

City of Bradford Metropolitan District Council

# ShIPLEY Canal Road Corridor and Bradford City Centre Area Action Plans

Habitats Regulations Assessment Screening



October 2015

Amec Foster Wheeler Environment  
& Infrastructure UK Limited



**Report for**

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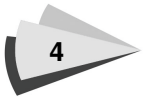
# Executive Summary

Regulation 102 of the *Conservation of Habitats and Species Regulations 2010* (as amended) (the 'Habitats Regulations') states that if a land-use plan "(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects); and (b) is not directly connected with or necessary to the management of the site" then the plan-making authority must "...make an appropriate assessment of the implications for the site in view of that site's conservation objectives" before the plan is given effect. The process by which Regulation 102 is met is known as Habitats Regulations Assessment (HRA).

As with Strategic Environmental Assessment (SEA), it is accepted best-practice for the HRA of strategic planning documents to be run as an iterative process alongside the plan development, with each version of the emerging policies or options assessed for their possible effects on European sites and modified or abandoned (as necessary) to ensure that the subsequently adopted plan is not likely to result in significant effects on any European sites, either alone or 'in combination' with other plans or projects.

The AAP screening process has reviewed the available data and the draft AAPs, and it is concluded that both the BCC and SCRC AAPs will have no likely significant effects (alone or in combination) on the North Pennine Moors SAC or the North Pennine Moors SPA, due to either an absence of impact pathways, policy controls within the plan that can be relied on to ensure significant effects are avoided, or external controls (such as the water resources planning process) that account for the growth aspects of the plan and with which the plan is consistent.

For the SCRC AAP it is recommended that wording of the three policies (NBE4, NBE1 and HSC2) could usefully be strengthened to ensure that effects on the SAC from those allocated sites which are located within 7km are avoided.



# Contents

<b>1.</b>	<b>Introduction</b>	<b>7</b>
1.1	Shipley Canal Road Corridor and Bradford City Centre Area Action Plans Publication Drafts	7
	Bradford City Centre Area Action Plan Publication Draft	7
	Shipley Canal Road Corridor Area Action Plan Publication Draft	10
1.2	Habitats Regulations Assessment Screening	15
1.3	Purpose of this Report	15
<b>2.</b>	<b>Approach</b>	<b>17</b>
2.1	Overview	17
2.2	Guidance	19
	Strategic Core Policy SC8	19
2.3	In-Combination Effects	20
2.4	Summary of Approach	20
	Screening	20
<b>3.</b>	<b>Scope of Assessment and Baseline Summary</b>	<b>21</b>
3.1	Study Area and Data Sources	21
3.2	European Sites within the Study Area	21
3.3	Conservation Objectives	30
	For SACs:	30
	For SPAs:	30
3.4	Impact Pathways	30
	Recreational Pressure	31
	Urbanisation	33
	Atmospheric Pollution	34
	Effects on Critical Habitats Outside of European Sites Affecting Mobile Species	39
	In-combination Effects	39
3.5	European Site Screening Based on Impact Pathways	40
<b>4.</b>	<b>Screening</b>	<b>43</b>
4.1	Screening of Site Allocations	43
	BCC Sites	43
	SCRC Sites	43
4.2	Screening of Policies	47
	Overarching Protective Policies	48
	Policy Screening	48
<b>5.</b>	<b>Summary and Recommendations</b>	<b>54</b>
5.1	Summary	54
	BCC AAP Publication Draft	54
	SCRIP AAP Publication Draft	54
	In-combination Effects Summary	55
5.2	Recommendations	55
	Overarching Protective Policies	55
5.3	Conclusion	57

Table 1.1	Site Allocations in the BCC AAP	8
Table 1.2	BCC AAP Policies	10
Table 1.3	Site Allocations in the SCRC AAP	13
Table 1.4	SCRC Policies	14
Table 3.1	European Sites within the Study Area	21
Table 3.2	European Sites and Interest Features Potentially Affected by AAPs	23
Table 3.3	Travel distances for ~70–75% of Visitors Recorded by Previous Studies	32
Table 3.4	Main Air Pollutants, Pathways and Effects	34
Table 3.5	Summary of APIS Interrogation	36
Table 3.6	Summary of European Site Screening Based on Impact Pathways	41
Table 4.1	SCRC Sites within ~7km of South Pennine Moors SAC: Screening of Potential Recreational Impacts	44
Table 4.2	Policy 'Types' That Can Usually Be Screened Out	47
Table 4.3	Colour Coding for Policy Screening	48
Table 4.4	Screening Summary: Draft BCC Policies	49
Table 4.5	Screening Summary: Draft SCRC Policies	51
Table 5.1	Policies With Protective or Mitigating Measures That Will Minimise Potential Recreational Effects	56

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Figure 1.2	BCC Site Allocations	after page 10
Figure 1.4	SCRC Site Allocations	after page 15
Figure 3.1	BCC and SCRC AAPs HRA Screening Report European Sites Locations and AAP	after Page 22

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Appendix A	European Site Designations
Appendix B	Latin Names
Appendix C	Distance of Site Allocations From European Designated Sites

# 1. Introduction

## 1.1 Shipley Canal Road Corridor and Bradford City Centre Area Action Plans Publication Drafts

The City of Bradford Metropolitan District Council (henceforth referred to as CBMDC) is currently in the process of preparing a Local Plan to guide future growth and development in the District in the period up to 2030 (see [www.bradford.gov.uk/planning](http://www.bradford.gov.uk/planning)). This will replace the existing Replacement Unitary Development Plan for Bradford (RUDP), adopted in October 2005.

The Local Plan for the Bradford District will be made up of a collection of planning documents that will guide future growth and development for housing, employment, leisure and retail for the next 10-20 years. Two Area Action Plans (AAPs) are being produced as part of the Local Plan, one of which is for Bradford City Centre (BCC) and the other for Shipley Canal Road Corridor (SCRC). These two AAPs will build upon the long term spatial vision for the District set out in the Core Strategy and address specific issues within each plan area.

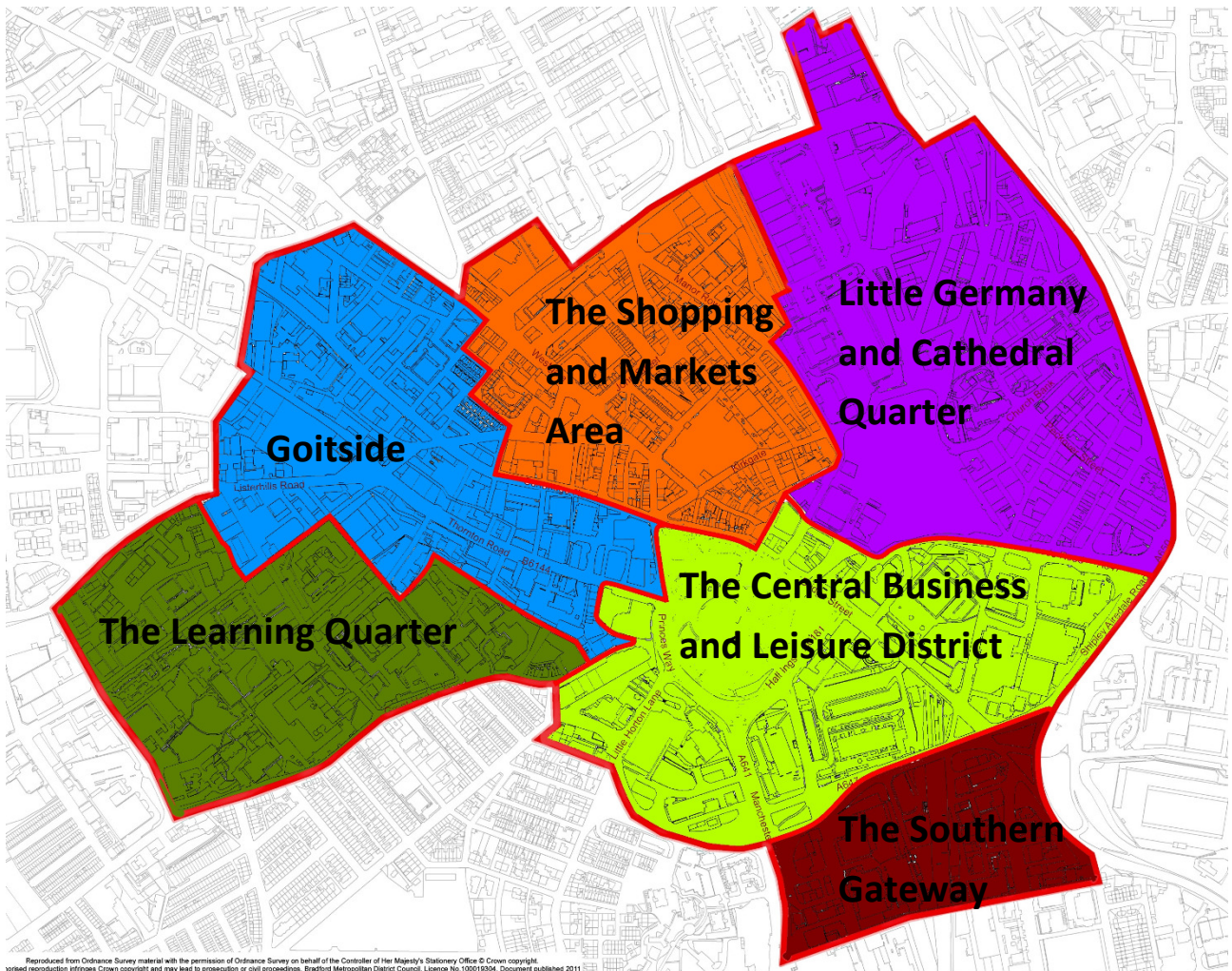
### Bradford City Centre Area Action Plan Publication Draft

The BCC AAP Publication Draft is made up of six 'neighbourhoods'. The neighbourhoods are derived from their unique character and development patterns. They are:

- ▶ **Central Business and Leisure District** - Business Core of the City Centre and focus of Grade A office space and leisure uses;
- ▶ **Little Germany and Cathedral Quarter** - The area will be the focus of new comparison retail in The Broadway Centre, and residential led mixed use development;
- ▶ **The Shopping and the Markets Area** - The focus for small independent retailing and leisure offer, with the introduction of residential into the area;
- ▶ **Goitside** - The area will be the focus of city living, with supporting small scale leisure and retail;
- ▶ **The Learning Quarter** - The area will be the focus for expanded education and student living; and
- ▶ **The Southern Gateway** - Transforming the area from former industrial to a focus for residential development and supporting uses.

The six 'neighbourhoods' and the area covered by the AAP are shown in **Figure 1.1** below. The map shows the red line boundary used by Bradford Centre Regeneration, which is the City's former regeneration company. It includes the main shopping, civic and entertainment core of the centre and also more peripheral areas such as Little Germany, Goitside, and the College and University campuses. Although there are arguments to include other areas, this boundary has been used for the City Centre RGF Growth Zone and City Plan. Therefore it was considered logical that the Area Action Plan was also based on this boundary.

Figure 1.1 Bradford City Centre AAP Neighbourhoods



The BCC AAP Publication Draft contains a number of site allocations and policies, which are detailed in **Tables 1.1** and **1.2** below. A map of the site allocations is shown on **Figure 1.2** below.

Table 1.1 Site Allocations in the BCC AAP

AAP Site Reference	Proposed Use
<b>The Central Business and Leisure District</b>	
B/1.1	Cultural Expansion Zone - Expansion of cultural offer and supporting uses (leisure).
B/1.2	Mixed Use - B1 office, with supporting retail and leisure.
B/1.3	Mixed Use – Office led mixed use.
B/1.4	Mixed Use – Mixed use scheme including office, residential and potential magistrate's court.
B/1.5	Mixed Use – B1 offices, 400 apartment units with supporting retail and leisure.
B/1.6	Mixed Use – mix of leisure, office floor space and residential units.
<b>Little Germany and Cathedral Quarter</b>	
CH/1.1	Residential – Phased residential development (600 units).



<b>AAP Site Reference</b>	<b>Proposed Use</b>
CH/1.2	Leisure led mixed Use – retail and office.
CH/1.3	Residential – 100 residential units.
CH/1.4	Residential – 200 residential units.
CH/1.5	Residential – 50 residential units.
CH/1.6	Residential – 20 residential units.
CH/1.7	Residential – 50 residential units.
CH/1.8	Residential – 100 residential units.
CH/1.9	Residential – 20 residential units.
CH/1.10	Residential – 20 residential units.
CH/1/11	Residential – 100 residential units.
CH/1.12	Residential – 100 residential units.
CH/1.13	Residential – 200 residential units.
<b>The Shopping and Markets Area</b>	
M/1.1	Mixed Use – 200 residential units with ancillary leisure and retail floor space.
M/1.2	Residential – 100 residential units.
M/1.3	Residential – 20 residential units.
M/1.4	Mixed Use – 80 residential units led mixed use.
M/1.5	Mixed Use – 100 residential units led mixed use.
<b>Goitside</b>	
V/1.1	Residential – 400 residential units with ancillary convenience retail and leisure.
V/1.2	Mixed Use – 400 residential units led mixed use.
V/1.3	Mixed Use – 200 residential units led mixed use.
V/1.4	Residential – 120 residential units.
V/1.5	Residential – 80 residential units.
V/1.6	Residential – 220 residential units with ancillary convenience retail and leisure.
V/1.7	Residential – 100 residential units with ancillary leisure / convenience retail.
V/1.8	Mixed Use – residential led mixed use.
V/1.9	Mixed Use – residential, office, retail and leisure.
V/1.10	Mixed Use – 100 residential units with ancillary retail and leisure.
<b>The Learning Quarter</b>	
LQ/1.1	Education – education and ancillary uses.
LQ/1.2	Education – education and ancillary uses.

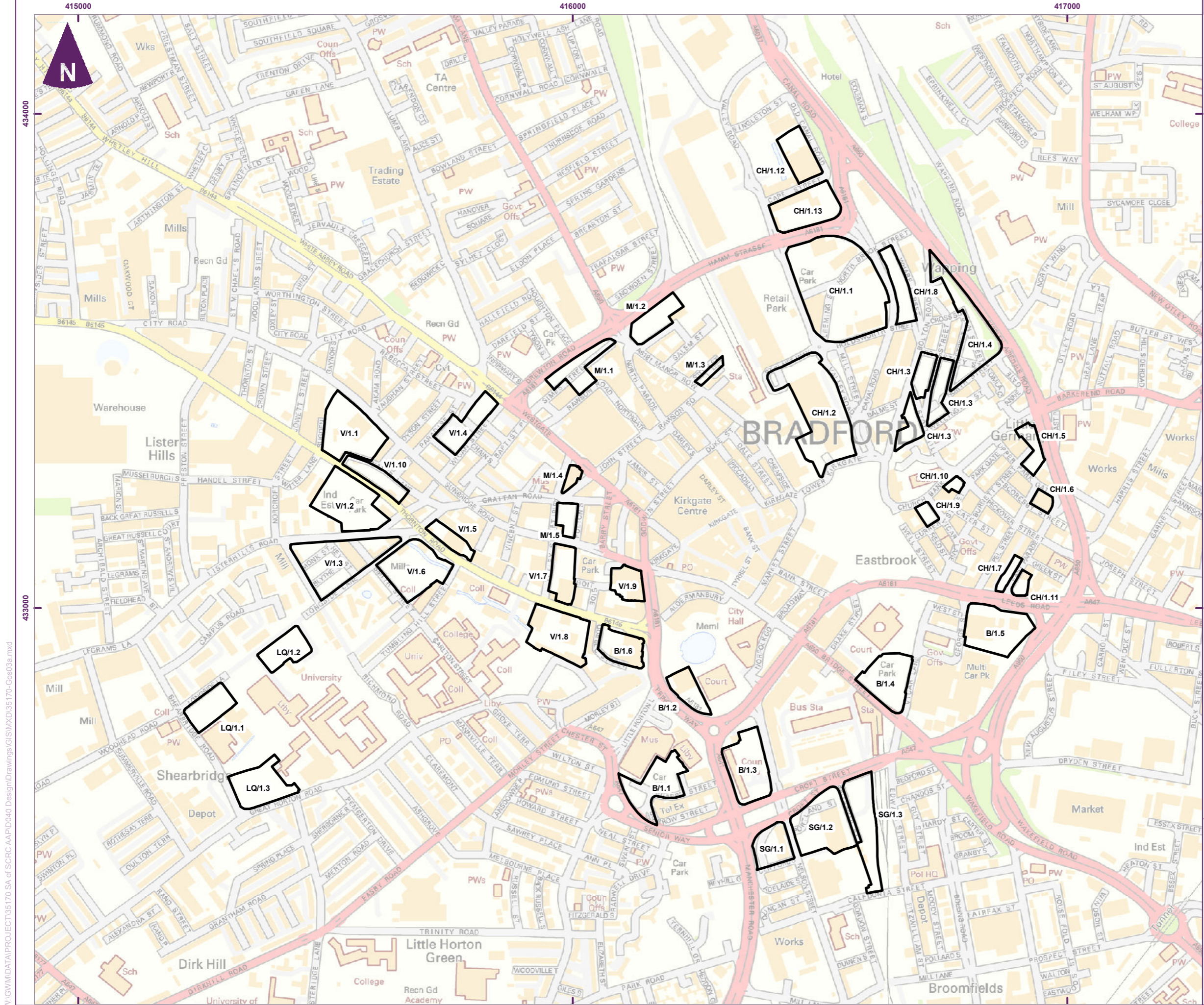
AAP Site Reference	Proposed Use
LQ/1.3	Education – education and ancillary uses.
<b>The Southern Gateway</b>	
SG/1.1	Residential – 250 residential units.
SG/1.2	Leisure Complex – leisure complex anchored by City Centre Swimming Pool.
SG/1.3	Improved railway and bus station with associated infrastructure.

