significant effect and, if so, to identify appropriate measures to mitigate the identified effects.
- 7.3 The following potential impact pathways have previously been identified (Aecom, 2016):
- Increased recreational pressure – including disturbance from recreational activities.
  - Increased extent of urbanisation - including the introduction of invasive species and predation from domestic animals.
  - Exacerbation of coastal squeeze – due to increased requirement for maintenance of sea defences.
  - Changes in water quality.
  - Changes in air quality.
- 7.4 Each of these potential pathways is considered in the following sections:

### **Recreation – disturbance**

#### ***Data Analysis***

- 7.5 A visitor survey commissioned by Sunderland City Council and South Tyneside Council was completed between November 2014 and April 2015. This was complemented by a second visitor survey that took place during the period January to March 2016. The results of these surveys provide useful information about visitor behaviour during the winter period.
- 7.6 The seasonal scope of the visitor surveys is not considered to constrain the assessment of impacts of recreational activities upon the wintering bird features of the Northumbria Coast SPA / Ramsar. The reason for this is that the qualifying species, i.e. turnstone and purple sandpiper, are not present in significant numbers outside of the winter months. Whilst the visitor survey data may underestimate the impact of recreational pressure upon the cliff vegetation of the Durham Coast SAC, this is also not considered to be a significant constraint due to the limited accessibility of the qualifying habitat features of the coastal SAC (the vegetation is associated with the eroding cliffs).
- 7.7 The visitor survey covered the whole South Shields and Sunderland coast extending from the Tyne Estuary south as far as Seaham Harbour. Whilst the Sunderland City Council administrative area only covers part of the survey area, it is appropriate to consider the full set of survey results (as well as the Sunderland-specific data) as it is possible that residents within the Sunderland City Council area will travel outside it when participating in recreational activities (analysis of visitor survey data indicates that a significant proportion of visitors to the coast travel less than 6 km to get there – see paragraph 4.9 et seq).
- 7.8 The results of the visitor survey show that different locations are visited by different numbers of people. There are also differences in the numbers of people who visit sections of coast that form part of an SAC, SPA or Ramsar site compared to sections of coast that are not of European importance (Bluegrass, 2015 & 2016).

- 7.9 The non-breeding bird surveys carried out by Arcus Consultancy Services Ltd (2015) and BSG Ecology (2016) identified that qualifying wintering bird species (purple sandpiper and turnstone) were also located outside of the designated areas and consequently these areas are considered likely to be supporting habitat (or functionally linked land) to the SPA / Ramsar. Both species typically favoured littoral rocks and were rarely found using sandy habitats.
- 7.10 The results of the visitor survey provide a snapshot of visitor behaviour and preferences at the time of the interview. The survey has revealed that people visit the coast with varying frequency and therefore it is important that this is taken into account when analysing the data.
- 7.11 Durham County Council (Durham County Council, 2014<sup>22</sup>) has previously undertaken a visitor survey of the Durham Heritage Coast and, following consultation with Natural England, the number of visits from each postcode location (grouped into distance bands) were annualised based on the reported frequency of visits over the winter and summer months. Natural England had recommended that a buffer should be adopted around a European site within which 75% of visitors originated<sup>23</sup>. This is based on an approach to data analysis developed by the Solent Mitigation and Disturbance Project<sup>24</sup>.
- 7.12 The survey data for the South Shields and Sunderland coast have also been annualised based on the reported frequency of visits over the winter and summer months (see Appendix 3). The total annualised visits (118,770) were used to derive the 75% significance figure (89,078). Postcode data were then used to estimate the distance travelled by visitors and using this information it was calculated that 75% of visitors travelled less than 6 km.
- 7.13 Of the 674 interviews that were conducted 318 respondents (47.2%) live within 1 km of the coast (based on postcode). Of these 247 respondents indicated that they visit the coast 2-3 times a week during the winter and 249 indicated that they visit the coast with the same regularity during the summer. This equates to about 37% of respondents are high risk in terms of the recreational pressure that they exert of the coast.
- 7.14 If the catchment is increased to 2 km from the coast a total of 375 respondents (55.6%) live within this area. Of these 283 visit the coast at least 2-3 times a week during the winter and 288 visit the coast with the same regularity during the summer (equating to about 42% of respondents).
- 7.15 The non-breeding bird and disturbance surveys carried out in 2014/15 (Arcus Consultancy Services, 2015) identified a total of 2527 disturbance events along the South Shields and Sunderland Coast. Of these 2084 (82.5%) did not affect birds, i.e. they were potential disturbance events based on the activity and the location. Birds were affected in 443 disturbance events and of these 81 involved no avoidance action by the birds – 362 did involve avoidance action. Both turnstone and purple sandpiper were observed to be disturbed by people and dogs using the coast.
- 7.16 The most frequently recorded form of disturbance, both actual and potential, involved dog walkers with dog(s) off the lead (1,138 out of 2,527 events – 45%). Walkers without dogs were the next most frequent form of disturbance (647 out of 2,527 events – 26%).
- 7.17 The non-breeding bird and disturbance surveys carried out in 2015/16 (BSG Ecology, 2016) identified a total of 4574 disturbance events along the South Shields and Sunderland Coast. Of these 4425 (96.7%) did not affect birds, i.e. they were potential disturbance events based on the activity and the location. Birds were affected in 149 disturbance events.

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<sup>22</sup> Durham County Council (2014). The County Durham Plan: Addendum to the Habitat Regulations Assessment of the County Durham Plan Pre-Submission, March 2014.

<sup>23</sup> Durham County Council (2014). The County Durham Plan: Addendum to the Habitat Regulations Assessment of the County Durham Plan Pre-Submission. Published March 2014.

<sup>24</sup> R,Clarke; H, Fearnley; D, Liley; R, Stillman; A, West (2012) The Solent Mitigation and Disturbance Project Footprint Ecology & Bournemouth University.

- 7.18 Once again the most frequently recorded form of disturbance, both actual and potential, involved dog walkers with dogs off the lead. Of the actual disturbance events that occurred 46.3% were attributed to dogs off the lead (48.0% of potential disturbance events were attributed to dogs off the lead): 20.1% were attributed to walkers without dogs (30.3% of potential disturbance events were attributed to walkers without dogs).
- 7.19 During these surveys both turnstone and purple sandpiper were observed to be disturbed by people, including those with dogs, using the coast.

### **Conclusion**

- 7.20 The results of bird surveys complemented by historical data indicate that turnstone and purple sandpiper both use the section of the coast within the Sunderland City Council administrative area and the 6 km visitor pressure catchment. The coast is an important recreational area and consequently is visited by large numbers of people undertaking a range of recreational activity. This inevitably results in the occasional disturbance of birds, including turnstone and purple sandpiper. The little tern nesting sites are sufficiently distant that additional visitor impacts are unlikely: the Crimdon nest site is c.16 km from the Sunderland City Council area and the Beadnell nest site is more than 60 km to the north.
- 7.21 Analysis of visitor survey data indicates that 75% of all visitors travel from locations within 6 km of the nearest European site. This approach is in line with Durham County Council (who had previously adopted a 6 km visitor pressure catchment that was based on the results of a visitor survey).
- 7.22 Application of a 6 km visitor pressure catchment to the European sites captures all potential housing sites within the Sunderland North, Central and South areas. Consequently all of these sites are considered to have the potential to result in recreational impacts on European sites. All sites from the Coalfield and Washington areas have been scoped out on the basis that they are considered to be sufficiently distant that significant effects on the European sites are unlikely: they are all located outside the 6 km visitor pressure catchment and they are located to the west of the A19, which may help to deter people from visiting the coast.

### **Recreation – damage to vegetation**

#### **Analysis**

- 7.23 Durham Coast SAC is noted for its 'Vegetated sea cliffs of the Atlantic and Baltic Coasts', which comprise a diverse range of plant species a proportion of which are vulnerable to damage through trampling / vehicle disturbance. Table 7 identifies those Durham Coast SSSI units (that are components of the Durham Coast SAC) that are present in the Sunderland City Council administrative area and the 6 km visitor pressure catchment, the most recent condition assessment (completed in 2009) indicating that the units are mostly in 'favourable' condition.
- 7.24 The vegetated sea cliffs of the Atlantic and Baltic coasts for which the SAC is designated are generally not considered to be vulnerable to trampling related impacts due to the steep nature of the cliff habitats. Access is typically clearly defined by well-used paths and warning signs advise visitors to stay away from the cliff edge. During surveys carried out in 2015 and 2016 (BSG Ecology, 2016) it was noted that many sections of the cliff habitat showed signs of recent slumping and destabilisation (slumping cracks and settlement). It was also noted that people and dogs typically used the well-defined paths or the grassland areas set back from the cliffs, with very few people and dogs walking along the cliff edges (Steven Betts, BSG Ecology, pers. comm.).
- 7.25 The SSSI condition assessment identifies units 20 and 23 (located to the south of Seaham) as 'unfavourable recovering' and this is reported to be due to mining waste inhibiting the natural erosive processes that are key to the development and maintenance of the cliff vegetation. It is unlikely that recreational impacts from visitors travelling from the Sunderland City Council administrative area, will be contributing significantly to this situation due to the presence of a well-defined network of paths. Furthermore these SSSI units are 4.5 km from the Sunderland City Council administrative area.

**Conclusion**

- 7.26 The assessment has concluded that many parts of the Durham Coast SAC are inaccessible to walkers due to the presence of steep cliffs and a clearly defined network of paths. A coastal path runs along the top of the cliffs in many area and warning signs encourage visitors to keep back from the edge. Whilst there are some areas where there is the potential for walkers to have a significant effect on the sensitive vegetation, these are distant from the Sunderland City Council administrative area (but nevertheless are located within the 6 km buffer), e.g. Seaham and Whitburn. Whilst visitor pressure could potentially result in the disturbance or loss of some plant species, as well as localised erosion of the soils and vegetation, the likelihood of this occurring is reduced by the distance that visitors would need to travel.
- 7.27 The visitor survey has demonstrated that people who live within 6 km of the coast may choose to walk there at some point. Consequently any development located within the 6 km visitor pressure catchment has the potential to exacerbate any existing trampling impacts. Consequently all potential housing sites within the Sunderland North, Central and South areas have the potential to result in impacts to the European site.

**Recreation – nutrients****Analysis**

- 7.28 SSSI units 10, 14, 15, 20 and 23 are all noted as having some vegetation interest associated with the cliff features; however, unit 10 is the only area where the vegetation is noted as being of reasonable botanical diversity. Influences such as encroaching arable land is noted as affecting units 14 and 15 and, as previously noted, units 20 and 23 are currently affected by the legacy of previous mining activity.
- 7.29 The most recent condition assessment for the component SSSI units of the SAC does not make any reference to issues related to nutrient enrichment as a result of dog fouling. Access to the coast for dog walkers is via a number of footpaths that link into the main coastal path, and via a limited number of car parks. Consequently dog walking activity is restricted to discrete areas that are away from the main cliff habitat.
- 7.30 Studies indicate that dogs generally defecate within 400m of a starting point<sup>25</sup>. Along the coast it is unlikely that dog fouling will result in significant nutrient enrichment of sensitive habitats due to various factors including the availability of parking, clearly defined paths, the presence of amenity grassland areas, the presence of signage to keep people away from the sea cliffs. As these factors are unlikely to change in the foreseeable future it is concluded that there is unlikely to be significant nutrient enrichment from dog fouling.

**Conclusion**

- 7.31 The most recent SSSI condition assessment provides no evidence that dog fouling is contributing to nutrient enrichment to such an extent that vegetation composition is changing as a result. Many sections are characterised by cliffs that are inaccessible to dogs. Whilst some grassland areas may be susceptible to faecal enrichment, they are generally sufficiently distant from access points that such impacts are unlikely.

**Urban effects****Analysis**

- 7.32 The effects of urbanisation can potentially be wide-ranging but in the context of the Sunderland City Council Core Strategy the following impact mechanisms have been evaluated: fly tipping and cat predation.

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<sup>25</sup> Taylor, K., Anderson, P., Liley, D. & Underhill-Day, J. C. (2006). Promoting Positive Access Management to Sites of Nature Conservation Value: A Guide to Good Practice. English Nature / Countryside Agency.

### Increased fly-tipping

- 7.33 Whilst the unauthorised tipping of any waste is undesirable, the main concern with regards to impacts on the European sites is the tipping of garden waste. This has the potential to introduce invasive non-native species into the wild, particularly those that are perceived to be causing a nuisance within the garden environment.
- 7.34 It is reasonable to assume that fly-tipping is most likely to take place in areas that are not overlooked but are readily accessible. It is therefore concluded that the steeply vegetated cliffs of the Durham Coast SAC are unlikely to be targeted by fly-tippers due to their limited accessibility. Furthermore the coastal environment is likely to be unfavourable to many species due to the exposure and the influence of sea water. It follows that the risk of non-native plant species being introduced and becoming established is negligible.

### Cat predation

- 7.35 A survey undertaken in 1997 indicated that nine million British cats brought home 92 million prey items over a five-month period<sup>26</sup>. One study has shown that domestic cats will roam up to 400m<sup>27</sup>. In a second study the distance travelled by individual cats from focal sites did not significantly differ between males (mean  $\pm$  SE = 232.00  $\pm$  21.05 m; median = 191 m) and females (mean  $\pm$  SE = 232.50  $\pm$  12.47 m; median = 228 m), with maximum distances of 1.5 km for males and 1.1 km for females<sup>28</sup>.
- 7.36 The effects of cat predation have previously been subject to extensive research with regard to the Thames Basin Heaths SPA. This resulted in the publication of guidance<sup>29</sup>, which included the requirement to adopt a 400m buffer around an SPA boundary to protect the European site from the direct effects of urbanisation, including bird predation by domestic cats.
- 7.37 The Northumbria Coast SPA interest features that are at most risk from cat predation are turnstone and purple sandpiper. Turnstone and purple sandpiper both favour littoral rock and other intertidal habitats, which is considered to be unfavourable to cats. This is supported by the results of the surveys undertaken in 2014/15 (Arcus Consultancy Services, 2015) and 2015/16 (BSG Ecology, 2016) neither of which reported any disturbance event that was attributable to a domestic cat.
- 7.38 The Northumbria Coast SPA is also noted for breeding little tern; however, the nearest little tern nesting colony is located at Crimdon, c.16 km to the south of Sunderland City Council area. This is sufficiently distant that predation impacts are considered to be highly unlikely.

### Conclusion

- 7.39 It is unlikely that significant effects on any European sites are likely to occur as a result of flytipping and the introduction of non-native species. This conclusion is reached by virtue of the fact that the majority of the coast is difficult to access and the conditions are not likely to favour the establishment of many species. There are no records of non-native species becoming established along the coast.
- 7.40 Cat predation is not likely to have a significant effect on the Northumbria Coast SPA due to the limited range of most domestic cats and the habitat preferences of turnstone and purple sandpiper. This is supported by the results of surveys undertaken in between 2014 and 2016 which did not identify any disturbance event that was attributable to a domestic cat.