Table 1.2 BCC AAP Policies

Policy Reference No.	Policy Name
CL1	Housing
CL2	Flood Risk
CL3	Active Frontages and Community Provision
CL4	Supporting Primary and Secondary Education Provision
SL1	Retail Development
SL2	Primary and Secondary Shopping Frontages
SL3	Improving the Connection between Shopping Areas
SL4	Cultural Assets
B1	Development of Employment Space
ED1	Promotion of the Learning Quarter
M1	Walking, Cycling and Public Realm
M2	Public Transport Services and Infrastructure (including Taxis)
M3	Traffic, Highways and Parking
M4	Impact of New Development upon the Transport Network
M5	Biodiversity in the City Centre
M6	Green/Blue Infrastructure and Open Space within the City Centre
BF1	The Nature of the Built Form
BF2	Tall Buildings
BF3	Built Form and the Environment
BF4	District Heat Networks

## ShIPLEY Canal Road Corridor Area Action Plan Publication Draft

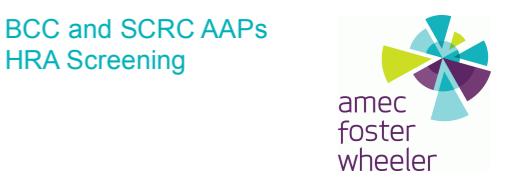
The SCRC is located within the main urban area of Bradford, stretching from the city centre to Shipley town centre. Canal Road itself is a major strategic route within the sub-region, linking areas within the Bradford District and beyond. The Corridor is a traditional employment corridor as well as being a key transport route



Key

□ BCC Site Allocations

0 0.1 0.2 0.3 0.4 km  
Scale at A3: 1:7,500

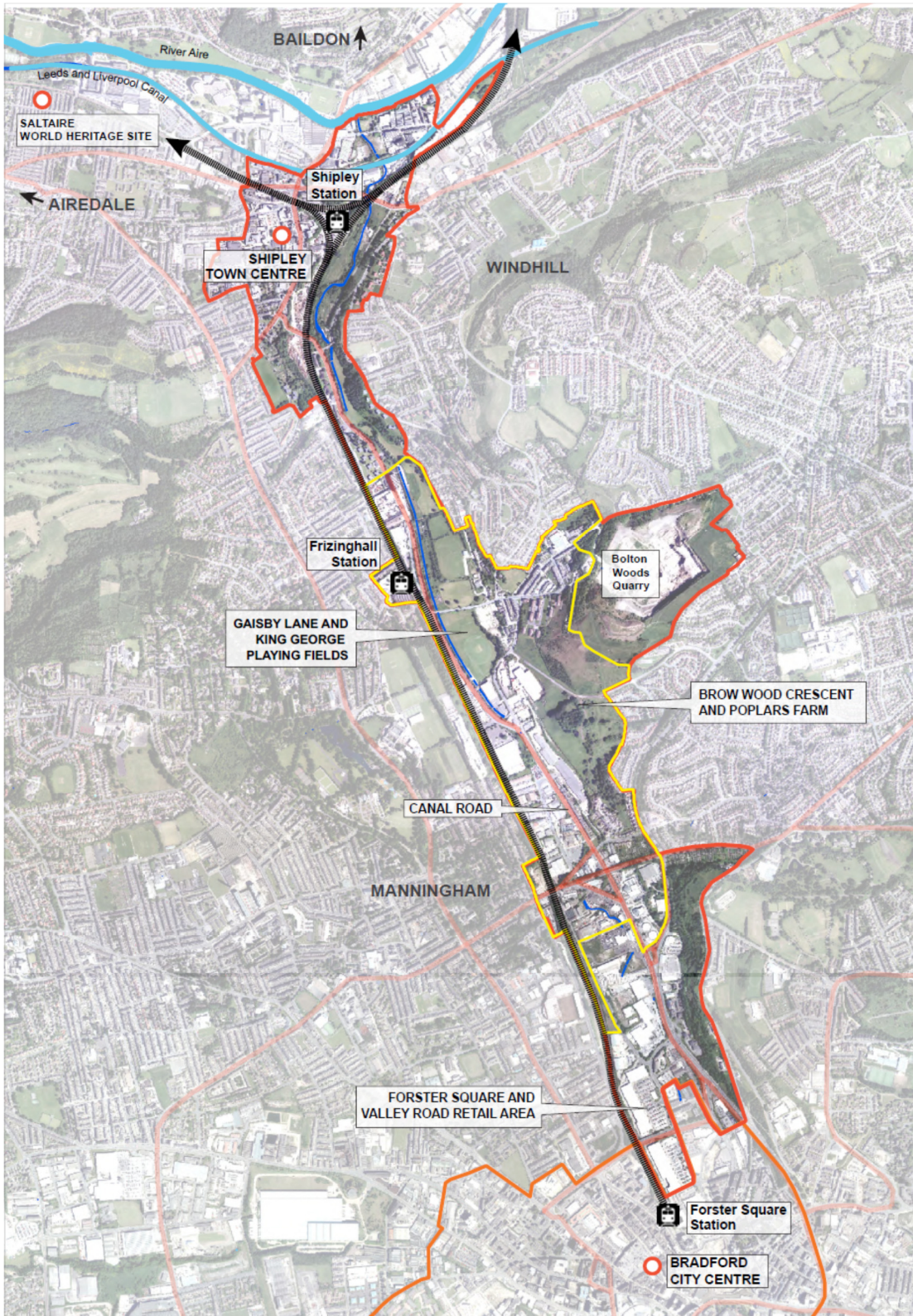


**Figure 1.2**  
BCC Site Allocations

northwards into and out of the city, forming a gateway into Airedale and beyond. Traditionally a mixed employment area, the Corridor developed out of its close proximity to the Bradford Canal and the railway line.

The Corridor is today characterised by a range of uses. The central area around Bolton Woods has a variety of uses including existing residential communities and areas of employment, mainly located alongside Canal Road. To the south, the area has a predominance of retail, business and commercial uses, which link to Forster Square retail area. The northern section includes Shipley town centre and business and residential areas to the east of Shipley around Dockfield Road and Crag Road. The area covered by the SCRC AAP is shown in **Figure 1.2** below.

Figure 1.2 SCRC AAP Boundary



The SCRC AAP Publication Draft contains a number of policies and site allocations which are detailed in **Tables 1.3** and **1.4** below. The SCRC site allocations are shown on **Figure 1.4** below.

Table 1.3 Site Allocations in the SCRC AAP

AAP Site Ref	Proposed Use
<b>Shipley</b>	
STC1	~20 residential units/office/commercial uses on upper floors with retail, commercial and leisure uses (A1-A4) on the ground floor.
STC2	~25 residential units, office and commercial use, with retail and leisure uses (A1-A4) on the ground floor
STC3	Residential - ~50 dwellings.
STC4	~50 residential units, business, hotel and commercial uses, with retail and leisure uses (A1-A5) on the ground floor
STC5	Residential - ~8 dwellings.
STC6	Residential/mixed use – A1/A5, business and ~20 dwellings.
SE1	Residential led mixed use - ~100-150 dwellings.
SE2	~30 dwellings.
DF1	~114 dwellings and supporting business uses.
DF2	Business, commercial and residential uses.
DF3	~60 residential units, business and commercial
DF4	Green Infrastructure/Flood Risk Management
DF5	~90 dwellings and supporting business uses.
DF6	~93 dwellings.
DF7	~6 dwellings.
DF8	~15 dwellings
DF9	~10 dwellings.
<b>Centre Section</b>	
NBW1	~1100 new dwellings, 300sq metres retail/leisure uses, new primary school, community facilities and employment uses.
NBW2	~42 dwellings.
NBW3	~21 dwellings.
NBW4	~35 dwellings.
NBW5	~50 dwellings, medium density.
NBW6	~30 dwellings, medium density.
NBW7	~70 residential units
BWQ1	~800-1000 dwellings, local and retail community uses to meet day to day needs.
<b>City Centre Fringe</b>	
CCF1	~46 dwellings.
CCF2	~16 dwellings, medium/high density.

<b>AAP Site Ref</b>	<b>Proposed Use</b>
CCF3	~23 dwellings, medium/high density.
CCF4	~60 dwellings.

Table 1.4 SCRC Policies

<b>Policy Reference No.</b>	<b>Policy Name</b>
H1	Housing Requirements
H2	Delivering New Homes and Sustainable Neighbourhoods
SE1	Sustainable Economic Growth
SE2	Canal Road Employment Zone
SE3	Valley Road Retail Area
SE4	Strategy for Retail Development
SE5	Shipley Town Centre and Primary Shopping Area
SE6	Market Provision
SE7	Minerals Safeguarding
SE8	Existing Waste Management Facilities
ST1	Transport Improvements
ST2	Safeguarded Transport Links
ST3	Maximising Sustainable Transport Options
ST4	Station Improvements
ST5	Pedestrian and Cycle Movements
ST6	Canal Road Greenway
ST7	Parking
ST8	Bradford Canal
CC1	Flood Risk and Water Management
CC2	Sustainable Design and Construction
NBE1	Green Infrastructure
NBE2	Waterway Environments
NBE3	The Bradford Beck
NBE4	Biodiversity and Ecology
NBE5	Heritage and Conservation
NBE6	Ensuring High Quality Design
HSC1	Hazardous Installations

Policy Reference No.	Policy Name
HSC2	Open Space, Sport and Recreation
HSC3	Community Infrastructure

## 1.2 Habitats Regulations Assessment Screening

As part of the production of these AAPs, CBMDC requires that a Habitats Regulations Assessment (HRA) screening is undertaken. Regulation 102 of the *Conservation of Habitats and Species Regulations 2010* (as amended) (the 'Habitats Regulations') states that if a land-use plan is "(a) is likely to have a significant effect on a European site or a European offshore marine site<sup>1</sup> (either alone or in combination with other plans or projects); and (b) is not directly connected with or necessary to the management of the site" then the plan-making authority must "...make an appropriate assessment of the implications for the site in view of that site's conservation objectives" before the plan is given effect.

The process by which Regulation 102 is met is known as Habitats Regulations Assessment (HRA)<sup>2</sup>. An HRA determines whether there will be any 'likely significant effects' (LSE) on any European site as a result of a plan's implementation (either on its own or 'in combination' with other plans or projects) and, if so, whether these effects will result in any adverse effects on the site's integrity. CBMDC has a statutory duty to prepare the Local Plan and is therefore the Competent Authority for an HRA.

Regulation 102 essentially provides a test that the final plan must pass; there is no statutory requirement for HRA to be undertaken on draft plans or similar developmental stages (e.g. issues and options; preferred options). However, as with Strategic Environmental Assessment (SEA) it is accepted best-practice for the HRA of strategic planning documents to be run as an iterative *process* alongside the plan development, with each version of the emerging policies or options assessed for their possible effects on European sites and modified or abandoned (as necessary) to ensure that the subsequently adopted plan is not likely to result in significant effects on any European sites, either alone or 'in combination' with other plans or projects. This is undertaken in consultation with Natural England (NE) and other appropriate consultees. It is therefore important to recognise that the strategic HRA is as much about guiding the development of the plan (and demonstrating that this has been done) as it is about (ultimately) assessing its effects.

## 1.3 Purpose of this Report

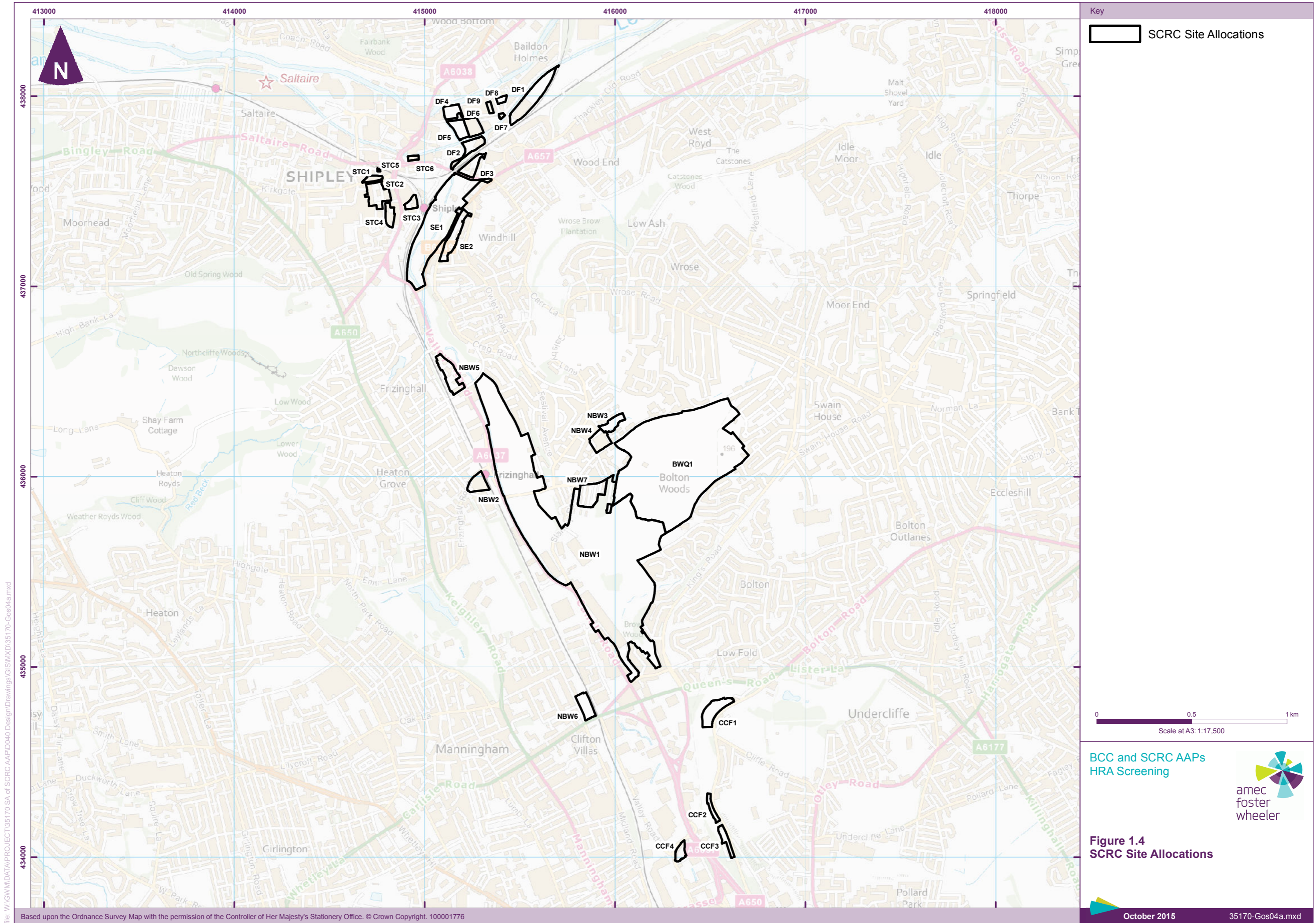
CBMDC, as the competent authority for its Local Plan, has requested consultancy support from Amec Foster Wheeler Environment and Infrastructure UK Limited (Amec Foster Wheeler) to undertake the necessary data collection and analyses to support a 'screening' assessment of the emerging AAPs, in accordance with Regulation 102, and to report this process appropriately. This assessment is iterative, and will assist CBMDC with the drafting of their emerging plans. The report does not provide a formal conclusion to the HRA process, which will occur at the adoption of the AAPs; rather, it sets out the stage 1 of the HRA process (screening) as applied to the Publication Drafts of both AAPs.

Further information about the screening process is set out in section 2 below. Section 3 of this report sets out the scope of the assessment and section 4 presents the findings. Section 5 presents the resulting conclusions and recommendations.

<sup>1</sup> 'European offshore marine sites' are defined by Regulation 15 of *The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007* (as amended); these regulations cover waters (and hence sites) over 12 nautical miles from the coast.

<sup>2</sup> The term 'Appropriate Assessment' has been historically used to describe the process of assessment; however, the process is now more accurately termed 'Habitats Regulations Assessment' (HRA), with the term 'Appropriate Assessment' limited to the specific stage within the process; see also Box 1.

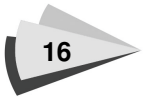




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**Figure 1.4**  
SCRC Site Allocations



## 2. Approach

### 2.1 Overview

An HRA involves determining whether there will be any LSEs on any European sites as a result of a plan's implementation (either on its own or 'in combination' with other plans or projects) and, if so, whether it can be concluded that there will be no adverse effects on the sites' integrity. The current European Commission guidance<sup>3</sup> suggests a four-stage process for HRA, as detailed in Box 1 below.

#### Box 1 Stages of Habitats Regulations Assessment

##### Stage 1 – Screening:

This stage identifies the likely impacts upon a European Site of a project or Plan, either alone or 'in combination' with other projects or plans, and considers whether these impacts are likely to be significant.

##### Stage 2 – Appropriate Assessment:

Where there are likely significant impacts, this stage considers the impacts of the Plan or project on the integrity of the relevant European Sites, either alone or 'in combination' with other projects or plans, with respect to the sites' structure and function and their conservation objectives. Where there are adverse impacts, it also includes an assessment of the potential mitigation for those impacts.

##### Stage 3 – Assessment of Alternative Solutions:

Where adverse impacts are predicted, this stage examines alternative ways of achieving the objectives of the project or Plan that avoid adverse impacts on the integrity of European Sites.

##### Stage 4 – Assessment Where No Alternative Solutions Exist and Where Adverse Impacts Remain:

This stage assesses compensatory measures where it is deemed that the project or Plan should proceed for imperative reasons of overriding public interest (IROPI). The guidance does not deal with the assessment of IROPI.

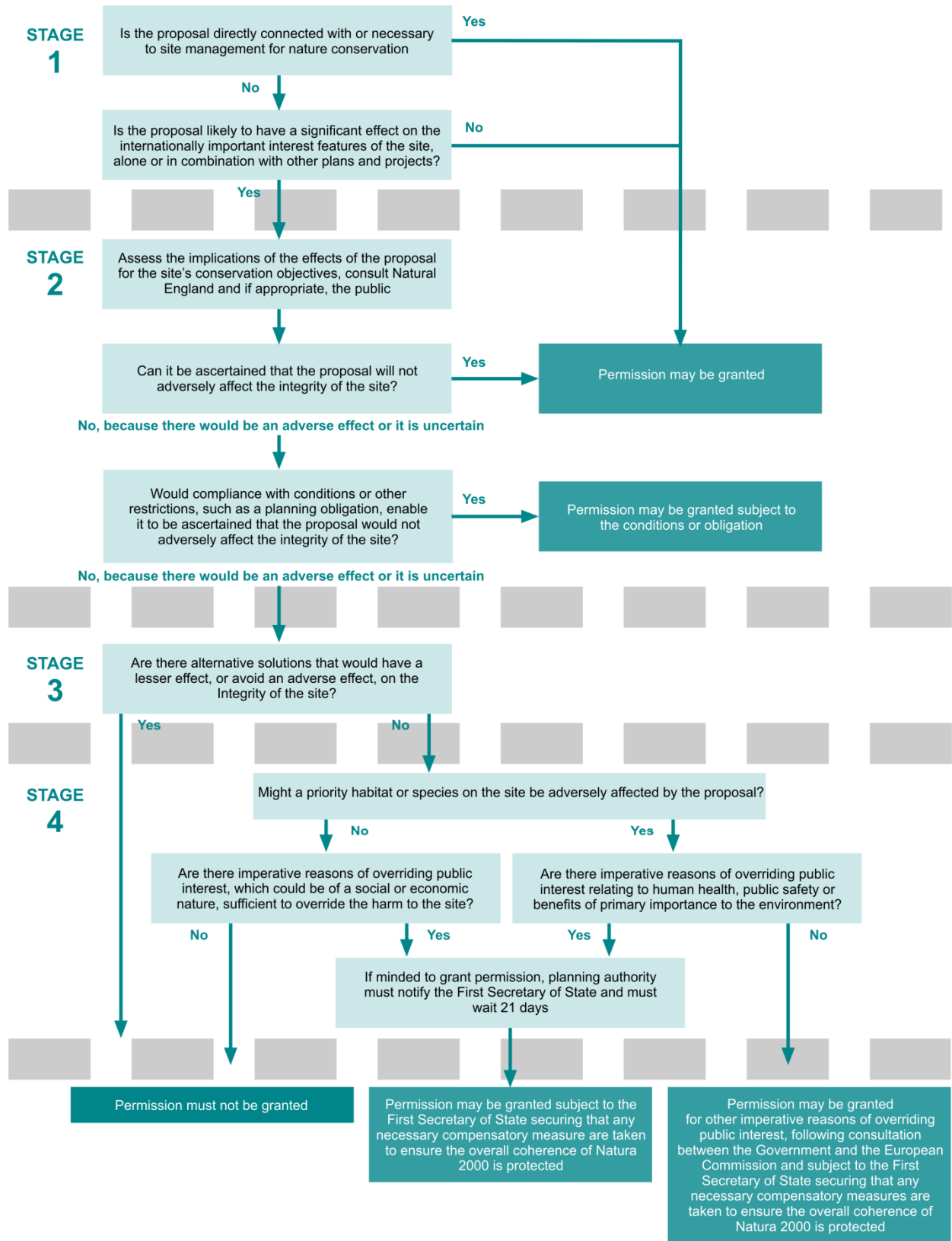
The approach summarised in Box 1 works well at the project-level where the scheme design is usually established and possible effects on European sites can be assessed (usually quantitatively) using a linear stepwise process. In contrast, land-use plans and similar strategies present a number of distinct challenges for HRA and rigid application of the 'staged' approach to assessment suggested by Box 1 is not always appropriate. It is preferable for sustainable policies to be developed from the beginning of the plan-making process rather than HRA being a purely retrospective assessment exercise towards the end. Furthermore, the HRA is ultimately a test that the final document must pass, and there is no statutory requirement for the developmental phases of the plan (e.g. 'issues and options' or the subsequent 'preferred options') to undergo HRA themselves. Therefore, it is important to recognise that the *process* of strategic HRA is as much about guiding the development of the plan (and demonstrating that effects on European sites have been considered appropriately) as it is about (ultimately) assessing its effects. The process is summarised in **Figure 2.1** below.<sup>4</sup>

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<sup>3</sup> *Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (EC 2002).