<sup>26</sup> The Mammal Society (1997). Domestic Cat Predation on Wildlife, by M. Woods, R.A. McDonald and S. Harris.

<sup>27</sup> Turner, D.C. & Meister, O. (1988). Hunting behaviour of the domestic cat. In *The Domestic Cat: the Biology of its Behaviour* (ed. Turner, D.C. & Bateson, P.). Cambridge University Press.

<sup>28</sup> Wierzbowska, I.A., Olkova, J., Hędrzak, M. & Crooks, K.R. (2012). Free-ranging domestic cats reduce the effective protected area of a Polish national park, *Mammalian Biology*, Volume 77, Issue 3, May 2012, Pages 204–210.

<sup>29</sup> Thames Basin Heaths Joint Strategic Partnership Board (2009). Thames Basin Heaths Special Protection Area Delivery Framework. Published on behalf of the Thames Basin Heaths Joint Strategic Partnership Board by the South East England Regional Assembly, March 2009.

- 7.41 It is concluded that flytipping and cat predation are unlikely to have a significant effect on any European site and for this reason urban effects have been scoped out the assessment.

### **Coastal squeeze**

#### **Analysis**

- 7.42 The Shoreline Management Plan (Royal Haskoning, 2007) reports that *'there is increasing pressure on coastal defences, with the potential threat of the low water mark moving landward and causing steepening of beaches, increased pressure on defences and loss of amenity. The plan recommends the need to build greater width into the defence systems to take account of this; either, in the case of South Tyneside and areas of Sunderland, by allowing or looking for opportunity to create width for retreat of defences or, in the case of north Sunderland, by attempting to manage the beaches to greater effect. Where feasible, the plan has recommended no further construction of defences, allowing the cliffs to erode naturally, but this requires full involvement with the planning authorities in controlling land use. Only really to the south of Sunderland is a significant change made to policy, where there is both coastal squeeze against the cliffs but also squeeze of the open cliff top land against established development'*.
- 7.43 Coastal protection objectives are set out within the Shoreline Management Plan and these reflect the need to protect existing urban infrastructure. A 'hold the line' policy is to be adopted between South Bents and Hendon Seawall, the potential result of this being that the erosion-colonisation pattern of vegetation development along the shore is interrupted. From Hendon Seawall to Pincushion the proposal is for 'retreat or realignment' and from Pincushion to Seaham the proposal is for 'no active intervention' over the same timeframe. These policies provide greater scope for the maintenance of the SAC vegetation, although this is difficult to predict. These policies will be implemented irrespective of the proposed objectives, proposals and policies within the Core Strategy.

#### **Conclusion**

- 7.44 Cliff retreat by natural erosion is predicted to be 1.0 m yr<sup>-1</sup> at Salterfen and 0.4 m yr<sup>-1</sup> at Pincushion (Royal Haskoning, 2007). It is noted that existing housing and associated infrastructure already defines the extent of the urban area, and hence the location at which action is likely to be required to prevent the loss or damage of these assets. Consequently any future development as a result of the Core Strategy is not considered likely to affect coastal defence policy in the long term. Salterfen is covered by a 'hold the line' policy and so any development in this area is also unlikely to influence coastal defence policy.

### **Air quality**

#### **Analysis**

- 7.45 The A183 coast road lies within 200 m of parts the Durham Coast SAC boundary, and therefore with an increase in housing provision there is the potential for an increase in traffic movements along the road such that changes in air quality may occur. This has the potential to result in increases in atmospheric nitrogen deposition.
- 7.46 The majority of the anticipated residential development sites are located within established urban areas away from the coast. It is expected that trips between work and home will utilise the existing inland road network, thereby reducing pressure on the A183 coast road.

7.47 As previously noted in Section 4.14, demographic data analysis (Edge Analytics, 2016<sup>30</sup>) shows that a small proportion of residents of Sunderland work in County Durham, and a small proportion of people who work in Sunderland live in County Durham. Consequently it is expected that traffic movement in the vicinity of the Durham Coast SAC will not experience a significant increase in traffic levels. Traffic modelling data<sup>31</sup> show that significant traffic increases are not predicted in the southern part of the area. More detailed analysis of modelling data will be carried out to inform the HRA for the Allocations and Designations Plan.

### Conclusion

7.48 The littoral rock and intertidal habitats (sandflats and mudflats) associated with the Northumbria Coast SPA and Ramsar are not considered to be susceptible to the effects of air pollution. The Air Pollution Information System (APIS) website<sup>32</sup> indicates that the designated feature of the Durham Coast SAC ('vegetated sea cliffs') is susceptible to the effects of nutrient nitrogen but not to acidity.

7.49 The APIS database does not list a critical load for nitrogen deposition for the Durham Coast SAC, but the annual nitrogen deposition rates are 10.08 – 16.94 kg N/ha/yr. The effects of nitrogen enrichment arising from air borne pollutants needs to be considered against naturally occurring sources, such as cliff nesting birds. Furthermore, the botanical interest of the Durham Coast SAC develops as a result of natural erosive processes, which means that vegetation can be ephemeral. Nevertheless, nutrient enrichment impacts are still possible.

### Summary of potential effects

7.50 Table 12 summarises the potential impacts and effects that may arise through the implementation of the Core Strategy and Development Plan.

**Table 12: Outcome of data analysis of potential impact pathways on European sites**

Qualifying features	Potential Source	Potential Impact	Impact Pathway Screening	Potential for Likely Significant Effects
Durham Coast SAC  Vegetated sea cliffs of the Atlantic and Baltic Coasts	Damage or disturbance of sensitive vegetation	Localised damage of vegetation by trampling etc and ground compaction	Access is limited to the cliffs that support SAC habitat. Off-road vehicle use is limited and some signage has been provided to advise the public.	No
	Nutrient enrichment from dog faeces	Dog fouling may result in localised nutrient enrichment and this may favour more competitive species	Negligible contribution to nutrient enrichment and no evidence of current enrichment. Fouling is likely to be restricted to area around parking sites.	No

<sup>30</sup> Edge Analytics (2016). Sunderland: Updating the Demographic Evidence. Published October 2016.

<sup>31</sup> Sunderland Local Plan: Assessment of Transport Impacts – Addendum 1.

<sup>32</sup> <http://www.apis.ac.uk/>.

Qualifying features	Potential Source	Potential Impact	Impact Pathway Screening	Potential for Likely Significant Effects
	Fly tipping	Increased risk of non-native species being spread into the wild	Negligible risk due to poor accessibility of the site and environmental conditions	No
	Coastal squeeze	'Hold the line' policy may result in habitat loss where natural landward erosion is limited.	The proposed policies and housing sites will not affect the SMP policy and so no additional impact is likely. Current shoreline management policy does not conflict with core strategy development.	No
	Water quality	Adverse effects on water quality due to increased pollutant loadings.	No impact pathway identified. The SAC habitat is not vulnerable to changes in water quality.	No
	Air quality	Nitrogen deposition from increased traffic from residential areas may result in changes to vegetation assemblages	Potential for increased nitrogen deposition to affect species composition and abundance.	No
Northumbria Coast SPA / Ramsar Little tern / Arctic tern	disturbance	No impact mechanism identified due to distance	No impact mechanism identified due to distance	No
	predation	No impact mechanism identified due to distance	No impact mechanism identified due to distance	No
Northumbria Coast SPA / Ramsar Turnstone	disturbance	Disturbance to wintering birds resulting in impacts on winter survival rates and hence the numbers of turnstone using coastal wintering habitats.	Residents within 6 km of the site may result in recreational disturbance impacts on birds, particularly those residents who have dogs.	Yes

Qualifying features	Potential Source	Potential Impact	Impact Pathway Screening	Potential for Likely Significant Effects
	predation	No impact mechanism identified due to bird distribution	No impact pathway identified. Wintering birds not vulnerable to cat predation.	No
Northumbria Coast SPA / Ramsar  Purple sandpiper	disturbance	Disturbance to wintering birds resulting in impacts on winter survival rates and hence the numbers of purple sandpiper using coastal wintering habitats.	Residents within 6 km of the site may result in recreational disturbance impacts on birds, particularly those residents who have dogs.	Yes
	predation	No impact mechanism identified due to bird distribution	No impact pathway identified. Wintering birds not vulnerable to cat predation.	No

### Policy Review

- 7.51 A review of the policies presented in the Publication Core Strategy and Development Plan has identified a number of policies where further assessment is needed to determine whether adverse effects on site integrity can be ruled out following further consideration of available information and evidence. The assessment of these policies is presented in Table 13. In all cases additional text is proposed to address any identified issue.
- 7.52 In its present form Policy NE2: Biodiversity and Geodiversity does not address the requirement for HRA to be completed for certain development proposals; however, the policy does make reference to the legal tests that will need to be considered prior to a planning permission being granted for a proposal that would adversely affect a European site. Furthermore, the policy is supported by the following text within the main body of the CSDP:
- 7.53 *'Any proposal that is likely to have a significant effect on a European site, either alone or in combination with other plans or projects, will need to undertake a Habitats Regulations Assessment. If necessary, developer contributions or conditions will be secured to implement measures to ensure avoidance or mitigation of adverse effects. Proposals for development or land use that would adversely affect a European Site, either individually or in combination with other plans or projects, will only be permitted where the developer can demonstrate that there are imperative reasons of overriding public interest, including those of a social or economic nature, and there is no alternative solution.'*

**Table 13: Sunderland Core Strategy Policy review**

Policy	Issue	Resolution
Policy SP4 / SS4: Housing Growth Areas HGA7 and HGA8	The policy identifies 2 Housing Growth Areas that are within the 6 km visitor impact catchment: HGA7 and HGA8.	Policy NE2 and its supporting text will ensure that impacts on European sites are fully considered. Both of the HGA sites within the visitor impact catchment will need to be assessed to determine potential impacts on the European sites and appropriate mitigation will be provided.
Policy VC6: Culture, Leisure and Tourism	This policy includes leisure and tourism proposals at Seaburn and Roker seafront, which may attract more visitors and result in increased recreational impacts on European sites.	Policy NE2 and its supporting text will ensure that impacts on European sites are fully considered. Mitigation and compensation that will be put in place as part of the Seaburn development may also benefit wider leisure and tourism proposals in the area.
Policy H6: Housing in Multiple Occupation	Multiple occupation of properties has the potential to result in local population increases and increased traffic volume due to more cars per residence. Significant effects on European sites cannot be ruled out if HMO development is in close proximity.	Policy NE2 and its supporting text will ensure that impacts on European sites are fully considered.
Policy H7: Backland and Tandem Development	Whilst new development within the curtilage of an existing property (within 6 km of the coast) may only result in small-scale localised increases in the population, there is the potential for cumulative effects over the life of the plan. Significant effects on European sites cannot be ruled out.	Policy NE2 and its supporting text will ensure that impacts on European sites are fully considered.
Policy NE2: Biodiversity and Geodiversity	This policy seeks to protect biodiversity including European sites. The policy does not specifically consider the requirement for HRA.	The supporting text for this policy includes reference to the need for certain development to undertake HRA. This recognises the fact that impacts can potentially be wide-ranging.
Policy SP5 / SS5 Port of Sunderland	The reinvigoration and future development of the Port of Sunderland has the potential to impact on birds using the adjacent coast. Whilst the Port is outside the SPA / Ramsar it is considered to have a supporting role as both purple sandpiper and turnstone have been recorded here.	The Port of Sunderland's growth proposals are currently subject to a separate HRA. Notwithstanding this, Policy NE2 and its supporting text will ensure that impacts on European sites are fully considered. Under Policy NE2 any development at the port will be required to undertake an HRA.

### **Predicted effects of Housing Growth Areas**

7.54 Sites that have been identified in the SHLAA have not been allocated in the Core Strategy. As the SHLAA sites will be considered for allocation in the Allocations and Designations Plan (ADP), which will be subject to a separate HRA, they have been excluded from this assessment.

### ***Previous Assessments***

7.55 Most of the proposed housing sites will be set out within the Allocations and Designation Plan, which has yet to be prepared; however, the Core Strategy does allocate the 4 SSGA sites under Policies SP5 and SS6 and the Housing Growth Areas HGA7 and HGA8 in Sunderland North under Policies SP4 and SS4 (these are located within the 6 km visitor pressure catchment).

7.56 The South Sunderland Growth Area sites have been subject to a separate HRA. In addition, a separate HRA is being finalised to support the North Sunderland Sites that are being brought forward by the council. These sites include Housing Growth Area HGA8 (SHLAA site 675).

7.57 The two Housing Growth Areas within the 6 km visitor pressure catchment will contribute the following number of dwellings to the overall provision: HGA7 – 110 dwellings; HGA8 – 80 dwellings. This gives a total number of dwellings of 190. Summary details of the Housing Growth Areas are as follows:

- HGA7 Land north and west of Ferryboat Lane, North Hylton (5.9 km from the coast)
- HGA8 Land at Newcastle Road, Fulwell (1.5 km from the coast)

### ***Predicted increase in visitor pressure***

7.58 The proposed Housing Growth Areas would provide an estimated 190 dwellings within the 6 km visitor pressure catchment.

7.59 The current population of Sunderland is 277,150<sup>33</sup>. The demographic modelling work undertaken by Edge Analytics indicates a population growth of 16,516<sup>34</sup> during the life of the Core Strategy, and so the predicted future population of Sunderland is 293,666. The current housing stock is estimated to be 127,393<sup>35</sup> and the number of dwellings that are proposed is 12,337<sup>36</sup>. Consequently the predicted future housing stock is 139,730.

7.60 Modelling by Edge Analytics predicts a 2.9% vacancy rate, which would mean that the future population of 293,666 will be accommodated in 135,678 dwellings. This equates to an average household size of 2.16 within the Sunderland City Council administrative area.

7.61 The HRA completed for the South Sunderland Growth Area (SSGA) included a simple estimate of predicted recreational disturbance arising from the proposed development. This involved comparing the predicted future population with the existing population and relating this to current levels of recreational activity. This approach has also been adopted in this assessment for illustrative purposes to estimate the minimum requirements to mitigate the impacts of the proposed development.

<sup>33</sup> ONS 2015 Mid-Year Population Estimate.

<sup>34</sup> Population estimate based on the Jobs-led Experian SENS A scenario.

<sup>35</sup> Arc4 (2016). Sunderland Objectively Assessed Need and Strategic Housing Market Assessment Update.

<sup>36</sup> Sunderland North 18 sites (1160 dwellings), Sunderland South 41 sites (4795 dwellings), Sunderland Central 16 sites (717 dwellings), Coalfield 45 sites (3235 dwellings), Washington 14 sites (884 dwellings), 15 Housing Release Sites (1546 dwellings).