<sup>4</sup> Note, from a strict procedural perspective the 'screening' and 'appropriate assessment' stages can only be formally applied to the finalised plan, and not to its various phases or iterations; therefore the term 'screening' is used advisedly.

Figure 2.1 Habitats Regulations Assessment Process



## 2.2 Guidance

The following guidance has been used in the preparation of this screening assessment:

- ▶ DTA Publications (2013) *The Habitats Regulation Handbook* [online]. Available at: <http://www.dtapublications.co.uk/handbook/>;
- ▶ DCLG (2006). *Planning for the Protection of European Sites: Appropriate Assessment. Guidance for Regional Spatial Strategies and Local Development Documents. Department for Communities and Local Government*, HMSO, London;
- ▶ English Nature, (1997-2001). *Habitats Regulations Guidance Notes 1-9*, Natural England, Peterborough;
- ▶ European Commission, (2002). *Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*. European Commission, Brussels;
- ▶ European Commission, (2001). *Assessment of plans and projects significantly affecting Natura 2000 sites. European Commission*, Brussels; and
- ▶ European Communities, (2007). *Managing Natura 2000 sites: The provisions of Article 6 of the Habitats Directive 92/433/EEC*. European Commission, Brussels.

### Strategic Core Policy SC8<sup>5</sup>

The HRA screening takes into consideration Policy SC8 within the Core Strategy, which seeks to protect the South Pennine Moors SPA and SAC and their zone of influence. To ensure these sites are not harmed, the policy identifies the following zones:

- ▶ Zone A: No development involving a net increase in dwellings would be permitted within a suitable buffer area of the SPA/SAC (normally 400m) unless, as an exception, the form of residential development would not have an adverse effect upon the sites' integrity.;
- ▶ Zone Bi: Zone Bi would apply between 400m and 2.5km of the designated Site boundary. Within Zone Bi the Council will take a precautionary approach to the review and identification of potential Greenfield sites for development based on an assessment of carrying capacity using the available evidence from bird and habitat surveys and appropriate additional monitoring.;
- ▶ Zone Bii: Zone Bii would apply between 2.5km and up to 7km of the designated Site boundary. Within Zone Bii appropriate assessment is still likely to identify significant adverse effects in combination with other proposals, however appropriate avoidance or mitigation measures should allow development to take place.

Within Zones and Zone Bii residential developments that result in a net increase of one or more dwellings will be required to contribute to:

1. The provision of additional natural greenspace and appropriate facilities to deflect pressure from moorland habitats and the long-term maintenance and management of that greenspace.
2. The implementation of access management measures, which may include further provision of wardens, in order to reduce the impact of visitors.
3. A programme of habitat management and manipulation and subsequent monitoring and review of measures.

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<sup>5</sup>[http://www.bradford.gov.uk/bmdc/the\\_environment/planning\\_service/local\\_development\\_framework/Core\\_Strategy\\_DPD\\_Publication\\_Draft](http://www.bradford.gov.uk/bmdc/the_environment/planning_service/local_development_framework/Core_Strategy_DPD_Publication_Draft)

An approach to mitigation will be adopted that sets out a mechanism for the calculation of the planning contribution.

## 2.3 In-Combination Effects

The HRA screening assessment will consider 'in combination effects' with other plans and programmes, whilst recognising that this can be problematic to scope and complete, particularly where others are in preparation on a similar timescale. The in-combination effects with Bradford's Core Strategy will be particularly important to consider, given that the Core Strategy proposes development across Bradford, and the HRA for the Core Strategy will be reviewed for the potential for any such effects.

Consideration will also be given to the cumulative effects from activities such as recreation, trampling, fly tipping, traffic causing pollution and urban edge effects, but also the effects with other urban areas (Craven, Harrogate, Leeds, Calderdale, Burnley, and Pendle) which could also contribute to urban edge effects, where such developments are close enough in proximity of the SAC/SPA. The following plans and programmes (which could act in combination) will be considered:

- ▶ Bradford Metropolitan District Council Emerging Waste Management DPD;
- ▶ Burnley Borough Council Emerging Local Plan;
- ▶ Craven District Council Emerging Local Plan;
- ▶ Calderdale Metropolitan Borough Council Emerging Local Plan;
- ▶ Harrogate Borough Council Adopted Core Strategy;
- ▶ Leeds City Council Adopted Core Strategy;
- ▶ Pendle Borough Council Pre Submission Core Strategy; and
- ▶ West Yorkshire Local Transport Plan 2011 – 2026.

## 2.4 Summary of Approach

### Screening

This report is intended to cover "Level 1 – Screening" only. The principles of screening are applied to the emerging plan or its components (i.e. policies and allocations) to allow the assessment stage to focus on those aspects that are most likely to have potentially significant or adverse effects on European sites, as well as shape the emerging strategy. Screening aims to determine whether the plan will have any 'likely significant effects' (LSE) on any European site as a result of its implementation. It is intended to be a coarse filter for identifying effects (positive and negative) that may occur, to allow the assessment stage to focus on the most important aspects. A plan should be considered 'likely' to have an effect if the competent authority is unable (on the basis of objective information) to exclude the possibility that the plan could have significant effects on any European site, either alone or in combination with other plans or projects; an effect will be 'significant' if it could undermine the site's conservation objectives. CBMDC is the competent authority for the purposes of the Habitats Regulations, and is therefore responsible for completing the HRA.

Screening can be used to 'screen-out' European sites and plan components from further assessment, if it is possible to determine that significant effects are unlikely (e.g. if sites or interest features are clearly not vulnerable (exposed and / or sensitive) to the outcomes of a plan due to the absence of any reasonable impact pathways). For the BCC and SCRC AAPs, the screening process has been used on the AAPs 'as a whole'; on the European sites themselves; and on the key components of the plan (the policies and allocations). The screening takes account of measures included in the plan to avoid significant effects.

## 3. Scope of Assessment and Baseline Summary

### 3.1 Study Area and Data Sources

The spatial scope of any HRA should be based on the likely environmental outcomes of the plan and its 'zone of influence'; and the interest features of the European sites that may be affected and their potential vulnerabilities<sup>6</sup>. It is therefore not usually appropriate to employ 'arbitrary' spatial buffers to determine those European sites that should be considered within an HRA. However, as distance is a strong determinant of the scale and likelihood of most effects, the considered use of a suitably precautionary search area as a starting point for the screening (based on a thorough understanding of both the plan outcomes and European site interest features) has some important advantages. Using buffers allows the systematic identification of European sites using GIS, so minimising the risk of sites or features being overlooked, and also ensures that sites where there are no reasonable impact pathways can be quickly and transparently excluded from any further screening or assessment. It also has the significant advantage of providing a consistent point of reference for consultees following the assessment process, allowing the 'screening' to focus on the potential effects, rather than on explaining why certain sites may or may not have been considered in relation to a particular aspect of the plan.

This study therefore considers potential effects on all European sites likely to be affected by the AAPs, which at this stage includes all European sites within 15km, together with any additional downstream sites that may be hydrologically linked to the plan's zone of influence. This is considered to be a suitably precautionary starting point for the assessment of the plan. The European sites listed in **Table 3.1** are therefore included in this HRA screening assessment (see also **Figure 3.1** below). It is noted that the European sites included in this study are the same as for the HRA completed of the Bradford Core Strategy.<sup>7</sup>

### 3.2 European Sites within the Study Area

Table 3.1 European Sites within the Study Area

Site	Approximate location relative to BCC and SCRC areas
<b>South Pennine Moors SAC and South Pennine Moors Phase 2 SPA</b>	Approximately 7.5km west and 8.5km north of BCC boundary Approximately 4.3km north and 9.4km west of SCRC boundary
<b>North Pennine Moors SAC and SPA</b>	Approximately 12.2km north of SCRC boundary >15km from BCC boundary

Data on the European site interest features, their distribution, and their sensitivity to potential effects associated with the plan were obtained from various sources and reports, including the Joint Nature Conservation Committee (JNCC) and Natural England (NE) websites (citations; boundaries; etc.); site condition was based on the NE condition assessments for corresponding SSSI units, where this information was available<sup>8</sup>. Additional information on particular sites or features was obtained from other sources where available.

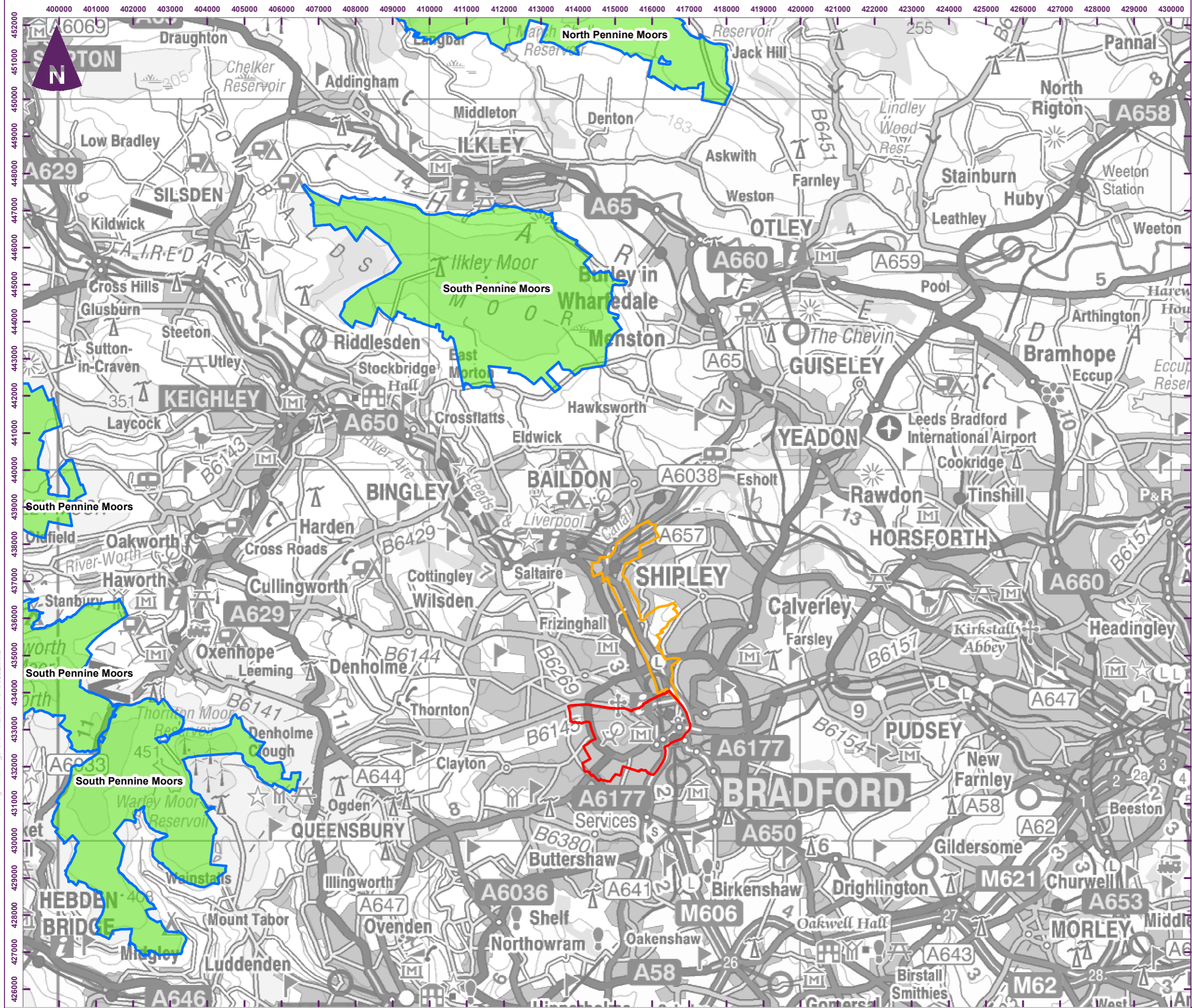
<sup>6</sup> The vulnerability of an interest feature will depend on its 'sensitivity' and 'exposure' to a potential effect.

<sup>7</sup> Urban Edge (2014), Habitats Regulations Assessment for the City of Bradford District Core Strategy: Appropriate Assessment Report for the Core Strategy Publication Draft Document (February 2014), December 2014

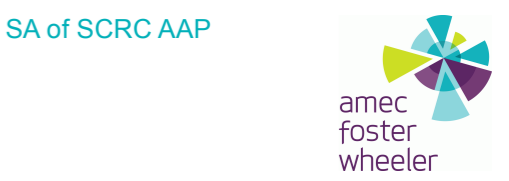
<sup>8</sup> Note that that the boundaries of the component SSSI units (which the condition assessments relate to) do not always match the European site boundaries exactly (i.e. the SSSIs are usually larger) and it is not always possible to split SSSI units to determine the precise quantity of the European site (or interest feature) that is in each condition category.

The interest features of the European sites likely to be impacted by the AAPs, and the current factors affecting them, are detailed in **Table 3.2**. A summary of the Conservation Objectives for European sites is provided in **Section 3.3** below. There are many factors currently affecting the European sites over which the local plan will have no or little influence; analysis of the available site data indicates that the most common reasons for an 'unfavourable' condition assessment of the component SSSI units are inappropriate management of some form (e.g. over- or under-grazing, scrub control, water-level management etc.) or secondary effects from agriculture (e.g. local drainage, run-off, grazing pressure etc.). The potential mechanisms by which the Local Plan could affect these sites are discussed in Section 3.3. Latin names (other than where they form part of the habitat classification/site citation or where no common name is in usage) can be found in **Appendix B**.





- Key
- Bradford City Centre AAP Boundary
  - Shipley Canal Road Corridor AAP Boundary
  - Special Areas of Conservation (SAC)
  - Special Protection Areas (SPA)



**Figure 3.1**  
**BCC and SCRC AAPs HRA**  
**Screening Report**  
**European Sites Locations and AAP**

file: F:\GWM\DATA\PROJECT\35170\_SA\_of\_SCRC\_AAP\040\_Design\Drawings\GIS\MXD\35170-Gos02.mxd

Table 3.2 European Sites and Interest Features Potentially Affected by AAPs

Site Name	Site description	Reasons for Designation	Vulnerabilities/Interest Features Potentially Affected by AAPs
<b>South Pennine Moors SAC</b>	<p>This site covers the key moorland blocks of the Southern Pennines from Ilkley Moor in the north to the Peak District in the south. The moorlands as a whole support a breeding bird community of national and international importance.</p> <p>The site is representative of upland dry heath which covers extensive areas, occupies the lower slopes of the moors on mineral soils or where peat is thin, and occurs in transitions to acid grassland, wet heath and blanket bogs. The upland heath of the South Pennines is strongly dominated by <i>Calluna vulgaris</i> – <i>Deschampsia flexuosa</i> heath and <i>C. vulgaris</i> – <i>Vaccinium myrtillus</i> heath. More rarely <i>C. vulgaris</i> – <i>Ulex gallii</i> heath and <i>C. vulgaris</i> – <i>Erica cinerea</i> heath are found. On the higher, more exposed ground <i>V. myrtillus</i> – <i>D. flexuosa</i> heath becomes more prominent.</p> <p>The smaller area of wet heath is characterised by cross-leaved heath and purple moor grass. The site also supports extensive areas of acid grassland largely derived from dry and wet heath. In the cloughs, or valleys, which extend into the heather moorlands, a greater mix of dwarf shrubs can be found together with more lichens and mosses. The moors support a rich invertebrate fauna, especially moths, and important bird assemblages.</p> <p>This site also contains areas of blanket bog, although the bog vegetation communities are botanically poor. Hare's-tail cottongrass is often overwhelmingly dominant and the usual bog-building <i>Sphagnum</i> mosses are scarce. Where the blanket peats are slightly drier, heather, crowberry and bilberry become more prominent. Cranberry and the uncommon cloudberry are locally abundant in bog vegetation. Bog pools provide diversity and are often characterised by common cottongrass. Substantial areas of the bog surface are eroding, and there are extensive areas of bare peat. In some areas erosion may be a natural process reflecting the great age (up to 9000 years) of the South Pennine peats.</p> <p>Around the fringes of the upland heath and areas of bog are blocks of old sessile oak woods, usually on slopes. These tend to be dryer than those further north and west, such that the bryophyte communities are less developed (although this lowered diversity may in some instances have been exaggerated by the effects of 19th century air pollution).</p>	<p><b>Annex I Habitats (primary):</b> European dry heaths Blanket bogs * <i>Priority feature</i> Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles</p> <p><b>Annex I Habitats (not primary):</b> ** Northern Atlantic wet heaths with <i>Erica tetralix</i> Transition mires and quaking bogs</p>	<p>All interest features have been affected by excessive livestock grazing levels across parts of the site, but agreements with graziers and moorland owners, including those in Wildlife Enhancement and Countryside Stewardship schemes, are starting to overcome the problems of overgrazing. Drainage of wet areas can also be a problem; drains have been cut across many areas of blanket bog, disrupting the hydrology and causing erosion, but in most parts these are being blocked and the habitat restored under agreements. Burning is a traditional management tool on these moorlands, which contributes to maintaining high populations of SPA breeding birds. However, over-intensive and inappropriate burning is damaging to heath and blanket bog. Restoration, to some degree, of a mosaic of more natural habitats across parts of the site is desirable. Acid and nitrogen deposition continue to have damaging effects on the site.</p> <p><b>Key potential issues:</b> Excessive grazing; drainage and disruption to hydrology; inappropriate burning and atmospheric pollution.</p>

Site Name	Site description	Reasons for Designation	Vulnerabilities/Interest Features Potentially Affected by AAPs
<b>South Pennine Moors Phase 2 SPA</b>	<p>The South Pennine Moors were designated as SPA in two phases in 1996 and 1997 and were further extended in 2000. This assessment focuses on the South Pennine Moors Phase 2 SPA only.</p> <p>The site covers an area of some 20,937ha. It incorporates three component Sites of Special Scientific Interest (SSSI), including the South Pennine Moors SSSI, The Dark Peak SSSI and Standedge Road Cutting SSSI. It includes the major moorland areas of the northern South Pennines from Ilkley in the north to Chase Moss and Pule Hill near Marsden in the south. It covers extensive expanses of semi-natural moorland habitat including upland heath and blanket mire.</p> <p>The SPA is of European importance for several upland breeding bird species, including birds of prey and waders. Both merlin and golden Plover feed upon farmland or in-by-land on the edge of the moors that is outside of the SPA boundary; this is considered important to the long term conservation of the SPA population of these birds. The northern end of the South Pennine Moors SPA is within 10 km of the North Pennine Moors SPA which supports a similar assemblage of upland breeding species.</p>	<p><b>Annex I Birds (Breeding):</b> Merlin; golden plover.</p> <p><b>Regularly occurring migratory birds/ internationally important assemblage of breeding birds:</b> Common Sandpiper; short-eared owl; dunlin; twite; common snipe; curlew; northern wheatear; golden plover; whinchat; redshank; ring ouzel; lapwing.</p>	<p><b>Farm management:</b> This includes loss of heather moorland and rough grazing to improved pastures; the switch from hay to silage making; increased year round stocking densities of sheep and cattle; localised overgrazing; lack of succession in an ageing farming community; decline in beneficial practices such as heather burning in some areas and excessive uncontrolled burning in others; lack of appropriate structural funds for the majority of South Pennine farmers; low take up of existing agri-environmental; high proportion of common land (at least 45%) with multiple graziers creating difficulties for effective land management; low levels of available labour leading to a decline in shepherding; and agriculture improvement using imported materials such as paper waste and building rubble. This has contributed to pressures on the feeding and nesting sites for many key upland bird species resulting in some of the core bird species of the SPA declining.</p> <p><b>Disturbance from recreation and access:</b> This can be through changes in habitat quality or extent, with the biggest risks from direct damage to vegetation likely to occur around footpaths and summits, particularly on peatland areas. Most concern has centred on the possible impact on birds during the breeding season, as both access and recreational activity and bird populations are at relatively low levels in the winter months. Depending upon the frequency and intensity of activity, impacts range from disruption of normal behaviour and activity patterns of birds, through avoidance behaviour, to increased risks of nest and chick loss due to desertion, starvation, predation or weather conditions. In the short-term this can reduce annual productivity. In the longer term, it could lead to reductions in population size from reduced recruitment or avoidance of heavily disturbed areas. Research to date is inconclusive as to whether recreation and access at current levels are having a major impact on bird conservation in the South Pennine Moors. However, these activities may have significant localised impacts, and have the potential to have wider conservation implications. Plans to extend or develop recreational activities in the area must be accompanied by appropriate assessment and monitoring. A large proportion of recreational activity takes place on already well-developed access networks and facilities, with honeypots absorbing a proportion of this. The general level of negative impact upon birds and habitats is, therefore, likely to be relatively limited. Research literature to date does not prove that access to open moorland in itself has a significant long-term impact upon breeding bird populations. There are, however, real short-term, localised effects from, for example uncontrolled dogs; orienteering; large walking events (e.g. sponsored); model aircraft; hang gliders particularly at breeding sites or seasons; and uncontrolled fires.</p>