**Table 14: Population by ward within 6 km of the European sites located within the Sunderland City Council administrative area**

Sunderland City Council wards		South Tyneside Council wards		Durham County Council wards	
Ward	Population	Ward	Population	Ward	Population
St Peters	10605	Whitburn & Marsden	7448	Easington	7693
Fulwell	11604	Cleadon & East Boldon	8457	Murton	7975
Southwick	10535	Boldon Colliery	9227	Seaham	8419
Redhill	11388	Cleadon Park	6890		
Castle	10968	Whiteleas	8259		
St Anne's	11067	Riddick & All Saints	8678		
Pallion	10117	Harton	8409		
Millfield	11958				
Hendon	12597				
St Michael's	10998				
Barnes	10987				
Sandhill	11128				
St Chad's	9449				
Silksworth	10531				
Ryhope	10484				
Doxford	9870				
<b>SUB TOTAL</b>	<b>174286</b>		<b>57368</b>		<b>24087</b>
<b>TOTAL</b>	<b>255741</b>				

- 7.62 The existing population within the 6 km visitor pressure catchment (that has been applied to those sections of the European sites that will potentially be affected by the Sunderland City Council Local Plan) is estimated to be 255,741 (see Table 14). The population has been estimated by adding together the population estimates for those wards located within the 6 km visitor pressure catchment, which includes wards from Durham and South Tyneside as well as Sunderland (see Table 14). It is possible that development may be proposed in the future within the 6 km visitor pressure catchment that extends into Durham and South Tyneside; however, at the present time limited information is available on the quantum and location of this development).
- 7.63 The proposed Housing Growth Areas would provide an estimated 190 dwellings within the 6 km visitor pressure catchment, supporting a population of c.410 (assuming an average household size of 2.16). This represents a 0.2% increase in the population that may potentially contribute to recreational impacts at the coast.
- 7.64 If it is assumed that the new population is just as likely to participate in recreation at the coast as the existing population, disturbance events are likely to increase by at least 0.2%. This figure is considered to be precautionary and assumes that everybody within the 6 km visitor pressure catchment is equally likely to visit the coast. In reality this is unlikely to be the case as visitor behaviour will be influenced by a range of factors including age, health, distance, mode of transport, transport efficiency, site accessibility, reason for the visit, availability of alternatives etc. Distance in particular is likely to be a key factor in determining the frequency of visits to the coast: HGA7 is c.5.9 km from the coast and HGA8 is c.1.5 km.

7.65 The visitor survey data that have been collected for the coast (Bluegrass, 2015 & 2016) support the conclusion that visitor numbers will reduce with distance from the coast. The data show that dog walkers tend to travel shorter distances than other visitors, which is consistent with another finding of the visitor survey, that convenience is an important factor (46% of dog walkers use the coast because it is convenient – Bluegrass, 2016). Table 15 shows the percentage of visitors within the different distance bands used during the visitor surveys.

Table 15: Distances travelled by visitors to the coast (Bluegrass, 2015 & 2016)

Survey zones (miles)	Survey zones (km)	All visitors	Dog walkers
2014/15 visitor survey (Bluegrass, 2015)			
0.5 or less = 22%	0.8 km	14%	16%
0.5-1.0 mile = 14%	0.8-1.6 km	20%	26%
2-5 miles = 34%	3.2-8.0 km	32%	32%
>5 miles = 30%	>8.0 km	34%	27%
2015/16 visitor survey (Bluegrass, 2016)			
0.5 or less = 22%	0.8 km	22%	26%
0.5-1.0 mile = 14%	0.8-1.6 km	14%	19%
2-5 miles = 34%	3.2-8.0 km	34%	36%
>5 miles = 30%	>8.0 km	30%	18%

### ***Predicted impacts on SPA / Ramsar wintering birds***

7.66 The results of visitor surveys carried out along the coast (Bluegrass, 2015 & 2016) indicate that many people visit this area to walk their dogs. The results of bird disturbance surveys carried along the coast (Arcus Consultancy Services, 2015; BSG Ecology, 2016) indicate that dog walking, particularly with dogs off the lead, is the most common reason why bird disturbance occurs. It is therefore reasonable to assume that predicted levels of dog ownership can be used as a simple metric to estimate the proportion of the new residential population that may visit the coast and impact on the qualifying species of the SPA/Ramsar (i.e. turnstone and purple sandpiper).

7.67 Statistics published by the Pet Food Manufacturers Association<sup>37</sup> indicate that 33% of households in the North East own at least one dog. As the Core Strategy will bring forward two sites (HGA7 and HGA8), which will deliver 190 new dwellings, this could result in an additional c.63 dogs. These dogs will need to be walked, which may take place locally if suitable places are available, but this may also take place at the coast.

7.68 Visitor surveys (Bluegrass, 2016) found that just under half the dog walkers (47%) interviewed indicated that they visited daily or almost every day, with 28% indicating that they visited the coast 2-3 times a week. This indicates that approximately 75% visit at least 2-3 times a week (and 25% walk once a week or less, which is not likely to have a significant effect on the qualifying features of the SPA). If it is assumed that 75% of dog walkers visit at least 2-3 times a week, the development of sites HGA7 and HGA8 may result in c.63 dogs being walked at the coast frequently enough to impact on SPA birds. This is a highly precautionary estimate as it is likely that people living further away from the coast will visit it less frequently than people living close to the coast (see Table 16).

7.69 The results of the visitor surveys (Bluegrass, 2015 & 2016) indicate that between 16% (Bluegrass, 2015) and 26% (Bluegrass, 2016) of visitors to the coast live within 0.8 km (0.5 miles), and between 42% (Bluegrass, 2015) and 45% (Bluegrass, 2016) of visitors to the coast live within 1.6 km (1.0 mile). It therefore follows that between 74% and 84% of visitors live more than 0.8 km of the coast, and 55% and 58% of visitors live more than 1.6 km from the coast.

<sup>37</sup> <http://www.pfma.org.uk/statistics>, accessed 8 December 2018.

- 7.70 Site HGA8 is located within 1.6 km of the coast and so, applying the findings of the Bluegrass visitor surveys, 84% (worst case) of the residents of this site with dogs are likely to visit the coast. For site HGA7, 58% (worst case) of the residents with dogs are likely to visit the coast. This in turn results in an estimated total of 43 dogs that are likely to be walked at the coast (see Table 16).

Table 16: Predicted number of dogs walked at the beach taking into account visitor behaviour

Site No. on plan	Site Ref	Site Name	Potential Dwelling No.	Distance from the coast (km)	% likely to visit the coast	Predicted no. dogs <sup>1</sup>	No likely to be walked at the coast
	HGA7	Land north and west of Ferryboat Lane, North Hylton	110	more than 1.6	58	c.36	21
	HGA8	Land at Newcastle Road, Fulwell	80	0.8 to 1.6	84	c.26	22
						c.63	43

<sup>1</sup> The predicted number of dogs is calculated on the basis that 84% of residents within 1.6 km of the coast and 58% of residents more than 1.6 km from the coast are likely to visit it regularly.

- 7.71 The 2014/15 visitor survey (Bluegrass, 2015) revealed that 85% of dog walkers visited the beach. Considering all of the findings together, it is apparent that the coast is used less frequently by dog walkers living further away, that dog walkers favour the beaches and typically avoid the rocky shore areas, and approximately half of the dog walkers remain at the coast for less than half an hour.
- 7.72 Surveys carried out during the winters of 2014/15 and 2015/16 (Arcus Consultancy Services, 2015; BSG Ecology, 2016) revealed that purple sandpiper has a restricted distribution within the authority's area. The species was recorded regularly on the rocky shore to the north of South Bents, with the area around Whitburn being one of the more regularly used areas of shore. This species was also recorded along the south-west breakwater in the Port of Sunderland, at Salterfen Rocks and in the vicinity of the harbour at Seaham.
- 7.73 Turnstone is more widespread having been recorded on most sections of the shore where littoral rock is present, as well as piers. Although this species is more widespread, in many locations the numbers of birds were low indicating that many areas are used on an occasional basis. Turnstone was rarely recorded using sandy habitats.
- 7.74 Recreational disturbance of purple sandpiper and turnstone is possible in those areas where favoured habitat is close to areas that attract visitors. The sandy beach at Whitburn Bay has been shown to attract large numbers of visitors and, whilst many of these visitors will not venture north as far as the rocks at South Bents, some do walk this far. Walkers, particularly those with dogs off the lead, therefore have the potential to disturb birds that are using this part of the shore.

- 7.75 Whilst some disturbance is possible, it is expected that the majority of visitors will avoid the littoral rock as it is uneven and can be very slippery making walking challenging (the results of the 2015/16 visitor survey (Bluegrass, 2016) indicate that 51% of dog walkers (or their dogs) spent less than 10% of their time at the coast walking on the rocky shore). Observations made during wintering bird and recreation surveys in 2015 and 2016 (BSG Ecology, 2016) noted that visitors typically avoided the rocky shore favouring sandy beaches. The presence of clearly defined footpaths and signage above the high tide mark means that recreation is likely to be focussed in these areas.
- 7.76 The Port of Sunderland is not accessible to the public and so recreational access is unlikely. Whilst the port is a busy place where activities could potentially result in the disturbance of birds, the coastal boundary of the port is typically difficult to access and the topography of the shore is likely to provide screening in many places (to visual and noise disturbance for example, which may arise from current and future development). There has been little evidence of bird disturbance in this area (Arcus Consultancy Services, 2015; BSG Ecology, 2016).
- 7.77 The Port of Sunderland has produced its own masterplan and the future development proposals for the port will be subject to a separate HRA. Notwithstanding this, Policy NE2 and its supporting text will ensure that impacts on European sites are fully considered: under Policy NE2 any development at the port will be required to undertake an HRA. Impacts arising from the future development proposals are also considered in combination with the Core Strategy and Development Plan in Section 9.
- 7.78 Public access at Salterfen Rocks is limited by the nature of the rocky shore, which comprises large boulders that are the result of past cliff erosion. Safe access to the shore is difficult due to the terrain and the fact that the rocks can be very slippery. This is likely to limit the potential for birds to be disturbed by visitors.

## 8 Mitigation Measures

### Mitigating Adverse Effects

- 8.1 Residential development within 6 km of the European sites has the potential to result in increased visitor pressure, which may in turn result in increased recreational disturbance of birds. To mitigate this potential impact it is proposed to divert recreational activity elsewhere and to put management measures in place to control visitor behaviour at the European sites.
- 8.2 It is proposed to mitigate impacts by adopting a suite of measures that can be broadly categorised as:
- Provision of Suitable Areas of Natural Greenspace (SANG);
  - Strategic Access Management and Monitoring (SAMM).
- 8.3 These measures are described in various documents published by local authorities, e.g. Hampshire County Council<sup>38</sup> and Royal Borough of Windsor & Maidenhead<sup>39</sup>.
- 8.4 The purpose of SANG is to provide an attractive alternative recreational space that may be used preferentially by visitors, thereby reducing visitor pressure at the coast. If a SANG is going to achieve this purpose then it must be located appropriately and designed to meet the needs of a particular recreational activity.
- 8.5 The purpose of SAMM is to control visitor behaviour at sensitive locations and to directly discourage undesired recreational activities at the European sites. SAMM necessarily involves management intervention and monitoring may be used to measure effectiveness and to trigger changes in the approach to management.
- 8.6 The coast is likely to attract residents of new housing developments due to its unique nature. Whilst well-designed and appropriately located SANG is likely to mitigate some recreational impacts, it is also likely that some residents will still choose to visit the coast. It is therefore expected that a combination of SANG and SAMM will be required to achieve the necessary level of mitigation in order to conclude that there is not likely to be an adverse effect on the integrity of a European site.

### Likelihood of effectiveness

- 8.7 A visitor survey undertaken by Bluegrass during the period November 2014 to April 2015 (i.e. the winter period when purple sandpiper and turnstone are present) on behalf of Sunderland City Council and South Tyneside Council, found that 91% of respondents visited the beach and 63% of walks (Sunderland data) were to walk dogs. Further survey work carried out during the period January to March 2016 found that 65% of walks (Sunderland data) were to walk dogs.
- 8.8 When asked if they would use suitable green space if it was closer to home 39% of respondents in 2014/15 (Sunderland data) indicated that they would probably use it some of the time and 45% indicated that they would probably use it most of the time. This indicates that the Suitable Areas of Natural Greenspace (SANG) could potentially significantly reduce dog-walking by changing the behaviour of up to 84% of visitors (the reported figures are taken directly from the Bluegrass survey data and show the breakdown of interviewee responses to specific questions. The key questions are whether visitors would use suitable green space closer to home some of the time or whether they would use it most of the time. Interviewees were only able to select one option and so there is no double counting).

<sup>38</sup> Hampshire County Council (2013). *Planning for Dog Ownership in New Developments: Reducing Conflict – Adding Value*. Hampshire County Council.

<sup>39</sup> Royal Borough of Windsor & Maidenhead (2010). *Thames Basin Heaths Special Protection Area Supplementary Planning Document (Part 1)*. Royal Borough of Windsor & Maidenhead.

- 8.9 In the 2016 survey 46% of respondents walked their dog at the coast because it was convenient. In the Sunderland area 43% of dog walkers indicated that they would use suitable greenspace some or most of the time if available close to home.
- 8.10 Just under half of all the dog walkers interviewed (47%) in 2015/16 indicated that they visited daily or almost every day, with 28% indicating that they visited the coast 2-3 times a week. For the area extending from South Bents to North Pier (the closest section of the coast to the North Sunderland Sites, which is also likely to be the most attractive due to the presence of sandy beaches) 70% indicated that they visited daily or almost every day, with 14% indicating that they visited the coast 2-3 times a week. In 2014/15 24% of respondents indicated that they visited the site at least once a day and a further 24% stated that they visited the site about twice a week.
- 8.11 The design and effectiveness of additional natural greenspace has previously been reviewed as part of the HRA for the SSGA (URS, 2015). It was noted that guidance on alternative natural greenspace published by Hampshire County Council<sup>40</sup>, in association with the Kennel Club, reported that dog owners travel on average 400-500m to reach greenspace for dog-walking.
- 8.12 Guidance published by Natural England<sup>41</sup> for Suitable Alternative Natural Greenspace (SANG) for the Thames Basin Heaths Planning Zone recommended that SANG sites should be within 400m of the linked developments.
- 8.13 Data collected by the Pet Food Manufacturers Association<sup>42</sup> indicates that 33% of households in the North East own a dog. As the proposed Housing Growth Areas would provide an estimated 190 dwellings within the 6 km visitor pressure buffer, this equates to an additional c.63 dogs that will need to be walked. It is estimated that 43 of these dogs will be walked at the coast frequently enough to potentially have a significant effect on SPA birds. Consequently there is potential for dog walking within and near the European sites to increase, which may require measures to offset the predicted impacts.