Site Name	Site description	Reasons for Designation	Vulnerabilities/Interest Features Potentially Affected by AAPs
			<p><b>Persecution:</b> Nest robbery is the most significant form of persecution in the South Pennine Moors. Although it is difficult to gauge the impact of this activity, birds of prey, notably peregrine falcon and merlin have become the subject of intense egg and chick theft in recent years, primarily by egg collectors and those involved in the illegal falconry trade. Other species, such as twaite, also being targeted by egg collectors.</p> <p><b>Wind farms:</b> Wind power developments can damage many of the core moorland habitats such as blanket peat due to drainage or the effects of access tracks, cabling and piling. In addition, the construction and operation of facilities may cause some disturbance to nesting areas, for example those of golden plover.</p> <p><b>Mineral Extraction:</b> Many quarries are operating on long-established planning permissions. As a result, the degree of habitat disturbance, damage and quality of restoration schemes can vary widely. Abandoned or derelict quarries can be a huge asset for key SPA birds such as peregrine falcon. Extraction of peat within the SPA is no longer carried out commercially.</p> <p><b>Transport:</b> The SPA and its environs contain a significant road network and a major trans-Pennine motorway route - the M62. Increasing moves towards promotion of public transport could reduce the extent of disturbance and habitat damage and loss through pollution. There is also a historic rail network providing commuter and tourist transport and a series of canals. Increasingly, such 'heritage' transport is being marketed and upgraded/restored which may bring increased visitor pressure in and around the SPA and lead to pressures for further associated development and infrastructure. The management regimes of local highway authorities for roads in general may be positive or negative for key birds of the SPA e.g. through positive encouragement of wild flower margins, excessive use of chemical treatments or inappropriate reinstatement of margins after road works.</p> <p><b>Key potential issues:</b> Farm management practices; transport; mineral extraction; wind farms; disturbance &amp; erosion from recreation &amp; access; and persecution.</p>

Site Name	Site description	Reasons for Designation	Vulnerabilities/Interest Features Potentially Affected by AAPs
<b>North Pennine Moors SAC</b>	<p>The North Pennine Moors (along with the North York Moors) hold much of the upland heathland of northern England. At higher altitudes and to the wetter west and north of the site complex, the heaths grade into extensive areas of blanket bogs.</p> <p>The most abundant heath communities are H9 <i>Calluna vulgaris</i> – <i>Deschampsia flexuosa</i> heath and H12 <i>Calluna vulgaris</i> – <i>Vaccinium myrtillus</i> heath. There are also examples of H18 <i>Vaccinium myrtillus</i> – <i>Deschampsia flexuosa</i>, H10 <i>Calluna vulgaris</i> – <i>Erica cinerea</i> and H21 <i>Calluna vulgaris</i> – <i>Vaccinium myrtillus</i> – <i>Sphagnum capillifolium</i> heaths.</p> <p>The North Pennine Moors (along with the North York Moors) hold much of the upland heathland of northern England. At higher altitudes and to the wetter west and north of the site complex, the heaths grade into extensive areas of blanket bogs.</p> <p>The most abundant heath communities are H9 <i>Calluna vulgaris</i> – <i>Deschampsia flexuosa</i> heath and H12 <i>Calluna vulgaris</i> – <i>Vaccinium myrtillus</i> heath. There are also examples of H18 <i>Vaccinium myrtillus</i> – <i>Deschampsia flexuosa</i>, H10 <i>Calluna vulgaris</i> – <i>Erica cinerea</i> and H21 <i>Calluna vulgaris</i> – <i>Vaccinium myrtillus</i> – <i>Sphagnum capillifolium</i> heaths.</p> <p>The North Pennine Moors (along with the North York Moors) hold much of the upland heathland of northern England. At higher altitudes and to the wetter west and north of the site complex, the heaths grade into extensive areas of blanket bogs.</p> <p>The most abundant heath communities are H9 <i>Calluna vulgaris</i> – <i>Deschampsia flexuosa</i> heath and H12 <i>Calluna vulgaris</i> – <i>Vaccinium myrtillus</i> heath. There are also examples of H18 <i>Vaccinium myrtillus</i> – <i>Deschampsia flexuosa</i>, H10 <i>Calluna vulgaris</i> – <i>Erica cinerea</i> and H21 <i>Calluna vulgaris</i> – <i>Vaccinium myrtillus</i> – <i>Sphagnum capillifolium</i> heaths.</p> <p>The North Pennine Moors (along with the North York Moors) hold much of the upland heathland of northern England. At higher altitudes and to the wetter west and north of the site complex, the heaths grade into extensive areas of blanket bogs.</p> <p>The most abundant heath communities are H9 <i>Calluna vulgaris</i> – <i>Deschampsia flexuosa</i> heath and H12 <i>Calluna vulgaris</i> – <i>Vaccinium myrtillus</i> heath. There are also examples of H18 <i>Vaccinium myrtillus</i> – <i>Deschampsia flexuosa</i>, H10 <i>Calluna vulgaris</i> – <i>Erica cinerea</i> and H21 <i>Calluna vulgaris</i> – <i>Vaccinium myrtillus</i> – <i>Sphagnum capillifolium</i> heaths.</p>	<p><b>Annex I Habitats (primary):</b> European dry heaths <i>Juniperus communis</i> formations on heaths or calcareous grasslands Blanket bogs *Priority feature if active bog Petrifying springs with tufa formation (<i>Cratoneurion</i>) * Priority feature Siliceous rocky slopes with chasmophytic vegetation. Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles</p> <p><b>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:</b></p> <p>Calaminarian grasslands of the <i>Violetalia calaminariae</i></p> <p>Siliceous alpine and boreal grasslands</p> <p>Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)</p> <p>Alkaline fens</p> <p><i>Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)</i></p> <p>Calcareous rocky slopes with chasmophytic vegetation</p> <p><b>Annex II species present as a qualifying feature, but not a primary reason for site selection:</b></p> <p>Marsh saxifrage.</p>	<p>The South Pennine Moors SAC is largely enclosed on two sides by large industrial urban areas, which means that large numbers of people use the area for recreational activities. Around two-thirds is within the Peak District National Park. Land management is primarily driven by agriculture, rough grazing for sheep, and grouse-shooting.</p> <p>Access management is therefore a key issue. Accidental fires can cause extensive damage to vegetation. The National Park Authority has produced a strategic Fire Plan and areas are closed to the public at times of high fire risk. Maintenance of the ecosystems relies primarily on appropriate grazing levels and burning regimes. There are a number of key pressures upon the site; these include overgrazing by sheep, burning as a tool for grouse moor management and inappropriate drainage through moor-gripping. Management of the site, especially north of the National Park, is further complicated by the large number of commons.</p> <p>Atmospheric pollution over the last few hundred years has depleted the lichen and bryophyte flora and may be affecting dwarf-shrubs. The impact has arguably been greatest on blanket bog, wet heath and transition mire where the bog-building <i>Sphagnum</i> mosses have been largely lost.</p> <p>Combined with historical overgrazing, burning (accidental and deliberate), drainage and locally trampling, large areas of blanket bog have become de-vegetated and eroded. It is unclear at this stage whether the effects are irreversible.</p> <p>The former extensive cover of woodland has declined over many centuries to the point that it is fragmented, relatively small-scale and largely restricted to steeper valley sides. Remaining woods are often unfenced and open to grazing which restricts tree regeneration. In some <i>Rhododendron</i> has invaded, choking out native flora. As well as restoring existing stands of woodland there is an emphasis on re-creation to expand and link fragments which inevitably involves changing existing habitats. The flora of woodlands has suffered from poor air quality. Again, it is less clear what can be done to reverse this situation other than to try and ensure continued improvements in air quality to allow affected species to recolonise if they can.</p> <p><b>Key potential issues:</b> Access management; farm management practices; drainage and disruption to hydrology; inappropriate burning; invasive species; and atmospheric pollution.</p>

Site Name	Site description	Reasons for Designation	Vulnerabilities/Interest Features Potentially Affected by AAPs
North Pennine Moors SPA	<p>The North Pennine Moors includes one major stand of juniper scrub in Swaledale as well as a number of small and isolated localities. The Swaledale site grades into heathland and bracken but the core area of juniper is of W19 <i>Juniperus communis</i> – <i>Oxalis acetosella</i> woodland with scattered rowan and birch spp.</p>		
	<p>The North Pennine Moors hold the major area of blanket bog in England. A significant proportion remains active with accumulating peat, although these areas are often bounded by sizeable zones of currently non-active bog, albeit on deep peat. The main NVC type is M19 <i>Calluna vulgaris</i> – <i>Eriophorum vaginatum</i> blanket mire, but there is also representation of M18 <i>Erica tetralix</i> – <i>Sphagnum papillosum</i> blanket mire and some western localities support M17 <i>Scirpus cespitosus</i> – <i>Eriophorum vaginatum</i> blanket mire. Forms of M20 <i>Eriophorum vaginatum</i> blanket mire predominate on many areas of non-active bog.</p> <p>Petrifying Springs habitat is very localised in occurrence within the North Pennine Moors, but where it does occur it is species-rich with abundant bryophytes, sedges and herbs including bird's-eye primrose and marsh valerian</p> <p>Acidic rock outcrops and screes are well-scattered across the North Pennine Moors and support vegetation typical of Siliceous rocky slopes with chasmophytic vegetation in England, including a range of lichens and bryophytes, such as <i>Racomitrium lanuginosum</i>, and species like stiff sedge and fir clubmoss.</p> <p>Birk Gill Wood is an example of old sessile oak woods well to the east of the habitat's main distribution in the UK. However, this sheltered river valley shows the characteristic rich bryophyte and lichen communities of the type under a canopy of oak, birch spp. and rowan. The slopes are boulder-strewn, with mixtures of heather, bilberry and moss carpets in the ground flora.</p>		
	<p>The North Pennine Moors SPA includes parts of the Pennine moorland massif between the Tyne Gap (Hexham) and the Ribble-Aire corridor (Skipton). It encompasses extensive tracts of semi-natural moorland habitats including upland heath and blanket bog.</p> <p>The southern end of the North Pennine Moors SPA is within 10km of the South Pennine Moors SPA, which supports a similar assemblage of upland breeding species. The North Pennine Moors includes Moor House SPA, a site that was subject to separate classification. The latter site has been subsumed within the North Pennine Moors SPA for reporting purposes.</p>	<p><b>Article 4.1: Annex 1 species:</b> Hen harrier; merlin; peregrine falcon; golden plover.</p>	<p>Suitable habitat exists on the site to support successful breeding, but low numbers of hen harrier are present (confined to one specific area).</p> <p>The Uplands Evidence Review has provided strong evidence that, amongst other things, managed rotational burning results in changes to the plant and faunal species composition and peat properties of blanket bogs and wet heath. Rotational burning of habitats supporting heather is carried out throughout the North Pennines as part of the management of moors for red grouse shooting and sheep grazing. However, frequent repeated burning, in combination with grazing and drainage, is affecting the condition of the blanket bog on a wide scale.</p>

Site Name	Site description	Reasons for Designation	Vulnerabilities/Interest Features Potentially Affected by AAPs
			<p>It also alters distribution of age structure and distribution/availability of nesting bird habitat within blanket bog, wet heath and dry heath habitats.</p> <p>Inappropriate grazing affects species composition of many habitats and can cause loss of extent of notified habitats and species. Rabbits as well as livestock cause localised overgrazing and additionally affect habitats on fragile substrates through burrowing. In many areas agri-environment schemes are helping to address this issue, but these are only temporary, lasting up to 10 years.</p> <p>In some areas, changes in grazing management to improve the condition of extensive features (e.g. blanket bog and dry heath) appears to have resulted in adverse changes in structure in other equally important but less extensive habitats, such as limestone grassland with rare arctic alpine species and flushes supporting yellow marsh saxifrage. There has been a general reduction in hardy cattle and an increase in the proportion of sheep, which graze more selectively and create a more uniform structure.</p> <p>Past drainage ('moor-gripping') has caused hydrological changes within blanket peat and some other water-dependent features such as alkaline fens. The effects on blanket bog are severe and widespread, potentially also resulting in impacts on breeding waders.</p> <p>Technical changes in terms of off-road vehicles and machinery to control burning has allowed access to areas of moorland that were previously difficult to manage and has increased commercial competition.</p> <p>Development applications (such as tracks, quarrying and windfarms) are usually small scale but there is the potential for in combination effects on the European site. Proposals are dealt with via the planning control process but usually require pre-application advice. The critical loads for nitrogen are exceeded within these sites. The actual impacts of this are unclear at present. However, increased nitrogen deposition has the potential to affect the species composition of sensitive habitats. There is particular concern about effects of nitrogen deposition on limestone grasslands which support arctic alpine species in the Upper Teesdale NNR, where an increasing proportion of grasses and a 'bulky' sward have been observed. Fertiliser use on certain areas, in particular upland hay meadows, is preventing achievement of favourable condition due to eutrophication. Inappropriate timing of in-field operations impacts on nesting birds (e.g. curlew).</p>

Site Name	Site description	Reasons for Designation	Vulnerabilities/Interest Features Potentially Affected by AAPs
			<p>Inappropriate timing of taking the hay crop from northern hay meadows impacts on vegetation composition and structure and hence the ability to restore unfavourable examples of an already extremely restricted habitat. The mechanisms to address this are only partly effective. An increase in dominance of larger, more competitive rushes, in particular soft rush, has been observed over much of the North Pennines, particularly in the moorland fringes. This affects the structure and composition of habitats into which the rushes have spread.</p> <p>Vehicle use for moorland or agricultural management or for recreational activity can damage habitats associated with soft ground in particular. It can also have direct impacts on or cause disturbance to breeding birds. There are localised but severe effects on bird populations and habitats through disturbance and direct physical damage as a result of illegal vehicle activity e.g. motorbikes.</p> <p>There are localised but severe effects on bird populations and habitats through disturbance and direct physical damage as a result of high or inappropriate recreational usage. As well as well-established traditional walking routes, recreational activities such as gill scrambling, mountain-biking, geocaching and large organised outdoor events are increasing.</p> <p><b>Key potential issues:</b> Farm management practices; disturbance &amp; erosion from recreation &amp; access; inappropriate burning; vehicle use; and atmospheric pollution.</p>



### 3.3 Conservation Objectives

The conservation objectives for all sites have been revised by NE in recent years to increase consistency of assessment and reporting. As a result, the overarching conservation objectives for all SACs and SPAs are effectively the same:

#### For SACs:

*With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features'...), and subject to natural change; ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring [as applicable to each site];*

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

#### For SPAs:

*With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features'...), and subject to natural change; ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:*

- ▶ *The extent and distribution of the habitats of the qualifying features;*
- ▶ *The structure and function of the habitats of the qualifying features;*
- ▶ *The supporting processes on which the habitats of the qualifying features rely;*
- ▶ *The population of each of the qualifying features, and*
- ▶ *The distribution of the qualifying features within the site.*
- ▶ The conservation objectives for Ramsar sites are taken to be the same as for the corresponding SACs/SPAs (where sites overlap). The conservation objectives are considered when assessing the potential effects of plans and policies on the sites; information on the sensitivities of the interest features also informs the assessment.

### 3.4 Impact Pathways

Analysis of the available European site data indicates that the most common reasons for 'unfavourable' condition are secondary effects from agriculture and inappropriate management of some form. The BCC and SCRC AAPs will have little direct influence on these factors, and therefore the assessment focuses on the main environmental aspects that the AAPs are likely to influence. The main mechanism by which the plan could affect these sites are through spatial allocations that have direct or indirect effects on European sites; on policies that direct development (or do not control development) such that significant effects are likely. The main environmental aspects, and the pathways by which the AAPs could affect European sites, are summarised in the following sections together with available baseline data on those aspects to inform the

assessment. European sites that are particularly vulnerable to a particular aspect (i.e. sensitive and likely to be exposed due to the AAPs) are identified.

## Recreational Pressure

Many European sites will be vulnerable to some degree of impact as a result of recreational pressure, although the effects of recreational pressure are complex and very much dependent on the specific conditions and interest features at each site: for example, some bird species are more sensitive to disturbance associated with walkers or dogs than others; some habitats will be more sensitive to trampling or mechanical disturbance than others; some sites will be more accessible than others.

The most typical mechanisms for recreational effects are through direct damage of habitats, or disturbance of certain species. Damage will most often be accidental or incidental, but many sites are particularly sensitive to soil or habitat erosion caused by recreational activities and require careful management of recreational activities to minimise any effects – for example, through provision and maintenance of ‘hard paths’ (boardwalks, stone slabs etc.) and signage to minimise soil erosion along path margins.

Disturbance<sup>9</sup> of species due to recreational activities can also be a significant problem at some sites, although the relationship (again) is highly variable and depends on a range of factors including the species, the time of year and the scale, type and predictability of disturbance. Most studies have focused on the effects on birds, either when breeding or foraging. For example, a long term monitoring project by Natural England on the Thanet Coast has found that turnstones (a shoreline-feeding water bird) are particularly vulnerable to disturbance from dogs, which interrupts their feeding behaviour and can prevent them from gaining sufficient body fat for overwintering or migration. Similarly, Finney et al. (2005) noted that re-surfacing the Pennine Way significantly reduced the impact of recreational disturbance on the distribution of breeding golden plover, by encouraging walkers to remain on the footpath. In contrast, some species are largely unaffected by human disturbance (or even benefit from it) which can result in local or regional changes in the composition of the fauna. The scale, type and predictability of disturbance is also important; species can become habituated to some disturbance (e.g. noise) particularly if it is regular or continuous. Unpredictable disturbance is most problematic.

Furthermore, most recreational activities with the potential to affect European sites are ‘casual’ and pursued opportunistically (e.g. walking, walking dogs, riding) rather than structured (e.g. organised group activities or trips to specific discrete attractions), which ensures that it can be harder to quantify or predict either the uptake or the impacts of these activities on European sites and (ultimately) harder to control or manage. It also means it is difficult to explore in detail all of the potential aspects of visitor pressure at the strategic level. However it is possible for plans and strategies to influence recreational use of European sites through the planning process, for example by increasing the amount of green-space required within or near developments if potentially vulnerable European sites are located nearby.

Several studies have used site-specific questionnaire surveys to identify visitor catchments and characterise the typical use of a site. The results of these can then be used to identify ‘buffer zones’ within which new development would be considered likely to have significant effects on a site, unless appropriately mitigated. Although distance and journey time are major factors influencing recreational use of a site, generic distances for recreational buffer zones are not usually employed, and there is limited consistency between studies when it comes to rationalising buffer zone size, largely due to the site-specific variables that are factored in to the assessment.

Natural England, as part of its input to the County Durham Plan, has noted that it adopts a ‘75% rule’ to determine significance, whereby recreational buffers are based on the distance within which 75% of visits are made to the site (i.e. taking account of frequency of visits as well as distance travelled); for the Durham Coast SAC, Northumbria Coast SPA/Ramsar and Teesmouth and Cleveland Coast SPA/Ramsar this distance was 6km.

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<sup>9</sup> In this case, literal disturbance by human activity; in ecology, ‘disturbance’ is a more complex concept used in models of ecosystem equilibrium.

Other studies have identified or used those distances within which approximately 70 - 75% of visitors live when considering recreational buffer areas. Some examples are summarised in **Table 3.3**, although note that these are necessarily selective as not all studies considering visitor pressure have necessarily reported percentiles; however, they provide some good examples for European sites that have similarities to sites near Bradford, including the presence of nearby urban areas.

Table 3.3 Travel distances for ~70–75% of Visitors Recorded by Previous Studies

Study	European sites and key issues	Summary
<b>Solent Disturbance and Mitigation Project (Fearnley et al. 2010)</b>	Solent Maritime SAC Chichester and Langstone Harbours SPA Pagham Harbour SPA Chichester and Langstone Harbours Ramsar Pagham Harbour Ramsar (Coastal sites; major urban areas; disturbance of birds)	Half of all visitors arriving on foot lived within 0.7km; half of all visitors arriving by car lived more than 4km away.  Average travel distance (excluding holidaymakers): 5.04km. 75% of visits from postcodes within 5.6km.
<b>Thames Basin Heaths (Liley et al. 2005)</b>	Thames Basin Heaths SPA (Heathland sites; urban areas; disturbance of birds)	70% of visitors travel 5km or less to access sites
<b>Whitehall and Bordon Ecotown (EPR 2012)</b>	Wealden Heaths SPA Shortheath Common SAC Woolmer Forest SAC Thursley, Ash, Pirbright and Chobham SAC Thursley and Ockley Bogs Ramsar site (Heathland and woodland sites; urban areas; disturbance of birds; damage to heath)	Average travel distance: 6.7km. 70% of visitors travel 4.3km or less to access sites. 70% distance values for following component sites: - Frensham Common: 10.7km - Kingsley Common: 7.4km - Bramshott Common: 4.5km - Woolmer Forest: 3.4km - Longmoor Enclosure: 3.2km - Ludshott Common: 2.9km - Broxhead Common: 2.1km - Hogmoor Inclosure: 0.9km - Shortheath Common: 0.6km - Bordon Enclosure: 0.5km
<b>Ashdown Forest (UE / University of Brighton 2009)</b>	Ashdown Forest SPA (Heathland sites; urban areas; disturbance of birds)	76% of visitors travel 5km or less to access sites

For most sites, the distance that 70-75% of visitors travel is typically less than 6–7km. Given that most studies have demonstrated that reported visit frequency increases with proximity to a site, it is reasonable to assume that the ‘75% distance’<sup>10</sup> for visits to most sites is likely to be less than this. However, it is important to recognise that visitor behaviour is complex and generalised statistics can hide important variations in the use of a site (for example, the 75% distance is likely to vary depending on the access point surveyed). Any derived buffers must be applied cautiously as the precise distance will depend on the site: a remote upland European site favoured by recreational walkers will probably have a substantially larger 75% distance for visits than, say, the Solent Maritime SAC that is adjacent to a number of urban areas including Southampton, Portsmouth, Milford on Sea and the Isle of Wight.

Secondary buffers are also sometimes identified to reflect the variation in visitor behaviour, particularly for those that live in close proximity to a site; for example, the studies supporting the County Durham Plan adopted a 400m buffer also, since 59% of respondents living within the 0–400m buffer were high risk users, i.e. visit the coast between one and three times a day.

The draft BCC Core Strategy Appropriate Assessment Report<sup>11</sup> responded to the risks assessed during the HRA through a multipronged approach to avoiding and mitigating adverse effects, as outlined in Policy SC8 below.

<sup>10</sup> i.e. the distance within which 75% of visits are made

<sup>11</sup> Urban Edge (2014), Habitats Regulations Assessment for the City of Bradford District Core Strategy: Appropriate Assessment Report for the Core Strategy Publication Draft Document (February 2014), December 2014

**Box 1 Strategic Core Policy (SC 8) Protecting the South Pennine Moors and their zone of influence**

Development will not be permitted where it would be likely to lead to an adverse effect upon the integrity, directly or indirectly, of the South Pennine Moors Special Protection Area and Special Area of Conservation. To ensure these sites are not harmed, a number of zones have been identified:

**Zone A**

No development involving a net increase in dwellings would be permitted within a suitable buffer area around the upland heath/South Pennine Moors (normally 400m) unless, as an exception, the form of residential development would not have an adverse effect upon the sites' integrity.

**Zone Bi**

Zone Bi would apply between 400m and 2.5km of the designated Site boundary.

Within Zone Bi the Council will take a precautionary approach to the review and identification of potential Greenfield sites for development based on an assessment of carrying capacity using the available evidence from bird and habitat surveys and appropriate additional monitoring. The underlying principles will be to avoid loss or degradation of areas outside European Sites that are important to the integrity of sites and that sufficient foraging resources continue to be available, in order to ensure the survival of bird populations.

**Zone Bii**

Zone Bii would apply between 2.5km and up to 7km of the designated Site boundary.

Within Zone Bii appropriate assessment is still likely to identify significant adverse effects in combination with other proposals, however appropriate avoidance or mitigation measures should allow development to take place.

**Zones Bi and Bii**

Within Zones Bi (taking into account the need to avoid loss or degradation of areas outside European Sites that are important to the integrity of the sites) and Zone Bii residential developments that result in a net increase of one or more dwellings will be required to contribute to:

- 1 The provision of additional natural greenspace and appropriate facilities to deflect pressure from moorland habitats and the long-term maintenance and management of that greenspace.
- 2 The implementation of access management measures, which may include further provision of wardens, in order to reduce the impact of visitors
- 3 A programme of habitat management and manipulation and subsequent monitoring and review of measures.

To mitigate impacts on European Sites due to the increase in population, an approach will be adopted that sets out a mechanism for the calculation of the planning contribution.

In line with the draft BCC Core Strategy Appropriate Assessment Report and Strategic Core Policy SC8, this HRA screening has therefore identified all allocations within ~7km of a site for possible recreational impacts as detailed in **Box 1** above.

**Urbanisation**

Urbanisation is generally used as a collective term covering a suite of often disparate risks and impacts that occur due to increases in human populations near protected sites. Typically, this would include aspects such as fly-tipping or vandalism, although the effects of these aspects again depend on the interest features of the sites: for example, predation of some species by cats is known to be sizeable<sup>12</sup> and can be potentially significant for some European sites. Recreational pressure is arguably one type of effect associated with urbanisation, although is usually considered separately (see above) as it is less closely associated with proximity: as a broad guide urbanisation effects are more likely when developments (etc.) are within 1km of a designated site, whereas people will typically travel further for recreation. Where sensitive sites are involved development buffers of around 500m are typically used to minimise the effects of urbanisation: for example, Natural England has identified a 400m zone around the Chichester and Langstone Harbours SPA within which housing development should not be located due to the potential effects of urbanisation (particularly the risk of chick predation by cats, which cannot be mitigated). None of the condition assessments for European sites within the study area identify this as a particular issue and in reality there is sufficient distance between most sites and the nearest settlement boundaries for this to not be a significant threat.

<sup>12</sup> Woods, M. *et al.* 2003. Predation of wildlife by domestic cats in Great Britain. *Mammal Review* **33** (2): 174-188

## Atmospheric Pollution

A number of pollutants have a negative effect on air quality; however, the most significant and relevant to habitats and species (particularly plant species) are the primary pollutants sulphur dioxide (SO<sub>2</sub>, typically from combustion of coal and heavy fuel oils), nitrogen oxides (NO<sub>x</sub>, mainly from vehicles) and ammonia (NH<sub>3</sub>, typically from agriculture), which (together with secondary aerosol pollutants<sup>13</sup>) are deposited as wet or dry deposits (**Table 3.4**). These pollutants affect habitats and species mainly through acidification and eutrophication. Acidification increases the acidity of soils, which can directly affect some organisms but which also promotes leaching of some important base chemicals (e.g. calcium), and mobilisation and uptake by plants of toxins (especially metals such as aluminium). Air pollution contributes to eutrophication within ecosystems by increasing the amounts of available nitrogen (N)<sup>14</sup>. This is a particular problem in low-nutrient habitats, where available nitrogen is frequently the limiting factor on plant growth, and results in slow-growing low-nutrient specialists being out-competed by faster growing species that can take advantage of the increased amounts of available N.

Table 3.4 Main Air Pollutants, Pathways and Effects

Pollutant	Pathway	Summary of Effects
<b>Ammonia (NH<sub>3</sub>)</b>	Primarily from agriculture through decomposition of animal manure and slurry.	Emissions contribute to acidification and (particularly) eutrophication.
<b>Nitrogen oxides (NO<sub>x</sub>)</b>	All combustion processes produce oxides of nitrogen (NO <sub>x</sub> ) in air; road transport is the main source, followed by the electricity supply industry. NO <sub>x</sub> emissions have decreased with increased fuel efficiency and catalytic converters	Emissions contribute to acidification and eutrophication; contribute to formation of secondary particles and ground level ozone.
<b>Sulphur Dioxide (SO<sub>2</sub>)</b>	Sulphur dioxide is released when fuels containing sulphur are burnt, especially coal and heavy fuel oils. The energy industry was the primary source, although this has decreased as use of coal has decreased.	SO <sub>2</sub> dissolves readily in water to form an acid which contributes to acidification of soils and water.

Overall in the UK, there has been a significant decline in SO<sub>x</sub> and NO<sub>x</sub> emissions in recent years and a consequent decrease in acid deposition; in England, SO<sub>x</sub> and NO<sub>x</sub> have declined by 90% and 65% respectively since 1990 (NAEI 2014), the result of a switch from coal to gas, nuclear and renewables for energy generation, and increased efficiency and tighter emissions standards for cars. These emissions are generally expected to decline further in future years, although use of coal may remain during an extended transitional period to a decarbonised energy mix due to delays in the construction of new power plants. In contrast, emissions of ammonia have remained largely unchanged: they have declined by 20% in England since 1990 (NAEI 2014), but have remained largely stable since 2008 (1% decrease from 2008 – 2011; 2.8% increase from 2011 – 2012).

The effect of SO<sub>x</sub> and NO<sub>x</sub> decreases on ecosystems has been marked, particularly in respect of acidification; the key contributor to acidification is now thought to be deposited nitrogen, for which the major source (ammonia emissions) has not decreased significantly. Indeed, although it was estimated that the proportion of UK semi-natural ecosystems that exceeding the critical loads for eutrophication would decline from 40% to 32% by 2010 (NEGAP 2001), eutrophication from N-deposition (again, primarily from ammonia) is now considered the most significant air quality issue for many habitats.

<sup>13</sup> Secondary pollutants are not emitted, but are formed following further reactions in the atmosphere; for example, SO<sub>2</sub> and NO<sub>x</sub> are oxidised to form SO<sub>4</sub><sup>2-</sup> and NO<sub>2</sub><sup>-</sup> compounds; ozone is formed by the reaction of other pollutants (e.g. NO<sub>x</sub> or volatile organic compounds) with UV light; ammonia reacts with SO<sub>4</sub><sup>2-</sup> and NO<sub>2</sub><sup>-</sup> to form ammonium (NH<sub>4</sub><sup>+</sup>).

<sup>14</sup> Nitrogen that is in a form that can be absorbed and used by plants.

The UK Air Pollution Information System (APIS) has been interrogated to identify the European sites and features relevant to the Action Plans where critical loads<sup>15</sup> for nutrient-N deposition and acidification are met or exceeded. APIS provides a comprehensive source of information on air pollution and the effects on habitats and species and although there are limitations to the data (see SNIFFER 2007), particularly related to the scale at which data can be modelled, this provides the best basis for assessing the impacts of air emissions in the absence of site-by-site monitoring data.

**Table 3.5** below summarises the APIS data for the relevant European sites with features that are sensitive to air quality in the study area. All other sites are either not sensitive to air emissions, or do not have the critical load (CL) exceeded. It should be noted that CL values are generally provided for habitats rather than species, and that watercourses are not included as eutrophication of most watercourses due to air emissions is negligible compared to run-off from agricultural land.

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<sup>15</sup> 'Critical Loads' are the threshold level for the deposition of a pollutant above which harmful indirect effects can be shown on a habitat or species, according to current knowledge (APIS 2009).

Table 3.5 Summary of APIS Interrogation

Site	Air quality sensitive features, species and supporting habitats	Over Critical Load?	
		Acid	N
<b>South Pennine Moors SAC</b>	Blanket bogs (* if active bog) (H7130)	++	++
	Transition mires and quaking bogs (H7140)	++	++
	Old sessile oak woods with Ilex and Blechnum in the British Isles (H91A0)	+	++
	Northern Atlantic wet heaths with Erica tetralix (H4010)	+	++
	European dry heaths (H4030)	+	++
<b>South Pennine Moors Phase 2 SPA</b>	Common sandpiper (A168)		
	Permanent oligotrophic waters: Softwater lakes	++	
	Freshwater		NS
	[North-western Europe - breeding] - European golden plover (A140)		
	Raised and blanket bogs	++	++
	Northern wet heath: Calluna-dominated wet heath (upland moorland)	++	
	Moss and lichen dominated mountain summits	++	
	Low and medium altitude hay meadows	+	
	Montane		++
	Acid Grassland		+
	Dwarf Shrub Heath		+
	Calcareous Grassland		-
	(Europe - breeding) - Common snipe (A153)		
	Non-mediterranean dry acid and neutral closed grassland	++	
	Raised and blanket bogs	++	++
	Low and medium altitude hay meadows	+	
	Acid Grassland		+
	Calcareous Grassland		-
	(Baltic/UK/Ireland) - Dunlin (A466)		
	Northern wet heath: Calluna-dominated wet heath (upland moorland)	++	
	Raised and blanket bogs	++	++
	Acid Grassland		+
	Ring ouzel (A282)		
	Coniferous woodland	++	
	Northern wet heath: Calluna-dominated wet heath (upland moorland)	++	
	Unmanaged Broadleaf/Coniferous Woodland		+
	Dwarf Shrub Heath		+
	Merlin (A098)		
	Dry heaths	++	
	Northern wet heath: Calluna-dominated wet heath (upland moorland)	++	
	Dwarf Shrub Heath		+
	(Europe - breeding) - Eurasian curlew (A160)		
	Moist and wet oligotrophic grasslands: Heath (Juncus) meadows and humid (Nardus stricta) swards	++	
	Low and medium altitude hay meadows	+	
	Acid Grassland		+
	Calcareous Grassland		-
	Short-eared owl (A222)		
	Northern wet heath: Calluna-dominated wet heath (upland moorland)	++	
	Dwarf Shrub Heath		+
	Whinchat (A275)		
	Dry heaths	++	
	Dwarf Shrub Heath		+
Northern wheatear (A277)			
Northern wet heath: Calluna-dominated wet heath (upland moorland)	++		
Dwarf Shrub Heath		+	
Twite (A367)			
Northern wet heath: Calluna-dominated wet heath (upland moorland)	++		
Dwarf Shrub Heath		+	
(Europe - breeding) - Northern lapwing (A142)			
Low and medium altitude hay meadows	+		
Acid Grassland		+	
Calcareous Grassland		-	
(Eastern Atlantic - wintering) - Common redshank (A162)			
Low and medium altitude hay meadows	+		
Acid Grassland		+	
Calcareous Grassland		-	
<b>North Pennine Moors SAC</b>	Siliceous alpine and boreal grasslands (H6150)	++	+

Site	Air quality sensitive features, species and supporting habitats	Over Critical Load?	
		Acid	N
	Blanket bogs (* if active bog) (H7130)	++	++
	Calcareous rocky slopes with chasmophytic vegetation (H8210)	++	+
	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani) (H8110)	++	+
	Siliceous rocky slopes with chasmophytic vegetation (H8220)	++	+
	Old sessile oak woods with Ilex and Blechnum in the British Isles (H91A0)	++	+
	Northern Atlantic wet heaths with Erica tetralix (H4010)	++	+
	European dry heaths (H4030)	++	+
	Juniperus communis formations on heaths or calcareous grasslands (H5130)	++	+
	Calaminarian grasslands of the Violetalia calaminariae (H6130)	+	-
	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) (H6210)	+	-
	Petrifying springs with tufa formation (Cratoneurion) (H7220)	+	
	Alkaline fens (H7230)	++	+
	Marsh saxifrage (S1528)		
<b>North Pennine Moors SPA</b>	[North-western Europe - breeding] - European golden plover (A140)		
	Raised & blanket bogs	++	++
	Northern wet heath	++	
	Moss & lichen dominated mountain summits	++	
	Low & medium altitude hay meadows	+	
	Montane		+
	Acid Grassland		+
	Dwarf shrub heath		+
	Calcareous grassland		-
	Hen harrier (A082)		
	Rich fens	+	
	Northern wet heath	++	
	Dwarf shrub heath		+
	Merlin (A098)		
	Northern wet heath	++	
	Dry heaths	++	
	Dwarf shrub heath		+
	Peregrine falcon (A103)		
	Northern wet heath	++	
	Dwarf shrub heath		+

**Acid** Acidification

**N** Eutrophication

**NS** Critical Load not set for feature

**+** minimum Critical Load for that habitat is exceeded by average deposition rate over site

**++** maximum Critical Load for that habitat is exceeded by average deposition rate over site

The figures provided in Table 3.6 indicate that there are a number of habitats where Critical Loads are already exceeded and will therefore be sensitive to any significant increase in deposition rates.

The proposals within the AAPs have the potential to contribute mainly to local air quality directly within the plan areas, with impacts on more distant diffuse pollution being far more limited. In practice, the principal source of air pollution associated with the plan will be associated with changing patterns of and/or increased vehicle use due to new developments and residential schemes. This is acknowledged within the plans which indicate that policies and strategies will be implemented to minimise air quality impacts associated with the proposals. The potential for point sources of pollution are also recognised within the plans which state that biomass boilers will not be the preferred option due to the potential for elevated NOx emissions.



Quantifying the effects over the designated sites is difficult. For screening purposes, the Department of Transport's *Transport Analysis Guidance*<sup>16</sup> states that "beyond 200m, the contribution of vehicle emissions from the roadside to local pollution levels is not significant". This is based on guidance contained within The Highways Agency Design Manual for Roads and Bridges document which covers the impact of road schemes on local air quality at human receptors and provides guidance on assessing European designated sites. Therefore, this approach has been used to screen the potential for significant air quality impacts at the designated sites as a consequence the plans.

With regard to the sites in **Table 3.5** below, the two plans are sufficiently distant and will not directly contribute to a noticeable change in air pollutant levels. Although there are a number of rural roads that pass through the designated sites, or pass close to them, the proposals should not directly contribute to any significant change in traffic flows on these routes and there should be no significant change in local air quality.

## Water Environment

This section discusses the potential effects of developments outlined in the AAPs on the water environment and whether these might have an impact on the European sites.

The two European sites are a minimum of 4.8km at closest point to the north, west and southwest of the two Area Action Plan development areas. The Moors cover the higher ground with the easterly flowing River Aire separating the North Moors site from the development sites in the south, and drainage from the eastern South Moors site areas draining towards Hebden Bridge and Keighley. In terms of water receptors, there are blanket bogs, petrifying springs, alkaline fens and wet heaths within North Pennine Moors SAC and blanket bogs, transition mires and quaking bogs within the South Pennine Moors SAC (Joint Nature Conservation Committee website). All these receptors apart from the blanket bogs are potentially groundwater fed.

Of the identified strategic objectives in the BCC/SCRC Area Action Plans, those most likely to have an impact on the water environment are the new housing proposals and office developments.