#### **Greenspace area requirements**

- 8.14 The existing population of North Sunderland is currently utilising accessible greenspace along the Sunderland coast: this includes all accessible land extending down to the low tide mark, all coastal amenity land and rough grassland, promenades, public rights of way etc. (see Figure 3). The area of this habitat within the 6 km visitor pressure catchment is estimated to be 197 ha (this is the area that is potentially available to residents of Sunderland). It is important to note, however, that this area has been calculated by mapping the areas of greenspace identified using aerial imagery and as shown in the Sunderland Greenspace Audit and Report (2012). It includes areas within South Tyneside and has not been surveyed to confirm what proportion is actually publicly accessible. This has been carried out for illustrative purposes only.
- 8.15 If it is assumed that the proposed Housing Growth Areas will collectively result in a 0.2% increase in visitor pressure then a similar increase in greenspace will be the minimum area required to absorb this pressure. This amounts to c.0.4 ha of greenspace. However, this approach is based on the assumption that the existing greenspace has no capacity to absorb additional recreational activity, which is not considered to be the case within the Plan area. It is also likely that greenspace will need to be more extensive than 0.4 ha if it is going to attract walkers and dog walkers<sup>43</sup>.
- 8.16 It is considered that increased recreational use is not desirable at the following locations within the Sunderland City Council administrative area due to the presence of purple sandpiper and turnstone (and hence there is the potential to disturb these species at these locations):

<sup>40</sup> Hampshire County Council (2013). *Planning for Dog Ownership in New Developments: Reducing Conflict – Adding Value*. Hampshire County Council.

<sup>41</sup> Royal Borough of Windsor & Maidenhead (2010). Thames Basin Heaths Special Protection Area Supplementary Planning Document (Part 1). Royal Borough of Windsor & Maidenhead.

<sup>42</sup> <http://www.pfma.org.uk/statistics>.

<sup>43</sup> Hart District Council (2010) guidance recommended that SANG should be of at least 2 ha in size, and located within a wider open space or network of spaces.

- The area north of Parson's Rocks (including Parson's Rocks and South Bents).
- Intertidal areas and other functionally linked terrestrial areas between Port of Sunderland and Salterfen Rocks.

- 8.17 In addition, surveys have also revealed that the coast at Whitburn is important for a range of waders including purple sandpiper and turnstone (Arcus Consultancy Services, 2015; BSG Ecology, 2016). This area is within the 6 km visitor pressure catchment for residents of the Sunderland City Council administrative area.
- 8.18 To the south of Salterfen Rocks the eroding cliffs significantly restrict access to the intertidal habitat used by purple sandpiper and turnstone, and so significant increased recreational use of these areas is not likely. Use of the grassland adjacent to the sea cliffs by walkers and dog walkers is not likely to result in significant additional disturbance of purple sandpiper and turnstone using the intertidal habitats.
- 8.19 To the west of the Port of Sunderland the England Coast Path skirts the boundary of the Port before reaching the coast at Hendon. From this point it runs through a grassed area parallel to the promenade, and beyond the promenade it runs alongside eroding sea cliffs, which limit access to the shore. Similarly the areas adjacent to the sea cliffs at the Leas and in the vicinity of Souter lighthouse in South Tyneside, also have the potential to support additional recreational activity, as does Roker beach.
- 8.20 Whilst there are areas of greenspace along the coast that may have capacity to support additional recreational activity, there is also land where additional recreational pressure is not desirable. As previously noted, the coast has not been surveyed to check which areas are publicly accessible and so this assessment is considered for illustrative purposes only.
- 8.21 The HRA completed for the SSGA concludes that the area of habitat calculated using the above method (paragraph 8.15) may not be adequate for various reasons, a key reason being that a SANG will not be able to replicate the coastal habitat that attracts visitors, which may reduce its effectiveness (URS, 2015). This conclusion also applies in this situation and therefore the figures presented previously should not be used as the basis for calculating areas of greenspace that are required to mitigate recreational impacts. For this reason Natural England's SANG guidance was adopted to calculate an appropriate area of greenspace, and this recommends provision at the rate of 8 ha per 1000 population.
- 8.22 Previous HRAs for development within the Sunderland City Council area have resulted in a requirement to provide greenspace as part of the proposed development, and this may have benefits that extend beyond the development limits, i.e. high quality greenspace provided in this area may also attract visitors who live elsewhere. If greenspace is effective in attracting visitors who would otherwise have visited the coast, this would have a positive effect on the European sites irrespective of where the visitors have come from.
- 8.23 The section of the coast that is considered to be most susceptible to disturbance impacts arising from development being brought forward by the Core Strategy is to the north of the Wear Estuary from Parson's Rocks northwards. There are two sites, HGA7 and HGA8, which will collectively deliver 190 dwellings, resulting in a predicted increase in the population of 410 people. Were Natural England's SANG guidance to be applied to this it would equate to a requirement for 3.3 ha of greenspace to be made available for recreational purposes (SANG provision at a rate of 8 ha per 1000 population applied to a predicted population of 410).
- 8.24 There are currently areas of accessible greenspace near HGA7 and HGA8 that are likely to attract visitors, e.g. land adjacent to Fulwell Quarry Local Nature Reserve (LNR) and land on the north bank of the River Wear where there is the River Wear trail. In some areas the habitats are designated as Local Nature Reserves, Local Wildlife Sites or SSSIs due to their ecological importance and so it is important that these are protected with non-designated areas becoming the focus of future recreational initiatives (recreation is not to be encouraged in designated wildlife sites).

- 8.25 Although there are significant areas of accessible greenspace to the south of the River Wear, accessibility (by road) may limit their use by residents of North Sunderland. A possible exception is the Promenade to the south of the Port of Sunderland, where parking is freely available. The Sunderland Strategic Transport Corridor will improve access from the A19 to the Port and this may in turn improve access to the Promenade for residents of sites HGA7 and HGA8. Whilst the coast adjacent to the Promenade is accessible to the public, the coast at Roker northwards is likely to be easier to access.
- 8.26 Although a 6 km visitor pressure catchment has been defined, it is reasonable to assume that the frequency of visits to the coast is likely to decrease with distance travelled, i.e. people who live close to the coast are likely to visit it more frequently than people living further away (Bluegrass, 2015 & 2016). The presence of parks to the west of the A19, such as the James Steel Park, may present an alternative for residents of site HGA7. Whilst a park located to the west of the A19 is unlikely to provide effective mitigation on its own, and may only attract a small proportion of the residents of site HGA7 on an occasional basis, it is possible that they will at the very least make a small contribution to the overall mitigation of effects.
- 8.27 Taking this into account, together with the availability of existing and proposed accessible local greenspace (see below), it is concluded that the provision of greenspace is adequate to mitigate the proposed quantum of development (see Figure 5 in BSG Ecology, 2019).
- 8.28 If the existing and proposed greenspace is to function effectively it is possible that enhancement may be required to make these areas more attractive to visitors. It is also possible that additional management will be required to ensure that the greenspace remains fit-for-purpose and that there is no long-term deterioration as a result of increased use.

#### ***Housing Growth Area HGA7 - SANG***

- 8.29 As previously noted, the section of the coast that is considered to be most susceptible to disturbance impacts is to the north of the Wear Estuary from Parson's Rocks northwards. HGA7 will accommodate approximately 110 dwellings and is located 5.95 km from the nearest European site. The developed site is predicted to generate a population of 238 people, which equates to a SANG requirement of 1.9 ha. It is also predicted to result in an increase of 36 dogs, which are expected to require daily walks.
- 8.30 Following discussions between Natural England and Sunderland City Council (March 2019), it has been concluded that the provision of a SANG in this locations would not provide an effective means of mitigating impacts on the coastal European sites. Therefore, while greenspace will be provided within the development complementing the existing greenspace provision described above, mitigation for the predicted increase in recreational activity will be addressed through the adoption of SAMM measures only (see paragraphs 8.58 and 8.59 below).
- 8.31 HGA7 will therefore contribute towards the strategic SAMM provision provided as part of the wider North Sunderland sites mitigation scheme (See: Sunderland City Council: North Sunderland Sites HRA report – BSG Ecology 2019).

#### ***Housing Growth Area HGA8 - SANG***

- 8.32 HGA8 will accommodate approximately 80 dwellings and is located 1.5 km from the coast. The developed site is predicted to generate a population of 173 people, which equates to a SANG requirement of 1.4 ha. It is also predicted to result in an increase of c.26 dogs (which will also require daily walks).
- 8.33 Visitor surveys (Bluegrass, 2016) found that approximately 75% of visitors used the coast at least 2-3 times a week. This equates to the proposed housing site HGA8 potentially resulting in 22 dogs being walked at the coast at least 2-3 times a week.

- 8.34 Analysis of the results of the visitor surveys (Bluegrass, 2015 & 2016) indicate that between 74% and 84% of visitors live more than 0.8 km of the coast. Site HGA8 is located more than 0.8 km from the coast and so by applying the visitor survey statistics (Bluegrass, 2015 & 2016), 84% (worst case) of the residents with dogs are likely to visit the coast.
- 8.35 The same survey also revealed that 47% of dog walkers spent less than half an hour on the shore. The 2014/15 visitor survey (Bluegrass, 2015) revealed that 85% of dog walkers visited the beach. Considering all of the findings together, it is apparent that the coast is used less frequently by dog walkers living further away, that dog walkers favour the beaches and typically avoid the rocky shore areas, and approximately half of the dog walkers remain at the coast for less than half an hour.
- 8.36 The nearest area of accessible greenspace that is likely to attract visitors from site HGA8 is land adjacent to Fulwell Quarry, which is c.250m to the west. A bridleway provides direct access to this area from HGA8, and this area is already crossed by public rights of way.
- 8.37 The Council has advised that an available mitigation option is to enhance 8.35 ha of council-owned land to the east of Fulwell Quarry and north of High Southwick (see Figure 5 in BSG Ecology, 2019), to attract walkers and dog walkers. This land, which is close to Fulwell Quarry, is currently mown amenity grassland with coarse grassland and scrub around the edges. Whilst it is currently accessible to the public, with appropriate landscaping it will provide a more attractive area for walkers and dog walkers.
- 8.38 Visitor survey data (Bluegrass, 2016) indicate that, whilst the coast is favoured by some visitors because of its uniqueness, there are a range of factors that also influence behaviour. For example, the data for Sunderland collected in 2016 indicate that 35% of dog walkers visit the coast because they enjoy the beach and the sea. The same survey also revealed, however, that 46% of dog walkers use the coast because it is convenient / close to home, 26% like it because it is good for dog walking with plenty of space, 10% like the tranquillity, 4% like it because it feels safe and 4% like it because their dogs do not get muddy. These are factors that can be replicated elsewhere without the need for extensive landscaping, and therefore it is concluded that the council-owned land is likely to provide an acceptable dog walking area.
- 8.39 When visitors were asked what might persuade them to use a site other than the coast, 70% of respondents said that they might be persuaded citing reasons such as the available space, dog safety and somewhere closer to home.
- 8.40 Given the extent of the proposed SANG (8.35 ha) and its proximity to other walking areas (land adjacent to Fulwell Quarry), it is likely that this area will draw walkers from further afield than just site HGA8 (see BSG Ecology, 2018a).

#### ***Summary of greenspace provision***

- 8.41 Whilst a 6 km visitor pressure catchment has been defined, it is reasonable to assume that the proportion of people visiting the coast is likely to decrease with distance travelled, i.e. more people who live close to the coast are likely to visit it compared with people living further away (paragraph 8.33). It therefore follows that residents of site HGA8 are more likely to visit the coast than residents of site HGA7 (Bluegrass 2015 & 2016).

- 8.42 Taking this into account, together with the availability of existing and proposed accessible local greenspace, it is concluded that the current and proposed provision of greenspace outside development sites provides appropriate and proportionate mitigation for the proposed quantum of development. It is, however, also acknowledged that Natural England has advised that greenspace provision alone is not likely to fully mitigate recreational impacts on the European sites at the coast. Therefore a combination of SAMM and SANG will be required to achieve the required level of mitigation (see below).
- 8.43 If the existing and proposed greenspace is to function effectively it is expected that enhancement will be required to make these areas more attractive to visitors. It is also likely that additional management will be required to ensure that the greenspace remains fit-for-purpose and that there is no long-term deterioration as a result of increased use.

#### **Greenspace location and connectivity**

- 8.44 Published guidance on alternative natural greenspace (e.g. Hampshire County Council<sup>44</sup>) reports that dog owners have been found to travel on average 400-500m to reach greenspace to walk their dogs. Residents of Housing Growth Areas HGA7 and HGA8 would be within 400m of existing or proposed greenspace, which leads to the conclusion that there is a high likelihood that dog walkers will use these areas.
- 8.45 A key objective of SANG is to attract dog-walkers, and for this reason it is important that areas of greenspace are large enough to allow visitors to undertake circular walks of sufficient distance. The Thames Basin Heaths SANG guidance recommends a walking distance of 2.3-2.5 km, which is based on the results of visitor surveys. The greenspace area adjacent to Fulwell Quarry is capable of delivering walks of this duration. For the residents of HGA7, it is anticipated that those choosing not to visit the coast will utilise the alternative greenspace options found locally (see below).
- 8.46 In the following sections greenspace provision is described. This includes existing areas that have been identified for appropriate management and enhancement, existing commitments arising from past HRA, and additional requirements.

#### ***Housing Growth Area HGA7***

- 8.47 The north bank of the River Wear, where there is the River Wear Trail, provides a recreational option for dog walkers, particularly as the footpath passes close to site HGA7. As this surfaced walking route will be readily accessible on foot by residents of the developed site, it is reasonable to conclude that it is likely to be a favoured walking option due to convenience. To walk at the coast would require a trip by car through central Sunderland. It should be noted that the options for off-the-lead recreation near site HGA7 may be limited by existing use.

#### ***Housing Growth Area HGA8***

- 8.48 Council-owned land to the east of Fulwell Quarry and north of High Southwick (see Figure 5 in BSG Ecology, 2019) has been identified as an area that can be enhanced to provide SANG that will mitigate impacts arising from the development of site HGA8 together with the development of a number of North Sunderland Sites (BSG Ecology, 2019). This SANG area is directly linked to site HGA8 by a public right of way.

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<sup>44</sup> Hampshire County Council (2013). *Planning for Dog Ownership in New Developments: Reducing Conflict – Adding Value*. Hampshire County Council.

- 8.49 An area of council-owned land extending to 8.35 ha<sup>45</sup> located to the east of Fulwell Quarry and north of High Southwick, will provide walking routes of up to 1.0 km with the opportunity to extend this using footpaths in the wider area, in particular land adjacent to Fulwell Quarry. Fulwell Quarry is currently used for recreation and this area is likely to attract new visitors. Recreational use of the area designated as SSSI and LWS will not be promoted and will need to be carefully controlled and managed to ensure that there is no degradation of the botanical interest of the designated sites (Sunderland City Council has commissioned a study that has considered recreational impacts on Fulwell Quarry SSSI (BSG Ecology, 2018. North Sunderland Extended Phase 1 Habitat Survey Report – draft). This report will set out measures that are required to mitigate impacts on Fulwell Quarry SSSI that will arise from increased recreational pressure associated with new housing developments and will be secured through the Development Management process as section 106).