In general, new development proposed, for example new housing developments, are expected to have an effect on the local water environment, during both the construction and subsequent operational phases of such developments. Related construction works would require excavations which might need some form of dewatering. This has the potential to lower the local and/or regional groundwater levels, depending on the size of the scheme. The pumped water would need to be discharged appropriately, and in line with licensing requirements, which has the potential to increase river flows as well as suspended solid loading. Other developments proposed in the AAPs, might require process water which could be sourced from mains water supply, groundwater and/or surface water abstraction. This may similarly cause increased river flows and sediment loads. However, in addition, there may be potential for the reduction of flow in water courses should this be the supply source.

Following construction, new planned infrastructure would likely result in a higher proportion of sealed surfaces during the operational phase. This could result in additional runoff which feeds into the sewer system and would add additional pressures on both sewage treatment works and the rivers into which these discharge. It would also be likely to lead to higher peak flows during high rainfall events, due to the removal of the former soils (which offer water storage capacity / retarding potential) into these rivers.

New housing developments can, in particular, lead to an increase of water demand during the operational phase, which puts additional pressure on the public water supply. To meet this extra demand, higher pumping quantities from the underlying aquifer might be required, which is likely to lower the groundwater table. This could, in theory, affect the two sites if the additional water was to be sourced from groundwater sources close to the two sites. However, according to the Environment Agency online Source Protection Zone (SPZ) map, there are only very minor SPZs close to these sites, which implies that the main public water supply for the wider Bradford area is sourced from further away. If however any of these existing abstractions would be used to provide the additional water demand that could have an impact on the Moors.

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<sup>16</sup> <http://www.dft.gov.uk/webtag/documents/expert/unit3.3.3.php#013>

Some of the suggested developments have the potential to change the drainage pattern in the vicinity of any proposed developments. As noted, run-off from impermeable surfaces could have considerable effects on waterbodies and watercourses, meaning that flow rates and volumes often exceed the capacity of the receiving drains or watercourses, causing localised flooding and contributing to regional flood events. However, the two European sites within the study area are outside of the relevant flood zones and unlikely to be sensitive to potential changes in flooding associated with the Area Action Plans.

Both meeting this additional water demand and the safeguarding of European sites is the responsibility of the water supplier and the assessment of this is outwith the scope of this screening exercise. It is clear that development promoted or supported by the Area Action Plans is likely to increase demand for water resources, which could indirectly affect the two European sites. Yorkshire Water (YW) is responsible for supply to the Bradford area which, together with the two European sites, is located within its Grid Surface Water Zone (Grid SWZ). Under the Water Act 2003 all water companies must publish a Water Resources Management Plan (WRMP) that sets out their strategy for managing water resources across their supply area over the next 25 years, and this is set out in the YW WRMP (from August 2014). WRMPs utilise calculations of Deployable Output (DO) to establish supply/demand balances; this enables them to identify those Water Resource Zones (WRZs) with potential supply deficits over the planning period. The YW WRMP was subject to a HRA Screening which found that there were unlikely to be any significant effects on European sites from the WRMP (based on current information and current designations), either alone or in combination with other plans or projects<sup>17</sup>. In consequence, the WRMP process (and its assessment), alongside the application of other regulations, helps ensure that future changes in demand will not adversely impact any European sites.

### Effects on Critical Habitats Outside of European Sites Affecting Mobile Species

The provisions of the Habitats Regulations ensure that 'direct' (encroachment) effects on European sites as a result of land use change (i.e. the partial or complete destruction of a European site) are extremely unlikely under normal circumstances, and this will not occur as a result of the AAPs. However, many European interest features (particularly animal species) may use or be reliant on non-designated habitats outside of a European site during their life-cycle. Developments some way from a European site can therefore have an effect if its interest features are reliant on the habitats being affected by the development. With regard to the European sites within the study area this is only potentially an issue for the South Pennine Moors Phase 2 SPA and North Pennine Moors SPA (i.e. the bird species listed under "reasons for designation" in Table 3.2).

### In-combination Effects

A review has been undertaken of the CBMDC Core Strategy HRA<sup>18</sup> with regards to developments within surrounding districts (e.g. Craven, Harrogate, Leeds, Calderdale, Burnley and Pendle) and their potential for in-combination effects. Following consideration of these developments, it is concluded that in-combination effects are broadly as those described in the Core Strategy HRA, as follows:

- ▶ **Recreational Impacts:** As stated in the Core Strategy HRA, other plans and projects which may act in combination with the Core Strategy to exacerbate recreational impacts to the European sites include proposed residential developments in neighbouring authority areas (e.g. Craven, Harrogate, Leeds, Calderdale, Burnley and Pendle) resulting in a net gain in dwellings within a zone of influence around the European sites. The zone of influence may differ in other authority areas in relation to residential population density and accessibility to/within the European sites. In particular, the Screening Assessment of Leeds Core Strategy identified potential for in-combination effects in relation to increases or changes in recreational pressure due to the location of dwellings in relation to the South Pennine Moors. Bradford's Core Strategy and future Allocations DPD were identified as having the greatest potential for in-combination impacts in relation to this factor. The Leeds District housing requirement is to deliver 70,000 new dwellings

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<sup>17</sup> Cascade (2014), Yorkshire Water Services Limited Water Resources Management Plan 2014: Strategic Environmental Assessment Post Adoption Statement, September 2014

<sup>18</sup> <http://www.bradford.gov.uk/NR/rdonlyres/A6A46E59-8428-4847-918C-20247D8E0A30/0/HRA3Dec2014.pdf>

between 2012 and 2028, and distributes the housing requirement between housing market areas rather than individual settlements;

- ▶ **Urbanisation:** As stated in the Core Strategy HRA, developments within surrounding districts (e.g. Craven, Harrogate, Leeds, Calderdale, Burnley and Pendle) within close proximity of the European sites could contribute to urban edge effects in their respective locations. When these developments are taken together, adverse effects on the overall integrity of the European sites are possible. However, given that there is sufficient distance between the BCC and SCRC AAPs and European sites, it is considered unlikely that these two AAPs would specifically act in combination with wider urbanisation impacts. No in-combination LSE's are therefore predicted with regard to urbanisation;
- ▶ **Atmospheric Pollution:** Air pollutant concentrations over the designated sites are likely to be influenced to a greater extent by wider regional diffuse pollution that is beyond the control or remit of the authority. Regional or trans-boundary air pollution can only be realistically addressed by national legislation or higher-tier plans, policies or strategies. Therefore, the focus should be on the development of suitable local policies that will ensure the sustainable development in the area whilst minimising the contribution of any plan-supported developments to overall diffuse pollution levels;
- ▶ **Water Environment:** Given the distance and the fact that the European Sites are up-gradient of the development sites, cumulative assessment on the water environment concludes that there would be no likely significant effect on any European Sites, both in terms of water demand and water quality.

### 3.5 European Site Screening Based on Impact Pathways

All European sites within 15km of the AAPs have been included in the scope of the HRA. Often, however, sites within a study area can be excluded from further assessment at an early stage ('screened out') because the plan or project will self-evidently have either 'no effect' or 'no significant effect' on these sites (i.e. the interest features are not sensitive to likely effects of plan or project; or are not likely to be exposed to those effects due to the absence of any reasonable impact pathways). The following sections provide a brief summary of the screening of the European sites and their interest features based on the baseline data summarised above. It should be noted that this aspect of the screening process is a 'low bar', with sites, aspects or features only 'screened out' if they will self-evidently be unaffected by the BCC and SCRC AAPs (i.e. it is aiming to identify those aspects that will clearly have 'no effect' or 'no significant effect' (alone or in combination) due to an absence of impact pathways). It does not necessarily imply a conclusion of 'significant effects' for those sites that are 'screened in' since controls within the plan (i.e. policy measures) will also operate to minimise these effects (these are considered in the next section); rather, it allows for the assessment of effects to focus on those issues that are potentially important.

A summary of the European site screening based on impact pathways is provided in **Table 3.6** below.

Table 3.6 Summary of European Site Screening Based on Impact Pathways

Site	Impact Pathway	Screening Summary	Consider Further?
<b>South Pennine Moors SAC</b>	Recreational pressure	Site is ~4.3km north of SCRC boundary, which is within the 7km buffer for possible recreational impacts considered by this HRA screening. Site is ~7.5km west and 8.5km north of BCC boundary, and is therefore not considered further in relation to the BCC AAP.	<b>Yes</b> (SCRC AAP only)
	Urbanisation	No AAP development proposals within 400m of the site, therefore BCC and SCRC AAPs will have no effect via this pathway.	No
	Atmospheric pollution	Some features are vulnerable to diffuse atmospheric pollution and eutrophication. However, the BCC and SCRC AAPs are sufficiently distant and will not significantly alter the traffic using roads through the designated sites. Effects on air quality will be limited to insignificant changes to wider diffuse pollution. Therefore, the impacts on the designated sites will not be significant and are not considered further.	No
	Water Environment	Given the distance and the fact that the European Sites are up-gradient of the development sites, any effects from the scheme on the water environment are considered to be not significant for the European Sites, both in terms of water demand and water quality.	No
	Effects on mobile species	Site supports mobile species but these are not thought to be reliant on habitats within the BCC and SCRC AAPs that could be affected by the plans.	No
<b>South Pennine Moors Phase 2 SPA</b>	Recreational pressure	Site is ~4.3km north of SCRC boundary, which is within the 7km buffer for possible recreational impacts considered by this HRA screening. Site is ~7.5km west and 8.5km north of BCC boundary, and is therefore not considered further in relation to the BCC AAP.	<b>Yes</b> (SCRC AAP only)
	Urbanisation	No AAP development proposals within 400m of the site, therefore BCC and SCRC AAPs will have no effect via this pathway.	No
	Atmospheric pollution	Some features are vulnerable to diffuse atmospheric pollution and eutrophication. However, the BCC and SCRC AAPs are sufficiently distant and will not significantly alter the traffic using roads through the designated sites. Effects on air quality will be limited to insignificant changes to wider diffuse pollution. Therefore, the impacts on the designated sites will not be significant and are not considered further.	No
	Water Environment	Given the distance and the fact that the European Sites are up-gradient of the development sites, any effects from the scheme on the water environment are considered to be not significant for the European Sites, both in terms of water demand and water quality.	No
	Effects on mobile species	Site supports mobile species but these are not thought to be reliant on habitats within the BCC and SCRC AAPs that could be affected by the plans.	No

Site	Impact Pathway	Screening Summary	Consider Further?
<b>North Pennine Moors SAC</b>	Recreational pressure	Site is ~12.2km north of SCRC boundary (and more than 15km from the BCC boundary), which is outwith the 7km buffer for possible recreational impacts is considered by this HRA screening. It is not therefore considered further within this report.	No
	Urbanisation	No AAP development proposals within 400m of the site, therefore BCC and SCRC AAPs will have no effect via this pathway.	No
	Atmospheric pollution	Some features are vulnerable to diffuse atmospheric pollution and eutrophication. However, the BCC and SCRC AAPs are sufficiently distant and will not significantly alter the traffic using roads through the designated sites. Effects on air quality will be limited to insignificant changes to wider diffuse pollution. Therefore, the impacts on the designated sites will not be significant and are not considered further.	No
	Water Environment	Given the distance and the fact that the European Sites are up-gradient of the development sites, any effects from the scheme on the water environment are considered to be not significant for the European Sites, both in terms of water demand and water quality.	No
	Effects on mobile species	Site supports mobile species but these are not thought to be reliant on habitats within the BCC and SCRC AAPs that could be affected by the plans.	No
<b>North Pennine Moors SPA</b>	Recreational pressure	Site is ~12.2km north of SCRC boundary (and more than 15km from the BCC boundary), outwith the 7km buffer for possible recreational impacts is considered by this HRA screening. It is not therefore considered further within this report.	No
	Urbanisation	No AAP development proposals within 400m of the site, therefore BCC and SCRC AAPs will have no effect via this pathway.	No
	Atmospheric pollution	Some features are vulnerable to diffuse atmospheric pollution and eutrophication. However, the BCC and SCRC AAPs are sufficiently distant and will not significantly alter the traffic using roads through the designated sites. Effects on air quality will be limited to insignificant changes to wider diffuse pollution. Therefore, the impacts on the designated sites will not be significant and are not considered further.	No
	Water Environment	Given the distance and the fact that the European Sites are up-gradient of the development sites, any effects from the scheme on the water environment are considered to be not significant for the European Sites, both in terms of water demand and water quality.	No
	Effects on mobile species	Site supports mobile species (birds) which may be reliant on habitats within the BCC and SCRC AAPs that could be affected by the plan; this aspect is considered further with regard to that site.	<b>Yes</b> (European interest features (birds) may use or be reliant on non-designated habitats outside of the SPA).

## 4. Screening

### 4.1 Screening of Site Allocations

The proposed site allocations in the BCC and SCRC AAPs have been reviewed for their potential to affect any European sites in relation to the impact pathways subject to further consideration as identified in **Table 3.6** above. In summary, most allocations are unlikely to result in significant effects on their own, assuming that normal policy safeguards are employed, due to an absence of reasonable impact pathways, and these have been excluded from **Table 4.1** below. Given that impact pathways relating to urbanisation, atmospheric pollution and hydrology have been screened out in **Table 3.6** above, **Table 4.1** considers recreational impacts only. In addition, both AAPs are discussed below in relation to potential effects upon European interest features (in this instance, birds) which may use or be reliant on non-designated habitats outside of a European site.

#### BCC Sites

There are no BCC sites within ~7km of any European site, and these sites are not therefore subject to any further consideration with regard to the European sites themselves. However, further consideration must be given in relation to European interest features (in this instance, birds) which may use or be reliant on non-designated habitats outside of a European site during their life-cycle (i.e. sites/policies which may have an effect if its interest features are reliant on the habitats being affected by the development). With regard to the European sites within the study area, only the South Pennine Moors Phase 2 SPA which falls within the 15km zone of influence is considered within this report. This means that for the BCC sites, potential impacts upon the North Pennine Moors SPA can be screened out at this stage because the BCC AAP will self-evidently have either 'no effect' or 'no significant effect' on this site in relation to this impact pathway. In terms of the South Pennine Moors Phase 2 SPA (~7.5km from BCC at closest point), given the lack of suitable habitat within the BCC AAP area, the lack of suitable habitat connectivity to the SPA, and the current disturbance levels likely to occur within this largely urban area, no likely significant effect (LSE) is predicated upon any SPA bird species.

#### SCRC Sites

There are 20 SCRC sites which are within ~7km of European sites, which are detailed in **Table 4.1** below. Again, further consideration must be given in relation to European interest features (in this instance, birds) which may use or be reliant on non-designated habitats outside of a European site during their life-cycle. With regard to the European sites within the study area, both the South Pennine Moors SAC, the South Pennine Moors Phase 2 SPA and the North Pennine Moors SPA fall within the 15km zone of influence considered within this report (South Pennine Moors SAC is ~4.3km from SCRC AAP boundary at closest point; South Pennine Moors Phase 2 SPA is ~9.3km from SCRC boundary at closest point, and the North Pennine Moors SPA is ~12.2km from SCRC AAP Boundary at closest point). Again given the lack of suitable habitat within the SCRC AAP area, the lack of suitable habitat connectivity to the SPA's, and the current disturbance levels likely to occur within this largely urban area, no LSE is predicted upon any SPA bird species for either European site.

Given that the SCRC lies within ~7km of South Pennine Moors SAC only, the South Pennine Moors Phase 2 SPA and the North Pennine Moors SPA are not therefore subject to any further consideration within this report. Only those SCRC sites within ~7km of South Pennine Moors SAC are subject to screening with regards to potential recreational impacts in **Table 4.1** below. These sites have been assessed in line with Strategic Core Policy SC8: Protecting the South Pennine Moors and their Zone of Influence, as described in Section 2.2 above.

Table 4.1 SCRC Sites within ~7km of South Pennine Moors SAC: Screening of Potential Recreational Impacts

Allocation	Size (ha)	Use	~Distance from South Pennine Moors SAC (km)	Effects		Rationale
				Alone	In Combination	
<b>STC1 – Shipley Indoor Market Hall</b>	0.18	~20 residential units/office/commercial uses on upper floors with retail, commercial and leisure uses (A1-A4) on the ground floor.	4.7	No Likely Significant Effects (LSE)	No Likely Significant Effects (LSE)	<p>Taken alone, each of these sites comprises a small number of houses which, given their distances from the SAC, are therefore unlikely to have recreational impacts upon qualifying habitat features. However, in line with Core Strategy Policy SC8, any residential developments within ~7km of a European site that result in a net increase of 1 or more dwellings will be required to contribute to mitigation measures relating to greenspace, access, habitat management and monitoring. An approach will be adopted to mitigation that sets out a mechanism for the calculation of the planning contribution.</p> <p>The development of these sites will be phased over the plan period and as mentioned above will be developed in accordance with Core Strategy Policy SC8 and policies in the SCRC AAP. Whilst there maybe some uncertainty of effects from the development of these sites prior to implementation of mitigation, in practice once mitigation is implemented it can be concluded that there would be no likely significant effects from the development of these sites.</p> <p>It is also considered that taking into account the requirements of Core Strategy Policy SC8 that there would be no likely significant “in combination” effects.</p>
<b>STC2 – Market Square</b>	n/a	~25 residential units, office and commercial use, with retail and leisure uses (A1-A4) on the ground floor	4.7	No LSE	No LSE	
<b>STC3 – Station Road</b>	0.4	Residential ~50 dwellings	4.9	No LSE	No LSE	
<b>STC4 – Shipley Gateway Site</b>	n/a	~50 residential units, business, hotel and commercial uses, with retail and leisure uses (A1-A5) on the ground floor	4.8	No LSE	No LSE	
<b>STC5 – Atkinson Street</b>	0.03	Residential ~8 dwellings	4.7	No LSE	No LSE	
<b>STC6 – Buildings Along Briggate</b>	0.1	Residential ~23 dwellings	4.7	No LSE	No LSE	
<b>SE1 – Shipley East</b>	8.9	Residential ~110-150 dwellings	4.8	No LSE	No LSE	
<b>SE2 – Land Around Crag Road Flats</b>	0.9	Residential ~30 dwellings.	5	No LSE	No LSE	

Allocation	Size (ha)	Use	~Distance from South Pennine Moors SAC (km)	Effects		Rationale
				Alone	In Combination	
<b>DF1 – Dock Lane, Canalside</b>	2.01	~114 residential dwellings and supporting business uses.	4.6	No LSE	No LSE	
<b>DF2 – Junction Bridge, Briggate</b>	0.71	Business, commercial and residential uses.	4.7	No LSE	No LSE	
<b>DF3 – Land between Leeds Road and Dock Lane</b>	0.5	~60 residential units, business and commercial	4.8	No LSE	No LSE	
<b>DF5 - Dockfield Road South</b>	1.26ha	Residential ~90 residential dwellings and supporting business uses.	4.6	No LSE	No LSE	
<b>DF6 – Regent House</b>	0.69ha	Residential ~93 dwellings.	4.6	No LSE	No LSE	
<b>DF7 - Junction of Dock Lane and Dockfield Road</b>	0.06ha	Residential ~6 dwellings.	4.7	No LSE	No LSE	
<b>DF8 - Dock Lane</b>	0.15ha	Residential ~15 dwellings	4.6	No LSE	No LSE	
<b>DF9 - Dockfield Road</b>	0.13ha	Residential ~10 dwellings.	4.6	No LSE	No LSE	
<b>NBW2 – Frizinghall Road</b>	0.75ha	Residential ~42 dwellings.	6.4	No LSE	No LSE	
<b>NBW3 - Thornhill Avenue</b>	0.6ha	Residential ~21 dwellings.	6.4	No LSE	No LSE	
<b>NBW4 - North Bolton Hall Road</b>	0.84ha	Residential ~35 dwellings.	6.4	No LSE	No LSE	



Allocation	Size (ha)	Use	~Distance from South Pennine Moors SAC (km)	Effects		Rationale
				Alone	In Combination	
<b>NBW5 – Flats East Valley Road</b>	1.29ha	Residential ~50 dwellings, medium density.	5.8	No LSE	No LSE	
<b>NBW7 - New Bolton Woods Flats</b>	0.8ha	Residential ~70 residential units	6.6	No LSE	No LSE	
<b>DF4 - Dockfield Road North</b>	1.26ha	Green Infrastructure/Flood Risk Management. Site will be enhanced with green infrastructure improvements and will be used for flood storage.	4.5	No effects	No effects	This site will provide improvements to green infrastructure, ecological assets and flood risk management. On this basis, no effects are predicted on the integrity of the SAC.
<b>NBW1 - New Bolton Woods</b>	49.29ha	~1100 new dwellings, 300sq metres retail/leisure uses, new primary school, community facilities and employment uses.	5.9	No LSE	No LSE	Whilst this is a large strategic allocation that is within 7km of the European site and therefore could have 'alone' or 'in combination' effects, it is also considered that development of this site in accordance with Core Strategy Policy SC8 and policies in the SCRC AAP, that there will be no likely significant effects either alone or in combination.
<b>BWQ1 – Bolton Woods Quarry</b>	29.33ha	Residential ~800-1000 dwellings, local and retail community uses to meet day to day needs.	6.4	No LSE	No LSE	Whilst this is a large strategic allocation that is within 7km of the European site and therefore could have 'alone' or 'in combination' effects, it is also considered that development of this site in accordance with Core Strategy Policy SC8 and policies in the SCRC AAP, that there will be no likely significant effects either alone or in combination.