### **Seaburn Development Area**

- 8.50 The proposed development at Seaburn (SHLAA sites 154A and 154B) includes provision of greenspace. This area will be connected by green links to provide a network of recreational space that will provide options for short duration, locally based recreational activity. It is possible that this greenspace may attract visitors from HGA7 and HGA8.
- 8.51 The mitigation that is proposed for the Seaburn site also includes funding towards a Coastal Ranger post. A key role of the post will be to educate the public regarding the importance of the coast for wintering birds and the impacts that uncontrolled dogs can have on these birds. Whilst this role will be established to mitigate impacts arising from residents of the Seaburn site, the benefits will inevitably extend to all users of the coast.

### **Greenspace within development sites**

- 8.52 If greenspace is to achieve the key objective of attracting dog walkers, thereby reducing visitor pressure on the coast, there is a minimum size requirement that will need to be met. As previously noted the Thames Basin Heaths SANG guidance recommends a walking distance of 2.3-2.5 km, which could, for example, be achieved using a large area of greenspace or several small areas that are linked by footpaths. Hart District Council (2010) guidance recommended that SANG should be of at least 2 ha in size, and located within a wider open space or network of spaces.
- 8.53 Whilst small areas of greenspace with development sites are unlikely to fully mitigate the recreational impacts that might arise as a result of an increase in the local residential population, partial mitigation is possible. The cumulative benefits of this partial mitigation could be significant, particularly when considered in combination with the SAMM (HGA7) and SANG/SAMM (HGA8) measures proposed for the respective sites.

### **Greenspace standards**

- 8.54 The effectiveness of greenspace depends on it being suitable as well as accessible. Natural England has published guidance for the design of Suitable Areas of Natural Greenspace (SANG)<sup>46</sup>, which recognises the need to provide a space that is likely to attract visitors and not deter them. The guidance includes the following standards (which should be applied to all Suitable Areas of Natural Greenspace (SANG) that are proposed as part of the mitigation requirements for the Core Strategy):
- Landscaping within the SANG should allow easy access into the recreational area, creating key nodal access points, allowing both new resident and existing users to directly access the greenspace provision. Landscaping should therefore be a key consideration.

<sup>45</sup> The area of land that is being brought forward to provide SANG is greater than the area needed. The reason for this is that the SANG will be provided in a large grassland field where it would not be beneficial to partition it. The current landscaping of this area means that the SANG objectives can be met with minimal landscaping requirements as the area provides a large, safe dog walking environment. It is expected that this area can be enhanced in the future through landscaping to accommodate more dog walkers.

<sup>46</sup> <http://www.bracknell-forest.gov.uk/sangs-guidelines-and-checklist-12-06-08.pdf>.

- The SANG should be linked with an additional circular route of between 2.3 and 2.5 km, if necessary, and this should be between 2.5m and 3m wide (this can incorporate existing as well as newly created routes). The route should offer a number of opportunities to both extend the walk and undertake shorter routes to suit the needs of the user.
- The paths may not need to be formally surfaced, but should benefit from regular maintenance to ensure they remain accessible during the summer growing season. They also need to remain accessible during the winter.
- The walking route should retain a natural feel and should not be incorporated into the main development area.
- Signposting and way-marking should be provided at key nodal points to make potential users aware of the provision. This should include some interpretation, explaining why the recreational area is being provided.
- Funding should be provided to allow the local authority to advertise the provision of the new recreational area on their website, and also provide a leaflet explaining conservation reasons why the route has been created.

8.55 The concept of SANG was developed to offset impacts on sensitive heathland sites and so it is likely that, whilst some design recommendations are relevant in the context of the CSDP, other recommendations may require adaptation. For example, Natural England has highlighted that it is important that SANGs are accessible during winter months, for example, ensuring that muddy paths are avoided as these may deter dog walkers who may then preferentially use the beach. An important requirement is that SANG should have a semi-natural character and there should be areas where dogs can safely be let off the lead.

8.56 It is important that users of greenspace feel safe and so consideration will need to be given to the location of paths, for example, away from roads, the use of fencing to prevent dogs from accessing dangerous areas, providing dog waste bins etc.

#### **Strategic Access Management & Monitoring (SAMM)**

8.57 The principles of Strategic Access Management and Monitoring (SAMM) have previously been established within the SSGA HRA. This comprises various measures that will be implemented at the European sites as well as within proposed development sites and areas of green infrastructure. SAMM measures are to be continued in perpetuity.

8.58 Whilst the provision of SANG at HGA8 is likely to mitigate some impacts that may arise as a consequence of the proposed development, Natural England has advised that the unique nature of the coast will attract some residents of the developed sites (HGA7 and HGA8). SAMM measures are therefore likely to be required to achieve the necessary mitigation.

#### ***SAMM mitigation at the European sites***

8.59 A range of measures are proposed that are designed to control visitor activities and behaviour, either as a result of education or through policing of byelaws and other enforceable control measures. The proposed measures are:

- The use of Public Space Protection Orders / By-laws to implement dog-leash restrictions in sensitive locations, i.e. Parson's Rocks and South Bents during the period September to April.
- The use of appropriately trained personnel to monitor adherence to Public Space Protection Orders / By-laws, and to issue fines where necessary. If monitoring shows that dog-leash restrictions are not sufficient then dog bans will be introduced instead within relevant areas.

- Appropriately trained personnel will also: monitor the European sites (with respect to bird presence and distribution, as well as visitor-related disturbance); manage the design and publication of educational information; promote walking routes (including the England Coast Path rather the shore); educate the local community; organise volunteers; and coordinate educational / promotional events.
- Implementation and promotion of the Council initiatives 'Beach Watch' and 'Friends of the Coast'. Appropriately trained personnel will contribute to the recruitment of volunteers, who will be trained to lead walks, promote best practice for dog walking and police irresponsible behaviour.
- The erection of interpretation panels at the coast adjacent to the main car parking areas. These will improve upon and complement the existing signage, and will specifically include information about the designated sites, the impacts of dog walking and the measures that dog walkers should adopt to mitigate their activities.

### Monitoring and follow-on mitigation

- 8.60 Monitoring is required to alert the Council (competent authority) before there are adverse effects on the integrity of a European site. This should then trigger a review of the current measures and their effectiveness and, if they are found to be inadequate, may prompt the implementation of additional measures<sup>47</sup>.
- 8.61 Monitoring will be undertaken within the 6 km visitor pressure catchment, and this will focus on the qualifying features of the European sites and pressures on them, specifically:
- Surveys of SPA wintering birds to map species distribution and abundance;
  - Visitor surveys / surveys of residents to evaluate their behaviour; and
  - Surveys of recreational disturbance of SPA wintering birds.
- 8.62 Surveys will also be undertaken of SANG usage, to assess whether improvements are necessary or if, for example, improved publicity is required to advertise their dog-friendly nature. If required, questionnaire-based surveys will be used to identify what modifications are required to enhance the site for users.
- 8.63 If monitoring identifies a requirement for the implementation of further mitigation measures, these will be discussed and agreed with Natural England as necessary. Further mitigation measures might include redefining the role of appropriately trained personnel, who will have a role to play in delivering certain mitigation measures (see Table 19 in BSG Ecology, 2019<sup>48</sup>).
- 8.64 Monitoring will commence following the development and occupation of either HGA7 or HGA8, whichever is sooner. Monitoring will initially take place every three years but this will be reviewed in light of the findings. If necessary, the frequency of monitoring visits will be increased.

<sup>47</sup> Tyldesley, D. & Chapman, C. (2013). The Habitats Regulations Assessment Handbook. June 2014 edition. DTA Publications Limited.

<sup>48</sup> It is important that mitigation measures being delivered by other projects, such as the North Sunderland Sites, Sunderland CSDP and Seaburn, should be considered together as providing a complementary package of measures that will collectively benefit European sites.

## 9 Mitigation Delivery

### SANG provision

#### *Housing Growth Area HGA7*

- 9.1 No SANG provision is proposed for HGA7. Mitigation will therefore be provided via SAMM measures only.

#### *Housing Growth Area HGA8*

- 9.2 To mitigate impacts arising from the development of HGA8 (c.80 dwellings and a population of c.173 people), it will be necessary to provide a SANG of 1.4 ha. It is proposed to enhance 8.35 ha of council-owned land to the east of Fulwell Quarry and north of High Southwick to attract dog walkers: further details of the SANG specification are presented in the separate HRA that has been prepared for the North Sunderland Sites (see BSG Ecology, 2019 – Figure 5 shows the SANG location), to attract walkers and dog walkers.
- 9.3 This area of SANG is expected to attract visitors from residential developments in addition to HGA8: the North Sunderland Sites (BSG Ecology, 2018a) collectively require SANG provision of 6.5 ha, which will be met by this site (the total SANG requirement for these developments together with HGA8 is 7.9 ha).
- 9.4 The measures that are proposed to make this land suitable for dog walking are:
- New signage to show access points and walking routes;
  - Provision of dog waste bins;
  - Provision of interpretation boards;
  - Regular mowing to provide a short sward.

### SAMM provision

#### *Housing Growth Areas HGA7 & HGA8*

- 9.5 A number of additional measures have been identified that will be implemented to mitigate impacts on the European sites. These measures are set out within the HRA report that has been prepared for the North Sunderland Sites, which includes site HGA7 and HGA8. (BSG Ecology, 2019).
- 9.6 The measures that will be adopted to mitigate impacts arising from the development of site HGA7 and HGA8 will be secured through a financial contribution to fund the use of appropriately trained personnel to raise awareness and provide support with the implementation of management measures in the local and wider community.

### Funding

- 9.7 In general, the costs of implementation and maintenance of SANG (HGA8) and SAMM (HGA7) will be split proportionately amongst the developments that have been identified as requiring these measures (see BSG Ecology North Sunderland Sites HRA 2019). Financial contributions will be sought that will cover both elements.
- 9.8 The costs of providing SANG are to be met by developers. This will necessarily include the ongoing maintenance cost for the SANG once provided, covering a 20 year period after which the Council will take on maintenance of the SANG in perpetuity. Funding for SAMM will be obtained by securing Section 106 contributions from developers of housing sites.

- 9.9 Mitigation measure costs are provided within the North Sunderland Area HRA report (BSG Ecology 2019). This will results in a figure of £703.00 per unit built being provided to secure the mitigation options selected.

**Development timing & certainty**

- 9.10 The timing of housing development is not known, however, it will be necessary for the proposed range of mitigation measures to be delivered at a time that ensures that an appropriate mix of both SANG and SAMM is implemented in advance of any impacts occurring. This will be controlled through legal agreements and phasing during the development planning process.

**In-combination assessment of residual effects**

- 9.11 The screening stage of the assessment concluded that, in the absence of mitigation, the proposed developments, when considered alone, are likely to have a significant effect on a European site. Consequently the need for an appropriate assessment was triggered without the requirement for an assessment of the proposals in combination with other plans and projects. The appropriate assessment has concluded that the wide range of measures that are proposed will fully mitigate impacts on European sites. Collectively it is considered that these measures will ensure that there will be no adverse effects on the integrity of any European site as a result of the proposed housing developments at sites HGA 7 and HGA 8.

## 10 Conclusions

- 10.1 The HRA has identified likely significant effects that may arise as a result of implementation of the Core Strategy and Development Plan. The main effect is likely to be disturbance of birds caused by higher numbers of visitors to the coast for recreational activities including dog walking.
- 10.2 Measures are therefore described to mitigate all potential impacts on European sites. It is considered that existing and proposed greenspace is appropriate in terms of area, distance from housing sites and proposed enhancement. If the greenspace design principles set out within the HRA are adhered to, the proposed combined measures are considered to be sufficient, when considered alongside the proposed site access management measures (see below) to mitigate impacts arising from recreational activity from the new developments (HGA 7 and HGA 8).
- 10.3 The use of greenspace to divert recreational activity from the European sites will be actively promoted and complemented by strategic access management measures. The use of measures, such as public education, will collectively counteract recreational activity that has the potential to have an adverse effect on European sites.
- 10.4 Proposed monitoring surveys with additional follow-on mitigation measures (such as adapting the role of appropriately trained personnel) provide assurance that, in the unlikely event that early signs of mitigation failure are observed, then alternative measures are available to ensure that adverse effects on European sites are not likely to occur. In reaching this conclusion it is important to take into account the mitigation measures being delivered by other projects, such as the North Sunderland Regeneration Sites, Sunderland CSDP and Seaburn, which collectively provide a complementary package of measures that will benefit European sites.
- 10.5 The HRA includes information on the delivery of the proposed mitigation measures. This includes:
- a) Detailed costing of the measures and breakdown of developer contributions;
  - b) Obligations enforced by Sunderland City Council to ensure that developers proposals include appropriate mitigation measures; and
  - c) The Council implementing the strategic access management and monitoring measures, and maintenance of mitigation measures funded by contributions/commuted sums secured via Section 106 agreement.
- 10.6 Full details of the proposed mitigation measures and associated costs are provided within the North Sunderland Area HRA report (BSG Ecology, 2019). This includes mechanisms identified for the delivery of the proposed SANG and SAMM measures.
- 10.7 A Statement of Common Ground has been prepared and signed between Sunderland City Council and Natural England, and this addresses matters in the plan where resolutions have been made to address areas of uncertainty.
- 10.8 It was concluded that the proposed development alone is likely to have a significant effect on a European site in the absence of mitigation measures and so an appropriate assessment has been completed. When the proposed mitigation measures are adopted (and the requirements of the Statement of Common Ground implemented) no residual effects are anticipated, and therefore it is concluded that the Core Strategy will not have an adverse effect on the integrity of the Northumbria Coast SPA/Ramsar sites or Durham Coast SAC There will be no residual effects on any European sites