## 4.2 Screening of Policies

Policies may have effects in their own right, or they may be used to control potential effects or prevent them occurring. A policy should be considered 'likely' to have an effect if the competent authority is unable (on the basis of objective information) to exclude the possibility that the plan could have significant effects on any European site, either alone or in combination with other plans or projects; an effect will be 'significant' if it could undermine the site's conservation objectives. However, it is important that the policy assessment focuses on effects that are objectively possible, rather than just imaginable; furthermore, it is not appropriate for policies to simply re-state existing legislation.

When considering the likely effects of a policy, it is recognised that some policy 'types' cannot result in impacts on any European sites. Different guidance documents suggest various classification and referencing systems to help identify those policies that can be safely screened out; the general characteristics of these policy types are summarised in **Table 4.2** below.

Table 4.2 Policy 'Types' That Can Usually Be Screened Out

Broad Policy Type	Notes
<b>General Statements of Policy/Aspiration</b>	The European Commission recognises* that plans or plan components that are general statements of policy or political aspirations cannot have significant effects; for example, general commitments to sustainable development.
<b>General Design/Guidance Criteria or Policies that Cannot Lead to or Trigger Development</b>	A general 'criteria based' policy expresses the tests or expectations of the plan-making body when it comes to consider proposals, or relates to design or other qualitative criteria which do not themselves lead to development (e.g. controls on building design); however, policies with criteria relating to specific proposals or allocations should not be screened out.
<b>External Plans/Projects</b>	Plans or projects that are proposed by other plans and are referred to in the plan being assessed for completeness (for example, Highways Agency road schemes; specific waste development proposals promoted by a County Minerals and Waste Plan).
<b>Environmental Protection Policies</b>	Policies designed to protect the natural or built environment will not usually have significant or adverse effects (although they may often require modification if relied on to provide sufficient safeguards for other policies).
<b>Policies Which Make Provision for Change but Which Could Have No Conceivable Effect</b>	Policies or proposals the which cannot affect a European site (no impact pathways and hence no effect; for example, proposals for new cycle path several kilometres from the nearest European site) or which cannot undermine the conservation objectives, either alone or in combination, if impact pathways exist (no significant effect).

It must be noted that it is inappropriate to apply a policy classification tool uncritically to all policies of a certain type: there will obviously be some occasions when a policy or similar may have potentially significant effects, despite being of a 'type' that would normally be screened out. The criteria in **Table 4.1** were applied critically to the screening of the draft policies within the Local Plan to identify the following policy groups:

- ▶ **'No effect'** policies: policies that will have 'no effect' (i.e. policies that, if included as drafted, self-evidently would not have any effect on a European site due to the type of policy or its operation; for example, a policy controlling town centre shop signage; a policy setting out sustainable development criteria that developments must meet). Note that 'no effect' policies cannot have in combination effects;
- ▶ **'No likely significant effect'** policies: policies where impact pathways exist but the effects will not be significant (alone or in combination);

- ▶ **'Uncertain effect'** policies: policies where the precise effects on European sites (either alone or in combination) are uncertain, and hence additional investigation (appropriate assessment) or policy modification is required. Note that further investigation will often demonstrate that there is no significant effect or allow suitable mitigation or avoidance measures to be identified to ensure this; and
- ▶ **'Likely significant effect'** policies: policies which are likely to have a significant effects (either alone or in combination) and hence which require additional investigation (appropriate assessment) or policy modification. Note that 'likely significant effect' policies are more likely to require that the policy be amended, abandoned or re-worked to avoid significant effects.

## Overarching Protective Policies

The screening of the draft policies accounts for overarching or cross-cutting protective policies that may potentially be relied on to ensure that some other policies do not have significant effects, particularly those that promote or support development but which do not specify the scale or location of that development. Note that these policies will not automatically be sufficient to prevent significant effects for all policies, and some policies may require bespoke measures to ensure that significant effects do not occur.

## Policy Screening

Policy screening for the BCC and SCRC AAPs is summarised in **Table 4.4** and **Table 4.5** below. The colour coding used in the screening assessment is detailed as follows in **Table 4.3** below:

Table 4.3 Colour Coding for Policy Screening

	No LSE – policy will not or cannot affect any European sites and can therefore be screened out (subject to brief review of final policy)
	No LSE, but amendments recommended; policies that will not affect any European sites but which could be enhanced or strengthened
	Policy requires changes to avoid significant effects (e.g. minor re-wording; referencing mitigating policies), or effects are uncertain.
	Significant effects likely; policy should be abandoned or re-worked to include specific mitigation (may apply to groups of policies)

Note that the inclusion of a policy in the 'red' or 'yellow' categories does not mean that significant effects are certain since in many instances the assessment reflects an uncertainty that needs to be explored through further assessment (so it would be possible to undertake an appropriate assessment stage and still conclude (following a further screening) that there will be no significant effects). For some policies or allocations a more detailed 'appropriate assessment' stage may be required, even if there is some confidence that identified mitigation will be successful in avoiding significant effects, to demonstrate that the potential effects have been suitably considered. The recommendations are suggested changes only: in most instances there will be a number of different ways in which the goals of the policy can be met with suitable wording changes. The review also included an assessment of 'in combination' effects between policies. In summary, the vast majority of the draft policies were categorised as 'no effect' or 'no significant effect' policies.

Table 4.4 Screening Summary: Draft BCC Policies

Policy	Effects		Rationale/Recommendations	Sites Specifically Vulnerable
	Alone	In Combination		
<b>CL1 - Housing</b>	No effects	No effects	All BCC sites allocated for housing are outwith the 7km impact pathway for recreation; all other impact pathways have been screened out.	-
<b>CL2 – Flood Risk</b>	No effects	No effects	General guidance criteria which will not directly lead to development.	-
<b>CL3 – Active Frontages and Community Provision</b>	No effects	No effects	Policy makes provision for change, but which could have no conceivable effect.	-
<b>CL4 – Primary and Secondary Education Provision</b>	No effects	No effects	Any BCC sites allocated for education provision are outwith the 7km impact pathway for recreation; all other impact pathways have been screened out.	-
<b>SL1 – Retail development</b>	No effects	No effects	Any BCC sites allocated for retail development are outwith the 7km impact pathway for recreation; all other impact pathways have been screened out.	-
<b>SL2 – Primary and Secondary Shopping Frontages</b>	No effects	No effects	Policy makes provision for change, but which could have no conceivable effect.	-
<b>SL3 – Improving the Connection Between Shopping Areas</b>	No effects	No effects	Policy makes provision for change, but which could have no conceivable effect.	-
<b>SL4 – Cultural Assets</b>	No effects	No effects	Policy is a general statement of aspiration that cannot have any significant effect.	-
<b>B1 – Development of Employment Space</b>	No effects	No effects	Any BCC sites allocated for employment uses are outwith the 7km impact pathway for recreation; all other impact pathways have been screened out.	-
<b>ED1 – Promotion of the Learning Quarter</b>	No effects	No effects	Any BCC sites allocated for education uses are outwith the 7km impact pathway for recreation; all other impact pathways have been screened out.	-
<b>M1 – Walking, Cycling and Public Realm</b>	No effects	No effects	Policy provides general design/guidance criteria that cannot lead to or trigger development.	-

Policy	Effects		Rationale/Recommendations	Sites Specifically Vulnerable
	Alone	In Combination		
<b>M2 – Public Transport Services and Infrastructure (including taxis)</b>	No effects	No effects	Any public transport services and infrastructure improvements are outwith the 7km impact pathway for recreation; all other impact pathways have been screened out.	-
<b>M3 – Traffic, Highways and Parking</b>	No effects	No effects	Highway improvements are outwith the 7km impact pathway for recreation; all other impact pathways have been screened out.	-
<b>M4 – Impact of New Development Upon the Transport Network</b>	No effects	No effects	Policy provides general design/guidance criteria that cannot lead to or trigger development (policy refers to expectations of the plan-making body when it comes to consider proposals).	-
<b>M5 – Biodiversity in the City Centre</b>	No effects	No effects	Environmental protection policy, designed to protect the natural environment.	-
<b>M6 – Green/Blue Infrastructure and Open Space within the City Centre</b>	No effects	No effects	Environmental protection policy, designed to protect the natural environment.	-
<b>BF1 – The Nature of the Built Form</b>	No effects	No effects	Environmental protection policy, designed to protect the built environment.	-
<b>BF2 – Tall Buildings</b>	No effects	No effects	Environmental protection policy, designed to protect the built environment.	-
<b>BF3 – Built Form and the Environment</b>	No effects	No effects	Environmental protection policy, designed to protect the natural environment.	-
<b>BF4 – District Heat Networks</b>	No effects	No effects	General guidance criteria which will not directly lead to development.	-

Table 4.5 Screening Summary: Draft SCRC Policies

Policy	Effects		Rationale	Sites Specifically Vulnerable
	Alone	In Combination		
<b>H1 – Housing Requirements</b>	No LSE	No LSE	No LSE, but amendments recommended as the policy relates to delivery of a minimum of 3100 new homes over the plan period through allocated development sites. Impact pathways to the SAC therefore exist due to the presence of a number of sites within ~7km, but the effects are not likely to be significant (alone or in combination) providing that amendments to policies NBE1, NBE4 and HSC2 (environmental protection and/or general guidance policies) are put in place. See “Recommendations” section below.	South Pennine Moors SAC
<b>H2 – Delivering New Homes and Sustainable Neighbourhoods</b>	No LSE	No LSE	No LSE, but amendments recommended as the policy relates to the development of new housing. Impact pathways exist due to a number of housing sites within 7km but the effects will not be significant (alone or in combination) providing that amendments to policies NBE1, NBE4 and HSC2 (environmental protection and/or general guidance policies) are put in place. See “Recommendations” section below.	South Pennine Moors SAC
<b>SE1 – Sustainable Economic Growth</b>	No LSE	No LSE	No LSE, but amendments recommended as the policy relates to new business and commercial uses as part of mixed use developments in Shipley Town Centre, Dockfield Road and Shipley East, which are within ~7km of the SAC. Impact pathways to the SAC therefore exist but the effects are not likely to be significant (alone or in combination) providing that amendments to policies NBE1, NBE4 and HSC2 (environmental protection and/or general guidance policies) are put in place. See “Recommendations” section below.	South Pennine Moors SAC
<b>SE2 – Canal Road Employment Zone</b>	No effects	No effects	Policy makes provision for change, but which could have no conceivable effect.	-
<b>SE3 – Valley Road Retail Area</b>	No effects	No effects	Policy makes provision for change, but which could have no conceivable effect.	-
<b>SE4 – Strategy for Retail Development</b>	No LSE	No LSE	No LSE, but amendments recommended as the policy relates to the development of sites in Shipley Town Centre and New Bolton Woods, which are within ~7km of the SAC. Impact pathways exist but the effects will not be significant (alone or in combination) providing that amendments to policies NBE1, NBE4 and HSC2 (environmental protection and/or general guidance policies) are put in place. See “Recommendations” section below.	South Pennine Moors SAC
<b>SE5 – Shipley Town Centre and Primary Shopping Area</b>	No LSE	No LSE	No LSE, but amendments recommended as the policy relates to the development of sites in Shipley Town Centre, which are within ~7km of the SAC. Impact pathways exist but the effects will not be significant (alone or in combination) providing that amendments to policies NBE1, NBE4 and HSC2 (environmental protection and/or general guidance policies) are put in place. See “Recommendations” section below.	South Pennine Moors SAC

Policy	Effects		Rationale	Sites Specifically Vulnerable
	Alone	In Combination		
<b>SE6 – Market Provision</b>	No LSE	No LSE	No LSE, but amendments recommended as the policy relates to the development of sites in Shipley Town Centre, which are within ~7km of the SAC. Impact pathways exist but the effects will not be significant (alone or in combination) providing that amendments to policies NBE1, NBE4 and HSC2 (environmental protection and/or general guidance policies) are put in place. See “Recommendations” section below.	South Pennine Moors SAC
<b>SE7 – Minerals Safeguarding</b>	No effects	No effects	Policy provides general design/guidance criteria that cannot lead to or trigger development.	-
<b>SE8 – Existing Waste Management Facilities</b>	No effects	No effects	Policy provides general design/guidance criteria that cannot lead to or trigger development.	-
<b>ST1 – Transport Improvements</b>	No effects	No effects	Policy makes provision for change, but which could have no conceivable effect.	-
<b>ST2 – Safeguarded Transport Links</b>	No effects	No effects	Policy is a general statement of aspiration that cannot have any significant effect.	-
<b>ST3 – Maximising Sustainable Transport Options</b>	No effects	No effects	Policy makes provision for change, but which could have no conceivable effect.	-
<b>ST4 – Station Improvements</b>	No effects	No effects	Policy makes provision for change, but which could have no conceivable effect.	-
<b>ST5 - Pedestrian and Cycle Movements</b>	No effects	No effects	Policy makes provision for change, but which could have no conceivable effect.	-
<b>ST6 – Canal Road Greenway</b>	No effects	No effects	Policy provides general design/guidance criteria that cannot lead to or trigger development.	-
<b>ST7 - Parking</b>	No effects	No effects	Policy provides general design/guidance criteria that cannot lead to or trigger development.	-
<b>ST8 – Bradford Canal</b>	No effects	No effects	Policy is a general statement of aspiration that cannot have any significant effect.	-
<b>CC1 – Flood Risk and Water Management</b>	No effects	No effects	Policy provides general design/guidance criteria that cannot lead to or trigger development.	-
<b>CC2 – Sustainable Design and Construction</b>	No effects	No effects	Environmental protection policy, designed to protect the natural environment.	-
<b>NBE1 – Green Infrastructure</b>	No effects	No effects	Environmental protection policy, designed to protect the natural environment.	-

Policy	Effects		Rationale	Sites Specifically Vulnerable
	Alone	In Combination		
<b>NBE2 – Waterway Environments</b>	No effects	No effects	Environmental protection policy, designed to protect the natural environment.	-
<b>NBE3 – The Bradford Beck</b>	No effects	No effects	Environmental protection policy, designed to protect the natural environment.	-
<b>NBE4 – Biodiversity and Ecology</b>	No effects	No effects	Environmental protection policy, designed to protect the natural environment.	-
<b>NBE5 – Heritage and Conservation</b>	No effects	No effects	Environmental protection policy, designed to protect the built environment.	-
<b>NBE6 – Ensuring High Quality Design</b>	No effects	No effects	Policy provides general design/guidance criteria that cannot lead to or trigger development.	-
<b>HSC1 – Hazardous Installations</b>	No effects	No effects	Policy provides general design/guidance criteria that cannot lead to or trigger development.	-
<b>HSC2 – Open Space and Recreation</b>	No effects	No effects	Policy provides general design/guidance criteria that cannot lead to or trigger development.	-
<b>HSC3 – Community Infrastructure</b>	No effects	No effects	Policy makes provision for change, but which could have no conceivable effect.	-



## 5. Summary and Recommendations

### 5.1 Summary

#### **BCC AAP Publication Draft**

Given that there are no BCC sites within ~7km of any European site, the screening process has concluded that the BCC AAP (sites and policies) will have no significant effects (alone or in combination).

Consideration has also been given in relation to European interest features (in this instance, birds) which may use or be reliant on non-designated habitats outside of a European site during their life-cycle. With regard to the European sites within the study area, only the South Pennine Moors Phase 2 SPA which falls within the 15km zone of influence is considered within this report. This means that for the BCC sites, potential impacts upon the North Pennine Moors SPA can be screened out at this stage because the BCC AAP will self-evidently have either 'no effect' or 'no significant effect' on this site in relation to this impact pathway. In terms of the South Pennine Moors Phase 2 SPA (~7.5km from BCC at closest point), given the lack of suitable habitat within the BCC AAP area, the lack of suitable habitat connectivity to the SPA, and the current disturbance levels likely to occur within this largely urban area, no LSE is predicated upon any SPA bird species. Where bird records and/or areas of supporting habitat are identified close to adjoining authority boundaries, this issue may need to be kept under review, as plan-making work progresses, and be the subject of future liaison with the authority concerned.

The BCC AAP is therefore screened out of the need for any subsequent HRA assessment.

#### **SCRIP AAP Publication Draft**

A number of sites allocated for development within the SCRC AAP are more than ~7km from any European site, and are therefore screened out of the need for any subsequent HRA assessment.

Again, further consideration has been given in relation to European interest features (again in this instance, birds) which may use or be reliant on non-designated habitats outside of a European site during their life-cycle. With regard to the European sites within the study area, both the South Pennine Moors SAC, the South Pennine Moors Phase 2 SPA and the North Pennine Moors SPA fall within the 15km zone of influence considered within this report. Again given the lack of suitable habitat within the SCRIP AAP area, the lack of suitable habitat connectivity to the SPA's, and the current disturbance levels likely to occur within this largely urban area, no LSE is predicted upon any SPA bird species for either European site. Where bird records and/or areas of supporting habitat are identified close to adjoining authority boundaries, this issue may need to be kept under review, as plan-making work progresses, and be the subject of future liaison with the authority concerned.

There are 20 SCRC sites which are within ~7km of European sites and could have effects either 'alone' or 'in combination'. One site is allocated for "Green Infrastructure/Flood Risk Management" and it is considered that on this basis that this site will have "No Effects" on the European sites. 17 of the remaining sites comprises of proposals for a small number of houses which, taken alone, and given their distances from the SAC, are unlikely to have recreational impacts upon qualifying habitat features. In line with Core Strategy Publication Draft Policy SC8, any residential developments within ~7km of a European site that result in a net increase of 1 or more dwellings will be required to contribute to mitigation measures relating to greenspace, access, habitat management and monitoring. The approach to mitigation that will be adopted will set out a mechanism for the calculation of the planning contribution.

As noted in **Table 4.1** above it is considered that whilst prior to implementation of mitigation there is potential for 'alone' effects from the development of these sites, implementation of Core Strategy Policy SC8 and policies in the SRC will help to ensure that in reality there will be no likely significant effects on the European sites. The exact phasing and timescales for the development of these sites is not yet known so there is also potential for 'in combination' effects. However, it is also considered that implementation of Core Strategy Policy SC8 and policies in the SRC will help to ensure no likely significant 'in combination' effects.

It is also considered that the two large strategic allocations will not have any likely significant effects on the SAC either 'alone' or 'in combination' when the development of these sites implemented in accordance with Core Strategy Policy SC8 and policies in the SCRC AAP. This will help to mitigate any adverse effects associated with additional recreational pressure from the development of these strategic allocations.