## 11 Glossary

BTO: British Trust for Ornithology

DBC: Durham Bird Club

HRA: Habitat Regulations Assessment

JNCC: Joint Nature Conservation Committee

LWS: Local Wildlife Site

RSPB: Royal Society for the Protection of Birds

SAC: Special Area of Conservation

SAMM: Strategic Access Management and Monitoring

SSAANG South Sunderland Areas of Additional Natural Greenspace

SANG: Suitable Alternative Natural Greenspace

SPA: Special Protection Area

SSGA: South Sunderland Growth Area

SSSI: Site of Special Scientific Interest

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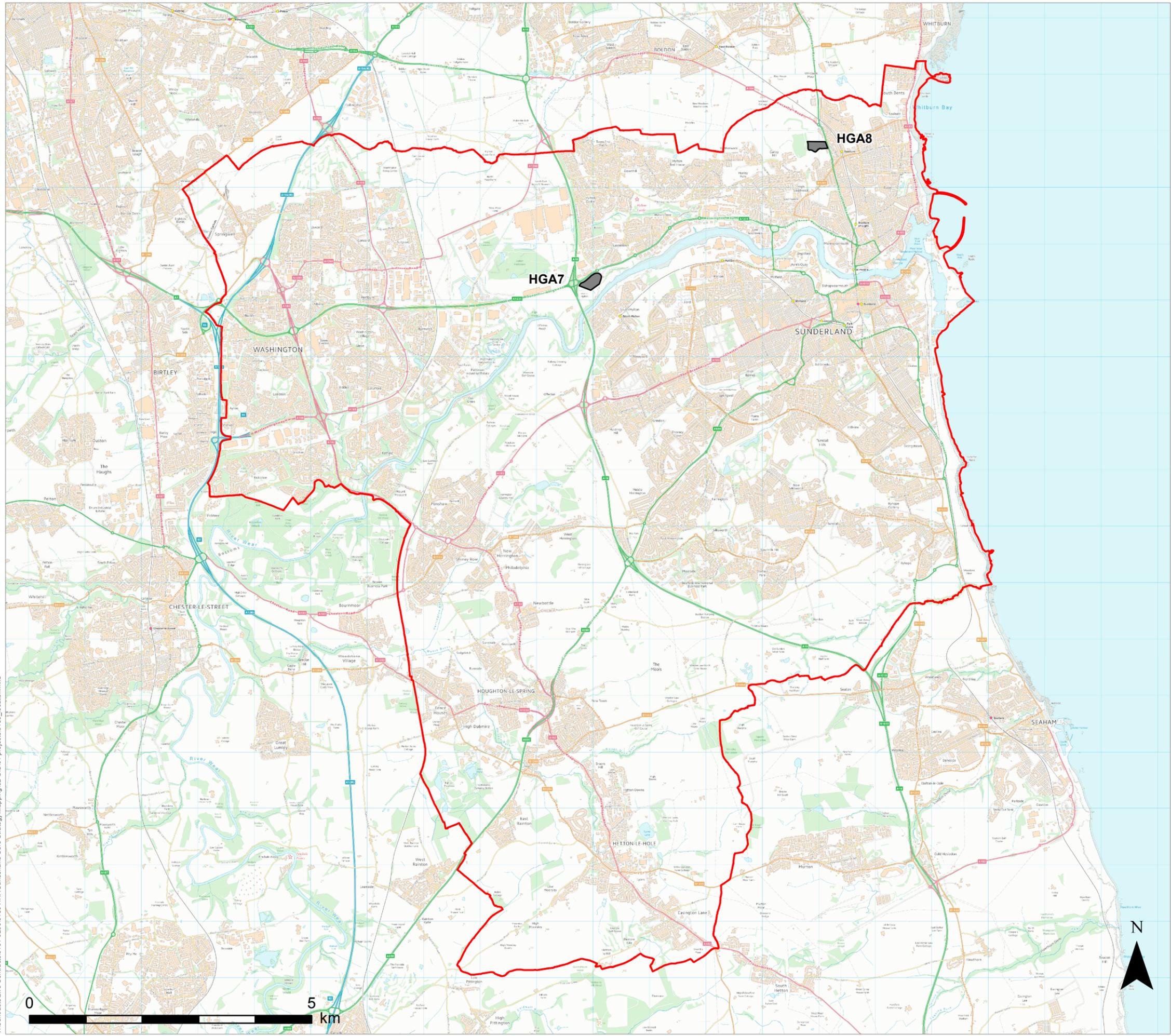
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## 13 Figures

Figure 1: Map showing the Sunderland City Council administrative area.

Figure 2: Map showing the European site boundaries.

Figure 3: Map showing existing semi-natural accessible coastal area.



**LEGEND**

- Sunderland District Boundary
- Housing Growth Areas



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PROJECT TITLE  
 HRA OF SUNDERLAND'S CORE STRATEGY 2016

DRAWING TITLE  
 Figure 1: Map showing the boundary of Sunderland district

DATE: 11.12.2018      CHECKED: SB      SCALE: 1:65,000  
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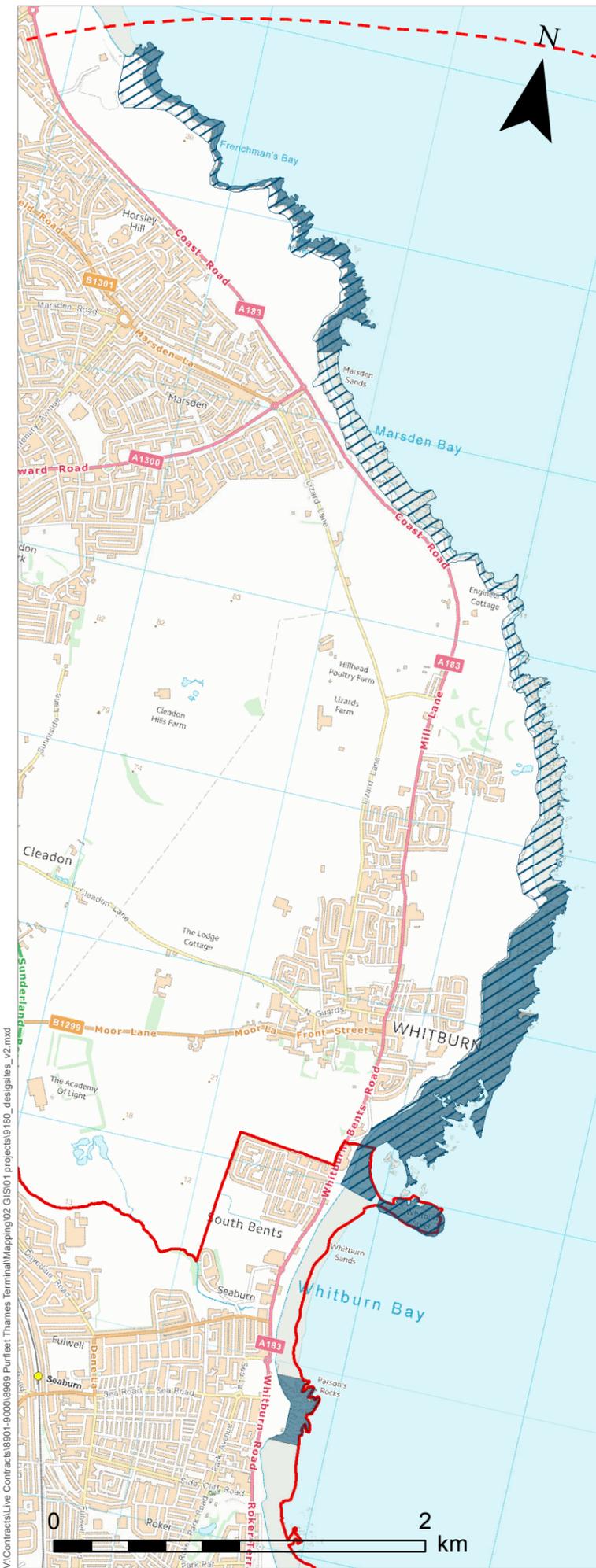
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- LEGEND**
- Sunderland District Boundary
  - 6 km radius from Sunderland District Boundary
  - Northumbria Coast Special Protection Area (SPA) / Ramsar sites
  - Durham Coast Special Area of Conservation (SAC)
  - 6 km radius from SPA / Ramsar sites / SAC



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PROJECT TITLE  
HRA OF SUNDERLAND'S CORE STRATEGY 2016

DRAWING TITLE  
Figure 2: European site boundaries

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DRAWN: COH

APPROVED: SB

STATUS: FINAL

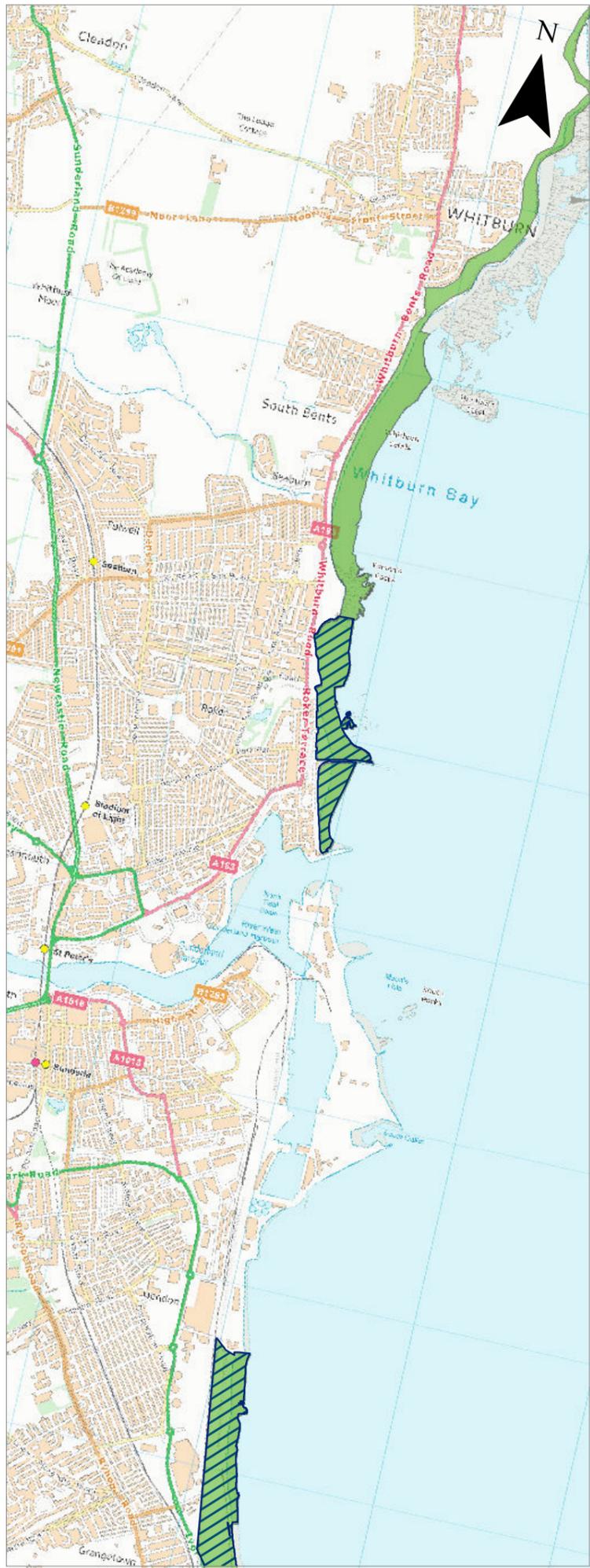
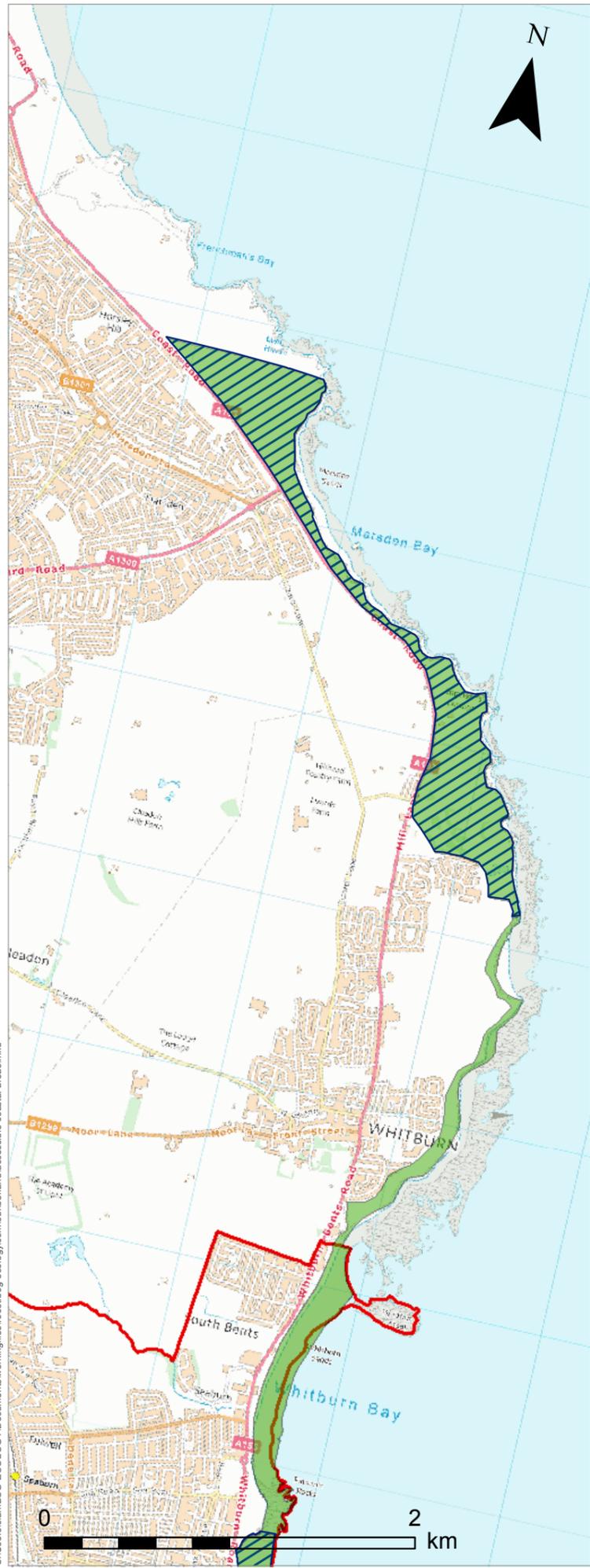
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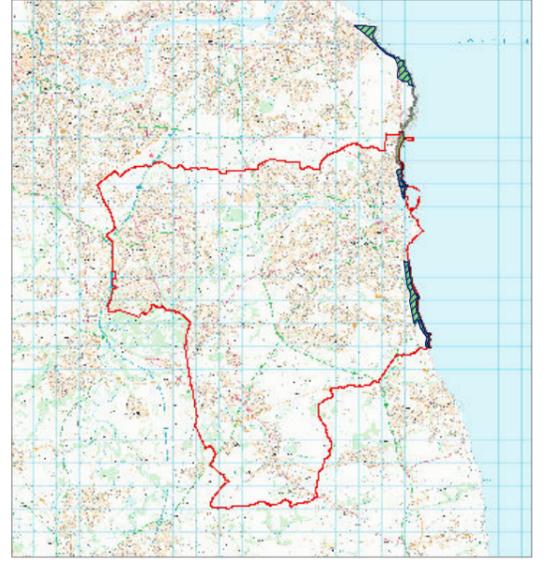
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**LEGEND**

-  Sunderland District Boundary
-  Semi-natural accessible coastal recreation area
-  Area where additional walking / dog walking may be possible



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PROJECT TITLE  
NORTH SUNDERLAND

DRAWING TITLE  
Figure 3: Existing semi-natural accessible coastal area

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DRAWN: COH      APPROVED: SB      VERSION: 1.1

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## 14 Appendix 1: Habitats Directive

### Statutory Requirements

- 14.1 In October 2005 (Case C-6/04), the European Court of Justice ruled that Articles 6(3) and 6(4) of Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (known as the 'Habitats Directive') applied to land use plans in England. This ruling was made with specific reference to the definition of the term 'plans or projects' as referenced within Article 6(3) of the Directive).
- 14.2 Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans or projects affecting Natura 2000 sites. Article 6(3) establishes the requirement for Appropriate Assessment:
- 14.3 "Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."
- 14.4 Article 6(4) goes on to discuss alternative solutions, the test of "imperative reasons of overriding public interest" (IROPI) and compensatory measures:
- 14.5 "If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted."
- 14.6 In its ruling the European Court of Justice concluded that land use plans must also be subject to an 'appropriate assessment', as required under Article 6(3) of the Habitats Directive. The purpose of the 'appropriate assessment' is the same for all plans or projects, i.e. to demonstrate that their implementation would not adversely affect the integrity of a Natura 2000 site.
- 14.7 Amendments to the Conservation (Natural Habitats &c) Regulations 1994 (the statutory instrument that first transposed the requirements of the Habitats Directive into UK law) to implement the ruling were published for England and Wales in July 2007. These amendments and the previous regulations were subsequently consolidated and replaced by the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations).
- 14.8 Chapter 8 of the Habitats Regulations covers the assessment of plans and projects and it sets out the requirement that an authority preparing a land-use plan must assess the potential effects of the plan upon European sites prior to the plan being published. Under regulation 102 of the Habitats Regulations, the assessment must determine whether or not a plan will adversely affect the integrity of any European site(s) that might be affected by the implementation of that plan. Where negative effects are identified, the process should consider alternatives to the proposed actions and explore mitigation opportunities, whilst adhering to the precautionary principle .
- 14.9 Decision-makers then have to determine what action to take and this requirement is summarised succinctly as follows (URS, 2015). 'They [decision makers] should take account of the potential consequences of taking no action, the uncertainties inherent in the scientific evaluation, and they should consult interested parties on the possible ways of managing the risk. Measures should be proportionate to the level of risk, and to the desired level of protection. They should be provisional in nature pending the availability of more reliable scientific data. Action is then undertaken to obtain further information enabling a more objective assessment of the risk.'

- 14.10 The measures taken to manage the risk should be maintained so long as the scientific information remains inconclusive and the risk unacceptable. The hierarchy of intervention is important: where effects on ecological integrity are identified, plan makers must first consider alternative ways of achieving the plan's objectives that avoid significant effects entirely. Where it is not possible to meet objectives through other means, mitigation measures that allow the plan to proceed by removing or reducing significant effects may be considered. If it is impossible to avoid or mitigate the adverse effect, the plan-makers must demonstrate, under the conditions of regulation 103 of the Habitats Regulations, that there are Imperative Reasons of Overriding Public Interest (IROPI) to continue with the proposal. This is widely perceived as an undesirable position and should be avoided if at all possible.'

## **15 Appendix 2: European Site Conservation Objectives**

Durham Coast Conservation Objectives

Northumbria Coast Conservation Objectives

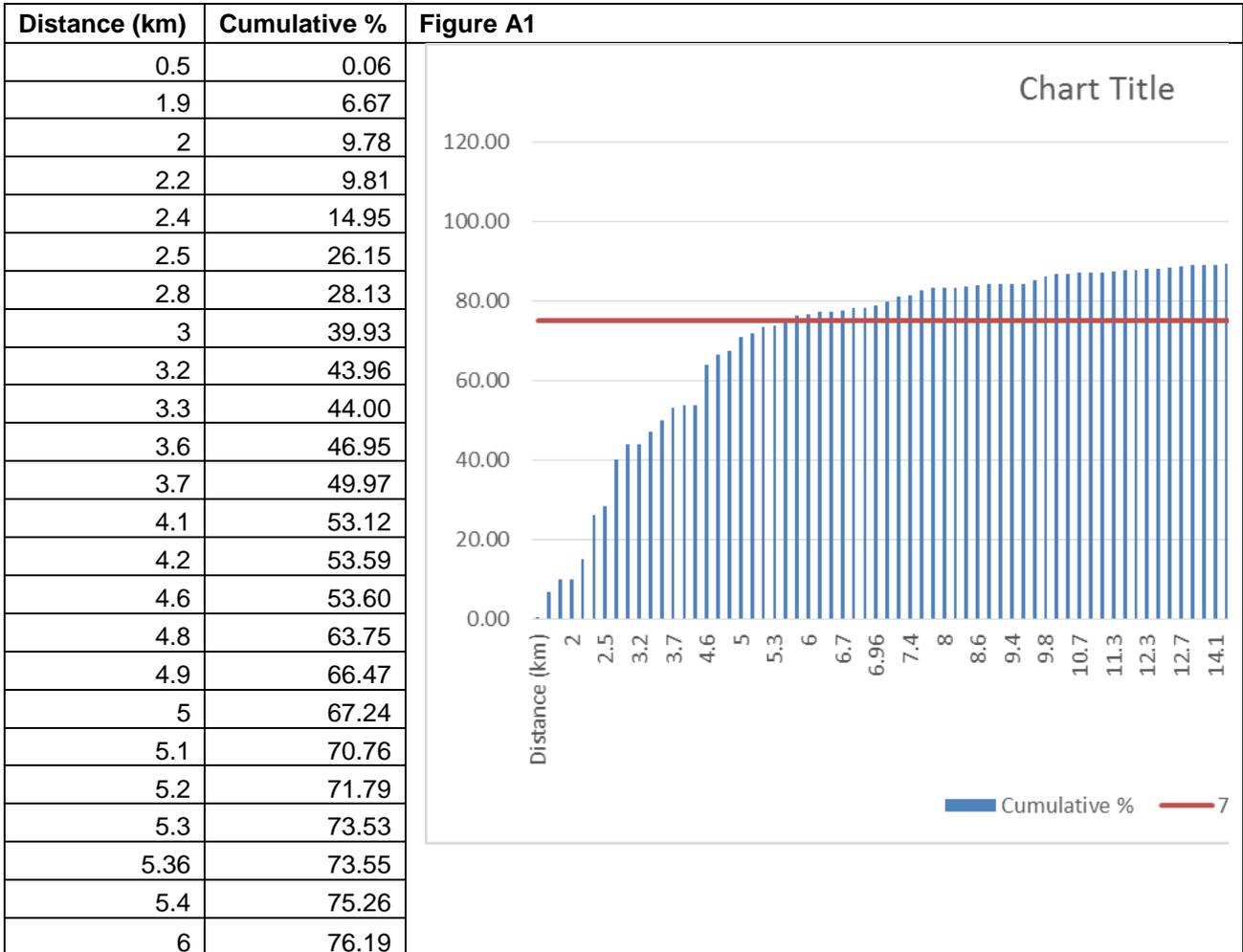
## 16 Appendix 3: European Site Visitor Pressure Catchment

### Annualising visitor survey data

- 16.1 Bluegrass has carried out a visitor survey that collected data from six locations in South Shields and Sunderland during the period November 2014 to April 2015. A total of 674 interviews were conducted, comprising 330 the South Tyneside area and 334 in the Sunderland area.
- 16.2 Each interview represents a sample of a single visit to the coast and so analysis of the resultant data without any correction is unlikely to provide a realistic picture of actual visitor behaviour over the course of a year. For example, visitors exhibit different behaviour with some visiting the coast daily whilst others may visit the coast less than once a month. Consequently there is a need to consider the frequency of visits when interpreting the data.
- 16.3 Durham County Council has previously commissioned visitor survey data of the Durham Heritage Coast and the resultant data were annualised to provide an overall picture of visitor activity per year. In broad terms the process involves converting visit frequency into a number of visits per year and then linking this to travel distance.
- 16.4 The approach that has been adopted in this study is as follows. Calculate the number of visits per year for each interviewee. During interviews each respondent was asked to estimate the frequency with which they visit the coast using the following bands:
- Every day
  - 2-3 times a week
  - About once a week
  - Once or twice a month
  - Less than once a month
- 16.5 These bands have been converted into visits per year as follows:
- Every day – 182 visits in the winter and 183 visits in the summer, which gives a total of 365 visits a year
  - 2-3 times a week – 26 weeks x 3 visits = 78 visits in the winter / summer
  - About once a week – 26 weeks x 1 visit = 26 visits in the winter / summer
  - Once or twice a month – 6 months x 2 visits = 12 visits in the winter / summer
  - Less than once a month - 6 months x 1 visits = 6 visits in the winter / summer
- 16.6 Calculate the travel distance for each interviewee. The travel distance has been calculated for each respondent using the postcode sector that has been provided. As a postcode sector represents a zone rather than a point, the minimum travel distance has been calculated (from the eastern edge of the postcode sector to the nearest designated site) and the maximum travel distance has been calculated (from the western edge of the postcode sector).
- 16.7 Aggregate the results. The results have then been aggregated into travel bands to provide a total number of visits per travel band. For example, two people may have travelled from postcode sector NE33 4, which is 1.2 km from the nearest designated site (minimum distance). One person may have indicated that they visit daily (365 visits a year) and the second person may have indicated that they visit once or twice a month (24 visits a year). The total annualised visits for this travel band is therefore 389.

16.8 Calculate a cumulative total. The results are then plotted as a list of aggregated visits for each travel band starting with the shortest travel distance and working up to the furthest. The aggregated visits are added to the previous total to provide a cumulative total (see Table A1). The cumulative total is then converted into a percentage with the last entry being 100%. The data are then plotted graphically and a 75% intercept is used to calculate the travel distance within which 75% of the visitors conducted their journeys to the coast.

Table A1



**Excluded data**

16.9 The above approach has excluded visits that are over 50 km as these were all reported to be infrequent by respondents and are considered to be people on holiday rather than local residents. In addition some of the postcodes are not recognised as legitimate postcode sectors and so they have been excluded unless there appears to have been an obvious transcription error.

## 17 Appendix 4: Durham Coast SAC – constituent SSSI Condition Assessment

17.1 Table A2: Condition assessment for the constituent SSSI units of the Durham Coast SAC (within the Sunderland City Council area).

SSSI unit	Section	Description	Condition assessment
6	The Bents to Whitburn Rifle Ranges	Littoral rock (34.6 ha)	Favourable  This unit consisted of rocky shore which has very good feeding habitat for non-breeding birds. A large extent of the intertidal rocks is covered in a mix of seaweed. The mix is dominated by: Fucus species, ulva (sea lettuce), washed up brown seaweeds including Laminaria and red seaweeds including Ceramium rubrum. No negative issues were identified for the coastal bird habitat
10	The Bents to Whitburn Rifle Ranges	Lowland grassland (13.4 ha)	neutral Favourable  This unit is in favourable condition. The range of vegetation zones and transitions has been maintained with areas of bare ground, pioneer habitat, maritime grassland on the cliff slopes and exposed headlands, and a mosaic of MG5/CG2 species rich grassland in a thin band at the top of the cliff interspersed with non-interest feature MG1 grassland. Scrub is well within acceptable limits at around 5%. Small patches of non-native 'garden escape' species are occasional, but do not affect overall condition. At Whitburn, the borders of amenity grassland adjacent to the SSSI have been sown with an arable wildflower mix, but this does not seem to be spreading into the SSSI so is not considered a threat. There were no negative factors affecting the geological interest and natural processes were unconstrained. At the northern end of the unit there was quite a lot of material from natural land slips at the base of the cliff, but this will be removed by wave action so is not considered to be a threat to condition. Strandline vegetation is still present at the southern end of the unit where Whitburn Bay begins.

SSSI unit	Section	Description	Condition assessment
13	Parsons Rocks	Littoral rock (4.5 ha)	Favourable  The majority of the rocks adjacent to the promenade were covered by a rich diversity of seaweed providing good feeding habitat for birds. <i>Fucus spiralis</i> , <i>enteromorpha</i> and washed up <i>Laminaria</i> were the main species present. The only negative factor on the unit was the amount of dog walking occurring on the accessible parts of the unit. The birds are forced to the seaward edge of the rocky shore so the amount of useable habitat during these times is reduced.
14	Promenade Grangetown Halliwell Banks	at to Littoral rock (13.5 ha)	Favourable  This unit only has rocky shore interest used by non-breeding birds. The majority of the rocky shore was covered by a rich diversity of seaweed providing good feeding habitat for birds. <i>Fucus spiralis</i> , <i>enteromorpha</i> and washed up <i>Laminaria</i> were the main species present. A large <i>Laminaria</i> forest could be seen further off shore. Sand and rock pools also provides good habitat for birds and invertebrates. The cliff tops consisted of poor grassland with little species diversity. The one area where there was better species diversity was the strip between units 14 and 15. Here the sward composition consisted of <i>Lotus corniculatus</i> , <i>Centaurea nigra</i> , <i>Plantago media</i> , <i>Festuca rubra</i> , <i>Geranium sanguineum</i> , <i>Succisa pratensis</i> and <i>Galium verum</i> . There were also negative species along the stream including Himalayan balsam, ragwort and various garden escapes. No negative features or actions were affecting the unit with the exception of some historic dumping areas seen on the cliff slopes.

SSSI unit	Section	Description	Condition assessment
15	Halliwell Banks to south of Ryhope Dene	Littoral rock (15.8 ha)	<p>Favourable</p> <p>This unit only has rocky shore interest used by non-breeding birds. The majority of the rocky shore was covered by a rich diversity of seaweed providing good feeding habitat for birds. <i>Fucus spiralis</i>, <i>enteromorpha</i> and washed up <i>Laminaria</i> were the main species present. The very South of the unit before Seaham Beach (Pincushion rocks) provided an excellent expanse of feeding habitat. Sand and rock pools also provides good habitat for birds and invertebrates. The cliff tops consisted of poor grassland with little species diversity. Arable land comes in close proximity to the cliff slopes and so will affect species diversity. The one area where there was better species diversity was the strip between units 14 and 15. Here the sward composition consisted of <i>Lotus corniculatus</i>, <i>Centaurea nigra</i>, <i>Plantago media</i>, <i>Festuca rubra</i>, <i>Geranium sanguineum</i>, <i>Succisa pratensis</i> and <i>Galium verum</i>. No negative features or actions were affecting the unit with the exception of some historic dumping areas seen on the cliff slopes.</p>

SSSI unit	Section	Description	Condition assessment
20	Nose's Point to Shot Rock	Calcareous grassland (16.4 Ha)	Unfavourable recovering  The unit passed all variables except frequency of pioneer community species because legacy mine waste is constraining coastal erosion, therefore exposing less bare ground for pioneer communities. The mine waste is being naturally eroded over time so the site can be considered to be Unfavourable Recovering. Biological features – The good grassland is in small patches interspersed with scrub and rank vegetation, but where it occurs the species diversity is high with a complex mosaic of neutral and calcareous communities reflecting the underlying geology of magnesian limestone with glacial boulder clay deposits. The biological interest features don't require management intervention as long as scrub remains below 20% overall (assessed as 7% on average). Vegetation succession will be moderated by natural processes so that the exact location and extent of the different interest features varies over time but the range of vegetation zones is maintained. However the best and most extensive area of grassland is the large meadow at Beacon Point which best fits the CG6 NVC but also contains abundant saw-wort and other neutral species. This area is managed as a hay meadow and scrub levels have been kept low here. Geological features – though the very base of the cliff is obscured by the mining deposits in places, the rest of the sequence is well exposed and the geological features are considered to be in favourable condition overall. The Easington Raised Beach deposits in the cliffs of Shippersea Bay were observed to be intact with no obstructions to them evolving naturally.
23	Nose's Point to Shot Rock	Littoral sediment (45.2 Ha)	Unfavourable recovering  See unit 20

## 18 Appendix 5: Policy Assessment

Policy	Rational
Policy SP1 Sustainable strategy to deliver economic growth and sustainable patterns of development	Sustainability requirements are not likely to have a significant effect on a European site.
Policy SP2: Urban Core	This policy sets out the Council's aspirations for growth and is not likely to have any effect on a European site as it only establishes general aspirations / objectives.
Policy SS1: The Vaux	The Vaux site is allocated for office-led mixed-use development. Whilst the site does include residential development, it already has planning permission so any impacts should have already been considered as part of the application process. It is not likely to have an effect on a European site.
Policy SP3: Washington	This policy sets out the Council's growth aspirations for Washington, which is outside the 6 km visitor pressure catchment. It is not likely to have an effect on a European site.
Policy SS2: Washington Housing Growth Areas	This policy identifies HGAs for Washington, which is outside the 6 km visitor pressure catchment. It is not likely to have an effect on a European site.
Policy SS3: Lane East of Washington	This policy identifies land for safeguarding. The site can only be brought forward for development through a review of the Plan, which would be required to undertake a HRA.
Policy SP4: North Sunderland	This policy sets out the Council's growth aspirations for North Sunderland. It is a policy statement and therefore is not likely to have an effect on a European site.
Policy SS4: North Sunderland Housing Growth Areas	This policy identifies two HGAs for North Sunderland, which are within the 6 km visitor pressure catchment. It is concluded that these sites are likely to have a significant effect on a European site.
Policy SP5: South Sunderland	This policy sets out the Council's growth aspirations for South Sunderland. It is a policy statement and therefore is not likely to have an effect on a European site.
Policy SS5: Port of Sunderland	This policy sets out the Council's position regarding the Port of Sunderland. The proposals for the Port are subject to a separate HRA.
Policy SS6: South Sunderland Growth Area	The SSGA includes residential development at locations that are close enough to the coast that impacts on European sites are possible. HRA has been completed for the SSGA and appropriate mitigation built in to the proposals.
Policy SP6: The Coalfield	This policy sets out the Council's growth aspirations for The Coalfield, which is outside the 6 km visitor pressure catchment. It is not likely to have an effect on a European site.
Policy SS7: The Coalfield Housing Growth Areas	This policy identifies HGAs for The Coalfield, which are outside the 6 km visitor pressure catchment. It is not likely to have an effect on a European site.
Policy SP7: Healthy and safe communities	This policy establishes the principles for promoting health and wellbeing and sets out the Council's aspirations. It is not likely to have any effect on a European site.

Policy	Rational
Policy HS1: Quality of life and amenity	This policy establishes the principles for health risks. It is not likely to have any effect on a European site.
Policy HS2: Noise sensitive development	This policy establishes the principles for reducing noise related impacts. It is not likely to have any effect on a European site.
Policy HS3: Contaminated land	This policy establishes the principles for reducing contaminated land impacts. It is not likely to have any effect on a European site.
Policy HS4: Health and safety executive areas and hazardous substances	This policy establishes the principles for controlling impacts from sites with special health and safety requirements. It is not likely to have any effect on a European site.
Policy SP8: Housing Supply and Delivery	This policy establishes the principles of housing provision and sets out the Council's general objectives. It is therefore not likely to have any effect on a European site.
Policy H1: Housing Mix	This policy establishes the principles of housing provision and sets out the Council's general aspirations / objectives. It is therefore not likely to have any effect on a European site.
Policy H2: Affordable Housing	This policy establishes the principles of affordable housing provision and sets out the Council's general aspirations / objectives. It is therefore not likely to have any effect on a European site.
Policy H3: Student Accommodation	This policy establishes the principles of student accommodation and sets out the Council's general aspirations / objectives; however, it also sets out criteria for evaluating other sites. Policy NE2 and its supporting text will ensure that impacts on European sites are fully considered. A previous HRA for the Draft Interim Student Accommodation Policy concluded that the policy was not likely to have a significant effect. Student numbers have been falling in recent years and this is expected to plateau and stabilise. Mobility within the student population is limited and this is reflected in reduced car parking provision at student accommodation sites. It is anticipated that students are unlikely to contribute significantly to visitor pressure at the coast.
Policy H4: Travelling Showpeople, Gypsies and Travellers	The policy allocates land and identifies broad locations for growth for Travelling Showpeople sites. All proposed allocations are in the Coalfield area and are outside the 6 km visitor pressure catchment. It is not likely to have an effect on a European site.
Policy H5: Loss of residential stock	This policy sets out the circumstances where loss of residential stock would be acceptable. It is not likely to have a significant effect on a European site.
Policy H6: Housing in Multiple Occupation	This policy establishes the principles of multiple occupation of properties and so has the potential to result in local population increases. Significant effects on European sites cannot be ruled out.
Policy H7: Backland and Tandem Development	This policy establishes the principles of new development within the curtilage of an existing property, and so has the potential to result in local population increases. Significant effects on European sites cannot be ruled out.
Policy EG1: Primary Employment Areas	This policy identifies a number of Primary Employment Areas, which are viewed as essential to the long-term prosperity of the area. Promotion of employment is not likely to have a significant effect on a European site. Although this policy includes the Port of Sunderland, Policy NE2 and its supporting text will ensure that impacts on European sites are fully considered.

<b>Policy</b>	<b>Rational</b>
Policy EG2: Key Employment Areas	This policy identifies a number of Key Employment Areas, which are existing areas that have been identified for future investment. Promotion of employment is not likely to have a significant effect on a European site.
Policy EG3: Other Employment Sites	This policy supports employment development on other sites if there are demonstrable regeneration benefits. Promotion of employment is not likely to have a significant effect on a European site.
Policy EG4: New Employment Areas	This policy supports employment development on other sites if it can be demonstrated that the proposed use cannot be accommodated within the existing designated Employment Areas. Promotion of employment is not likely to have a significant effect on a European site.
Policy EG5: Offices	This policy identifies a number of locations for office development. Promotion of office development is not likely to have a significant effect on a European site.
Policy EG6: Trade Counters	This policy establishes the principles of establishing trade counters. Promotion of this type of outlet is not likely to have a significant effect on a European site.
Policy VC1: Main town centre uses and retail hierarchy	This policy seeks to maximise regeneration and investment in the main town centres. This is not likely to have a significant effect on a European site.
Policy SP9: Comparison retail growth	This policy identifies floor space requirements to meet retail needs. This is not likely to have a significant effect on a European site.
Policy VC2: Retail Impact Assessments	This policy sets out the assessment requirements for edge or out-of-centre retail development. This is not likely to have a significant effect on a European site.
Policy VC3: Primary shopping areas and frontages	This policy sets out the requirements for retail development in the primary and secondary frontages. This is not likely to have a significant effect on a European site.
Policy VC4: Hot Food Takeaways	This policy sets out the requirements for takeaway development. This is not likely to have a significant effect on a European site.
Policy VC5: Protection and delivery of community facilities and local services	This policy sets out to protect facilities that are considered to be essential to the future success of communities. This is not likely to have a significant effect on a European site.
Policy VC6: Culture, Leisure and Tourism	This policy encourages culture, leisure and tourism initiatives within the City and town centres; however, it also includes leisure and tourism proposals at Seaburn and Roker seafront, which may result in increased recreational impacts on European sites.
Policy BH1: Design quality	This policy sets out the Council's objectives for urban design, which are not likely to have a significant effect on any European sites.
Policy BH2: Sustainable design and construction	This policy sets out the Council's aspirations for achieving sustainability in all development. This is not likely to have a significant effect on any European sites.
Policy BH3: Public Realm	This policy sets out the Council's objectives for ensuring that high design standards are met for public realm. This may have a positive effect on European sites by providing alternative visitor attractions.
Policy BH4: Advertisements	This policy establishes the design standards for advertisements. This is not likely to have a significant effect on any European sites.
Policy BH5: Shop fronts	This policy establishes the design standards for shop fronts. This is not likely to have a significant effect on any European sites.

<b>Policy</b>	<b>Rational</b>
Policy BH6: High quality communications	This policy seeks to ensure that digital communications are integral to development. This is not likely to have a significant effect on any European sites.
Policy BH7: Historic Environment	This policy seeks to ensure that the historic environment continues to be valued, protected, enhanced and managed appropriately. This is not likely to have a significant effect on any European sites.
Policy BH8: Heritage Assets	This policy seeks to protect heritage assets. This is not likely to have a significant effect on any European sites.
Policy BH9: Archaeology and recording of heritage assets	This policy seeks to protect heritage assets. This is not likely to have a significant effect on any European sites.
Policy NE1: Green Infrastructure	This policy promotes the enhancing, creating and managing of multifunctional greenspace. This is considered to be key in terms of helping to mitigate impacts on European sites arising from implementation of other aspects of the Plan.
Policy NE2: Biodiversity and Geodiversity	This policy seeks to protect biodiversity including European sites. Whilst the policy itself does not refer to a trigger for HRA, the supporting text sets out what is required and when.
Policy NE3: Woodlands/Hedgerows and Trees	This policy seeks to protect biodiversity including European sites. This is not likely to have a significant effect on any European sites.
Policy NE4: Greenspace	This policy seeks to protect greenspace. This is considered to be key in terms of helping to mitigate impacts on European sites arising from implementation of other aspects of the Plan. Reinforce this?
Policy NE5: Burial Space	This policy sets out the requirements for the protection of existing and the creation of new burial spaces. This is not likely to have a significant effect on any European sites.
Policy NE6: Green Belt	This policy establishes the principles of green belt protection. This is not likely to have a significant effect on any European sites.
Policy NE7: Settlement Breaks	This policy seeks to maintain settlement breaks, one benefit being to reinforce the policy on green infrastructure. This is not likely to have a significant effect on any European sites.
Policy NE8: Development in the Open Countryside	This policy sets out the criteria that will need to be applied before development in the open countryside will be permitted. This includes limited small-scale residential development, which is unlikely to have a significant effect on any European sites.
Policy NE9: Landscape Character	This policy seeks to protect the landscape within the Plan area. This is not likely to have a significant effect on any European sites.
Policy NE10: Heritage coast	This policy seeks to protect the Heritage Coast within the Plan area. This is not likely to have a significant effect on any European sites.
Policy NE11: Creating and Protecting Views	This policy provides guidance on dealing with views in and out of a site. This is not likely to have a significant effect on any European sites.
Policy NE12: Agricultural Land	This policy seeks to protect agricultural land within the Plan area. This is not likely to have a significant effect on any European sites.
Policy WWE1: Decentralised, Renewable and Low Carbon Energy	This policy sets out the Council's aspirations to limit the effects of climate change and is not likely to have any effect on a European site as it only establishes general aspirations / objectives.

<b>Policy</b>	<b>Rational</b>
Policy WWE2: Flood risk and Coastal management	This policy seeks to reduce flood risk, promote water efficiency measures, and protect and enhance water quality. It is not likely to have an effect on a European site.
Policy WWE3: Water Management	This policy seeks to reduce flood risk. It is not likely to have an effect on a European site.
Policy WWE4: Water Quality	This policy seeks to maintain water quality. It is not likely to have an effect on a European site.
Policy WWE5: Disposal of Foul Water	This policy sets out the objectives for dealing with foul water drainage within a site. It is not likely to have an effect on a European site.
Policy WWE6: Waste Management	This policy sets out the framework for waste management within the Plan area. It includes a requirement to ensure that new waste developments are located and designed to avoid significant adverse impacts on wildlife. It is not likely to have an effect on a European site.
Policy WWE7: Waste Facilities	This policy sets out the Council's aspirations for waste facilities. It is not likely to have an effect on a European site.
Policy WWE8: Safeguarding Waste Facilities	This policy sets out how the Council will maintain existing levels of waste management capacity to aid delivery of the Joint Municipal Waste Strategy. It is not likely to have an effect on a European site.
Policy WWE9: Open Waste Facilities	This policy sets out the Council's aspirations for open waste facilities. It is not likely to have an effect on a European site.
Policy WWE10: Energy from Waste	This policy sets out the Council's proposals for renewable energy, including energy from waste, and includes a commitment to protect the environment. It is not likely to have an effect on a European site.
Policy SP10: Connectivity and Transport Network	This policy promotes connectivity and identifies specific transport projects that are to be implemented. It is not likely to have an effect on a European site.
Policy ST1: Urban Core Accessibility and Movement	This policy promotes City centre accessibility. It is not likely to have an effect on a European site.
Policy ST2: Local Road Network	This policy protects the Local Road Network to ensure the safe and efficient movement of traffic. New development must not compromise the efficient use of the network. It is not likely to have an effect on a European site.
Policy ST3: Development and Transport	This policy seeks to ensure the provision of safe and convenient access for all road users. It is not likely to have an effect on a European site.
Policy SP11: Mineral extraction	This policy requires that mineral extraction sites must ensure that the natural environment is conserved, managed and enhanced as appropriate. It is not likely to have an effect on a European site.
Policy M1: Mineral Safeguarding Areas and Infrastructure	This policy restricts development in Mineral Safeguarding Areas. It is not likely to have an effect on a European site.
Policy M2: Surface coal extraction	This policy establishes a presumption against surface coal extraction within the City. Any proposal must be environmentally acceptable. It is not likely to have an effect on a European site.
Policy M3: Land Instability and Minerals Legacy	This policy highlights the need for development to consider land stability and mine gas. It is not likely to have an effect on a European site.

<b>Policy</b>	<b>Rational</b>
Policy M4: Restoration and Aftercare	This policy sets out the requirement for minerals and waste development proposals to include high quality restoration and aftercare. It is not likely to have an effect on a European site.
Policy ID1: Delivering Infrastructure	This policy sets out the Council's aspirations for infrastructure delivery and is not likely to have any effect on a European site as it only establishes general aspirations / objectives.
Policy ID2: Planning Obligations	This policy establishes the role of planning obligations. It is not likely to have an effect on a European site.