The majority of policies within the SCRC AAP have also been screened out of the need for any subsequent HRA assessment because their policy 'type' cannot result in impacts on any European sites. There are, however, six policies which are assessed as having "No LSE, providing that amendments to policies NBE1, NBE4 and HSC2 (environmental protection and/or general guidance policies) are put in place", and these are discussed further in Section 5.2 below.

### **In-combination Effects Summary**

In-combination effects have been considered in section 3.4 above. Following assessment of potential in-combination effects with other plans in surrounding districts it has been determined that in relation to recreational impacts, urbanisation, atmospheric pollution and the water environment, there are unlikely be any in-combination effects with other plans due to the distance of the AAPs from the European Sites. In-combination effects are therefore screened out of the need for any subsequent HRA assessment.

## **5.2 Recommendations**

With regard to the prediction of effects, it is not possible to accurately model the likely increase in the number of recreational visits to the South Pennine Moors SAC that may result from the relevant SCRC site allocations and policies without substantial investigations into the current behaviour of residents in the SCRC area. Where there are other accessible recreational areas close by, this, combined with the size and design of sites, will provide a number of opportunities to manage landscapes and access to encourage residents to use the local area rather than driving elsewhere. It should also be noted that the site allocations will only be gradually developed over the lifetime of the plan and beyond, allowing for monitoring of recreational pressure to influence site design and phasing of development.

This is not to say that additional visits cannot be controlled and managed: for example, Guillemain *et al.* (2007) investigated the effects of ecotourism in the Camargue and found that waterbodies with more tourists did not support fewer birds in the medium-term; and that in the long term, wildfowl numbers were not related to the number of visitors. Obviously there will always be site-specific variations, but it is known that management can minimise disturbance, provided sufficient resources are available. It is therefore important that the SCRC provides control mechanisms for monitoring, managing and mitigating any potential effects on the SAC. Other plans have adopted a range of measures in similar situations, but most commonly these involve developer contributions to site management; and the provision of well-designed green infrastructure that integrates with the developments and allows easy walking access to local greenspace and the wider countryside (i.e. attractive local areas that are more convenient than protected areas). Studies have repeatedly shown that the most important factors influencing dog owners' choice of recreational area are the ability to take their dog off its lead; the proximity to home; and it being traffic-free. Measures that reduce the attractiveness of the SAC in this regard and increase the accessibility and value of local greenspace are likely to be successful in mitigating potential increases in recreational pressure. Recreational visits to the SAC are likely to increase as the population within the SCRC area increases, and appropriate controls within the SCRC can ensure that effects will not be adverse. Ensuring that open space is provided (so allowing easy access to large, nearby open space or the wider countryside) as is required by SCRC AAP Policy NBE1 is likely to greatly reduce the potential for adverse effects to occur.

### **Overarching Protective Policies**

The screening of the draft policies accounts for overarching or cross-cutting protective policies that may potentially be relied on to ensure that some other policies (and sites) do not have significant effects, particularly those that promote or support development but which do not specify the scale or location of that development. There are several such policies within the SCRC designed to protect the natural environment and ensure the provision of open space; not only can these policies usually be "screened out" as discussed in **Section 4.2** above, but they can also be used as control mechanisms for monitoring, managing and mitigating any potential effects on both sites and policies; and can be utilised to provide or enhance green infrastructure and reduce

an “Uncertain Effect” to “No LSE” (either “Alone” or “In Combination”). Policies within the SCRC that will help minimise the “Uncertain Effect” of site allocations on additional recreational pressure on the SAC are described in **Table 5.1** below. The use of these overarching policies can also be used to reduce the effects of the 6 remaining policies with “No LSE” predicted –applying the below mitigation measures to a site allocation would also necessitate that the accompanying policy relating to, for example, residential development, must also take this mitigation into consideration.

Table 5.1 Policies With Protective or Mitigating Measures That Will Minimise Potential Recreational Effects

Policy	Protective/mitigating measures
<b>NBE4</b> Biodiversity and Ecology	<p>Development will be expected to minimise adverse impacts on biodiversity and wildlife and provide for an improvement in local biodiversity where possible, through the protection and enhancement of important habitats, the creation of new habitats and the strengthening of key ecological corridors.</p> <p>All major development proposals will be expected to be accompanied by a Biodiversity Statement and take advantage of appropriate ecological enhancement opportunities, in line with the findings of this.</p>
<b>NBE1</b> Green Infrastructure	<p>All development will be expected to protect and enhance key green infrastructure and ecological networks. Major developments will be expected to demonstrate that they will positively contribute to enhancing green infrastructure and ecological networks, and include green infrastructure as an integral part of the design.</p> <p>The Council will work with partners to support the delivery of Green Infrastructure enhancement projects. This includes the creation of a new Linear Park, alongside the Bradford Beck and Canal Road greenway, to serve and integrate new and existing communities along the Corridor.</p>
<b>HSC2</b> Open Space, Sport and Recreation	<p>Any existing playing field which would be lost as a result of the proposed development should be replaced.</p> <p>Within the New Bolton Woods and Bolton Woods Quarry sites, any loss of land formerly used as recreation open space will be mitigated through the provision of new and enhanced areas of space.</p> <p>Major residential developments will be required to provide for new or improved open space and recreation facilities, in accordance with Core Strategy EN1. Larger scale housing sites will be expected to provide new and enhanced areas of on site open space, including recreation facilities and natural green space.</p>

It is suggested that the wording of the above policies could usefully be strengthened to ensure that effects on the SAC are avoided, using the following amendments:

- ▶ The term “major development” should be defined, for example to a precise number or scale of houses/size of development, to ensure that the above policies are given due consideration as any type of development covered by the AAP proposed within ~7km of a European site may also encourage recreational use of the European sites;
- ▶ Site allocations which are not “major developments” but that are within ~7km of a European site may have an “in-combination” effect when considered with other developments. After considering where and when development is proposed, if collectively, the proposed in-combination development then meets the threshold of a “major development”, the above policies and mitigation should also apply;
- ▶ Major developments within ~7km of a European site will be required to agree an appropriate monitoring strategy to identify any significant recreational effects on the interest features of the site as the allocation is developed, and suitable mitigation measures; and
- ▶ Core Strategy Publication Draft Policy SC8 must also be taken in to consideration - any residential developments within ~7km of a European site that result in a net increase of 1 or more dwellings will be required to contribute to mitigation measures relating to greenspace, access, habitat management and monitoring. The approach to mitigation that will be adopted will set out a mechanism for the calculation of the planning contribution. This should be reflected in the wording

of the policies contained within **Table 5.1** or the appropriate cross reference to Core Strategy Policy SC8 is made in the policy links box underneath the policy text within the AAP.

It is assumed that when applications for new development come forward over the lifetime of the plan, that such developments would be assessed in accordance with all policies in the plan (with particular reference to the policies contained within **Table 5.1** and Core Strategy Policy SC8) and therefore that consideration would always be given to any potential impacts on European sites within ~7km, as discussed in the recommendations above.

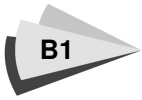
### 5.3 Conclusion

The AAP screening process has reviewed the available data and the draft AAPs, and it is concluded that both the BCC and SCRC AAPs will have no likely significant effects (alone or in combination) on any European site, due to either an absence of impact pathways, policy controls within the plan that can be relied on to ensure significant effects are avoided, or external controls (such as the water resources planning process) that account for the growth aspects of the plan and with which the plan is consistent, providing that the recommendations outlined in Section 5.2 above are followed.

# Appendix A

## European Site Designations

Box A1		European sites
Special Area of Conservation	SAC	Designated under the EU <i>Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora</i> , and implemented in the UK through the <i>Conservation of Habitats and Species Regulations 2010</i> (as amended), and the <i>Conservation (Natural Habitats, &amp; c.) Regulations (Northern Ireland) 1995</i> (as amended).
Sites of Community Importance	SCI	Sites of Community Importance (SCIs) are sites that have been adopted by the European Commission but not yet formally designated by the government of each country. Although not formally designated they are nevertheless fully protected by <i>Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora</i> , the <i>Conservation of Habitats and Species Regulations 2010</i> (as amended), and the <i>Conservation (Natural Habitats, &amp; c.) Regulations (Northern Ireland) 1995</i> (as amended).
Candidate SAC	cSAC	Candidate SACs (cSACs) are sites that have been submitted to the European Commission, but not yet formally adopted as SCIs. Although these sites are still undergoing designation and adoption they are still fully protected by <i>Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora</i> , the <i>Conservation of Habitats and Species Regulations 2010</i> (as amended) and the <i>Conservation (Natural Habitats, &amp; c.) Regulations (Northern Ireland) 1995</i> (as amended).
Possible SACs	pSAC	Sites that have been formally advised to UK Government, but not yet submitted to the European Commission. As a matter of policy the Governments in England, Scotland and Wales extend the same protection to these sites in respect of new development as that afforded to SACs.
Draft SACs	dSAC	Areas that have been formally advised to UK government as suitable for selection as SACs, but have not been formally approved by government as sites for public consultation. These are not protected (unless covered by some other designation) and it is likely that their existence will not be established through desk study except through direct contact with the relevant statutory authority; however, the statutory authority is likely to take into account the proposed reasons for designation when considering potential impacts on them.
Special Protection Area	SPA	Designated under <i>EU Council Directive 79/409/EEC on the Conservation of Wild Birds</i> (the 'old Wild Birds Directive') and <i>Directive 2009/147/EC on the Conservation of Wild Birds</i> (the 'new Wild Birds Directive', which repeals the 'old Wild Birds Directive'), and protected by Article 6 of <i>Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora</i> . These directives are implemented in the UK through the <i>Wildlife &amp; Countryside Act 1981</i> (as amended), the <i>Conservation of Habitats and Species Regulations 2010</i> (as amended), the <i>Wildlife (Northern Ireland) Order 1985</i> , the <i>Nature Conservation and Amenity Lands (Northern Ireland) Order 1985</i> and <i>The Conservation (Natural Habitats, &amp;C.) (Northern Ireland) Regulations 1995</i> (as amended) and the <i>Offshore Marine Conservation (Natural Habitats &amp; c.) Regulations 2007</i> .
Potential SPA	pSPA	These are sites that are still undergoing designation and have not been designated by the Secretary of State; however, ECJ case law indicates that these sites are protected under Article 4(4) of <i>Directive 2009/147/EC</i> (which in theory provides a higher level of protection than the Habitats Directive, which does not apply until the sites are designated as SPAs), and as a matter of policy the Governments in England, Scotland and Wales extend the same protection to these sites in respect of new development as that afforded to SPAs, and they may be protected by some other designation (e.g. SSSI).
Ramsar		The <i>Convention on Wetlands of International Importance especially as Waterfowl Habitat</i> (Ramsar Convention or Wetlands Convention) was adopted in Ramsar, Iran in February 1971. The UK ratified the Convention in 1976. In the UK Ramsar sites are generally underpinned by notification of these areas as Sites of Special Scientific Interest (SSSIs) (or Areas of Special Scientific Interest (ASSIs) in Northern Ireland). Ramsar sites therefore receive statutory protection under the <i>Wildlife &amp; Countryside Act 1981</i> (as amended), and the <i>Nature Conservation and Amenity Lands (Northern Ireland) Order 1985</i> . However, as a matter of policy the Governments in England, Scotland and Wales extend the same protection to listed Ramsar sites in respect of new development as that afforded to SPAs and SACs.



# Appendix B

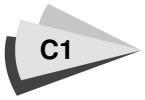
## Latin Names

### Common name

cross-leaved heath  
purple moor grass  
hare's-tail cottongrass  
heather  
crowberry  
bilberry  
cranberry  
cloudberry  
common cottongrass  
bracken  
rowan  
birch  
bird's-eye primrose  
marsh valerian  
stiff sedge  
fir clubmoss  
marsh saxifrage  
merlin  
golden plover  
common sandpiper  
short-eared owl  
dunlin  
twite  
common snipe  
curlew  
northern wheatear  
whinchat  
redshank  
ring ouzel  
lapwing  
hen harrier  
peregrine falcon

### Latin name

*Erica tetralix*  
*Molinia careulea*  
*Eriophorum vaginatum*  
*Calluna vulgaris*  
*Empetrum nigrum*  
*Vaccinium myrtillus*  
*Vaccinium oxycoccus*  
*Rubus chamaemorus*  
*Eriophorum angustifolium*  
*Pteridium aquilinum*  
*Sorbus aucuparia*  
*Betula* spp.  
*Primula farinose*  
*Valeriana dioica*  
*Carex bigelowii*  
*Huperzia selago*  
*Saxifraga hirculus*  
*Falco columbarius*  
*Pluvialis apricaria*  
*Actitis hypoleucos*  
*Asio flammeus*  
*Calidris alpine schinzii*  
*Carudelis flavirostis*  
*Gallinago*  
*Numenius arquata*  
*Oenanthe*  
*Saxicola rubetra*  
*Tringa tetanus*  
*Turdus torquatus*  
*Vanellus*  
*Circus cyaneus*  
*Falco peregrinus*



# Appendix C

## Distance of Site Allocations From European Designated Sites



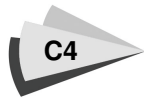
## BCC

AAP Name	AAP Site	SPA Name	Distance to SPA (m)	Direction to SPA	SAC Name	Distance to SAC (m)	Direction to SAC	SPA Name	Distance to SPA (M)	Direction to SPA	SAC Name	Distance to SAC (m)	Direction to SAC
SG/1.1	Southern Gateway	South Pennine Moors Phase 2	9868.62	W	South Pennine Moors	9868.62	W	North Pennine Moors	17354.13	N to NW	North Pennine Moors	17354.13	N to NW
SG/1.2	Southern Gateway	South Pennine Moors Phase 2	9948.39	W	South Pennine Moors	9948.39	W	North Pennine Moors	17273.78	N to NW	North Pennine Moors	17273.78	N to NW
SG/1.3	Southern Gateway	South Pennine Moors Phase 2	9972.63	N to NW	South Pennine Moors	9972.63	N to NW	North Pennine Moors	17237.00	N to NW	North Pennine Moors	17237.00	N to NW
V/1.1	Valley	South Pennine Moors Phase 2	8927.30	N to NW	South Pennine Moors	8927.30	N to NW	North Pennine Moors	16592.24	N to NW	North Pennine Moors	16592.24	N to NW
V/1.2	Valley	South Pennine Moors Phase 2	9053.54	W	South Pennine Moors	9053.54	W	North Pennine Moors	16743.99	N to NW	North Pennine Moors	16743.99	N to NW
V/1.3	Valley	South Pennine Moors Phase 2	9001.79	W	South Pennine Moors	9001.79	W	North Pennine Moors	16868.33	N to NW	North Pennine Moors	16868.33	N to NW
V/1.4	Valley	South Pennine Moors Phase 2	9005.59	N to NW	South Pennine Moors	9005.59	N to NW	North Pennine Moors	16552.93	N to NW	North Pennine Moors	16552.93	N to NW
V/1.5	Valley	South Pennine Moors Phase 2	9230.04	N to NW	South Pennine Moors	9230.04	N to NW	North Pennine Moors	16823.22	N to NW	North Pennine Moors	16823.22	N to NW
V/1.6	Valley	South Pennine Moors Phase 2	9169.07	W	South Pennine Moors	9169.07	W	North Pennine Moors	16868.10	N to NW	North Pennine Moors	16868.10	N to NW
V/1.7	Valley	South Pennine Moors Phase 2	9340.29	N to NW	South Pennine Moors	9340.29	N to NW	North Pennine Moors	16841.02	N to NW	North Pennine Moors	16841.02	N to NW
V/1.8	Valley	South Pennine Moors Phase 2	9446.86	N to NW	South Pennine Moors	9446.86	N to NW	North Pennine Moors	16966.20	N to NW	North Pennine Moors	16966.20	N to NW





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V/1.9	Valley	South Pennine Moors Phase 2	9420.50	N to NW	South Pennine Moors	9420.50	N to NW	North Pennine Moors	16867.57	N to NW	North Pennine Moors	16867.57	N to NW
V/1.10	Valley	South Pennine Moors Phase 2	9060.48	N to NW	South Pennine Moors	9060.48	N to NW	North Pennine Moors	16719.39	N to NW	North Pennine Moors	16719.39	N to NW
B/1.1	Bowl	South Pennine Moors Phase 2	9609.66	W	South Pennine Moors	9609.66	W	North Pennine Moors	17229.53	N to NW	North Pennine Moors	17229.53	N to NW
B/1.2	Bowl	South Pennine Moors Phase 2	9656.48	N to NW	South Pennine Moors	9656.48	N to NW	North Pennine Moors	17059.04	N to NW	North Pennine Moors	17059.04	N to NW
B/1.3	Bowl	South Pennine Moors Phase 2	9813.63	N to NW	South Pennine Moors	9813.63	N to NW	North Pennine Moors	17166.12	N to NW	North Pennine Moors	17166.12	N to NW
B/1.4	Bowl	South Pennine Moors Phase 2	9755.54	N to NW	South Pennine Moors	9755.54	N to NW	North Pennine Moors	16993.68	N to NW	North Pennine Moors	16993.68	N to NW
B/1.5	Bowl	South Pennine Moors Phase 2	9720.25	N to NW	South Pennine Moors	9720.25	N to NW	North Pennine Moors	16881.73	N to NW	North Pennine Moors	16881.73	N to NW
B/1.6	Bowl	South Pennine Moors Phase 2	9524.96	N to NW	South Pennine Moors	9524.96	N to NW	North Pennine Moors	16992.13	N to NW	North Pennine Moors	16992.13	N to NW
CH/1.1	Channel	South Pennine Moors Phase 2	8916.67	N to NW	South Pennine Moors	8916.67	N to NW	North Pennine Moors	16163.45	N to NW	North Pennine Moors	16163.45	N to NW
CH/1.2	Channel	South Pennine Moors Phase 2	9132.65	N to NW	South Pennine Moors	9132.65	N to NW	North Pennine Moors	16401.93	N to NW	North Pennine Moors	16401.93	N to NW
CH/1.3	Channel	South Pennine Moors Phase 2	9209.86	N to NW	South Pennine Moors	9209.86	N to NW	North Pennine Moors	16382.72	N to NW	North Pennine Moors	16382.72	N to NW
CH/1.4	Channel	South Pennine Moors Phase 2	9023.61	N to NW	South Pennine Moors	9023.61	N to NW	North Pennine Moors	16175.84	N to NW	North Pennine Moors	16175.84	N to NW



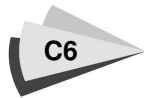
AAP Name	AAP Site	SPA Name	Distance to SPA (m)	Direction to SPA	SAC Name	Distance to SAC (m)	Direction to SAC	SPA Name	Distance to SPA (M)	Direction to SPA	SAC Name	Distance to SAC (m)	Direction to SAC
CH/1.5	Channel	South Pennine Moors Phase 2	9421.93	N to NW	South Pennine Moors	9421.93	N to NW	North Pennine Moors	16510.15	N to NW	North Pennine Moors	16510.15	N to NW
CH/1.6	Channel	South Pennine Moors Phase 2	9553.92	N to NW	South Pennine Moors	9553.92	N to NW	North Pennine Moors	16642.78	N to NW	North Pennine Moors	16642.78	N to NW
CH/1.7	Channel	South Pennine Moors Phase 2	9660.62	N to NW	South Pennine Moors	9660.62	N to NW	North Pennine Moors	16779.14	N to NW	North Pennine Moors	16779.14	N to NW
CH/1.8	Channel	South Pennine Moors Phase 2	8985.79	N to NW	South Pennine Moors	8985.79	N to NW	North Pennine Moors	16172.66	N to NW	North Pennine Moors	16172.66	N to NW
CH/1.9	Channel	South Pennine Moors Phase 2	9496.65	N to NW	South Pennine Moors	9496.65	N to NW	North Pennine Moors	16684.27	N to NW	North Pennine Moors	16684.27	N to NW
CH/1.10	Channel	South Pennine Moors Phase 2	9469.48	N to NW	South Pennine Moors	9469.48	N to NW	North Pennine Moors	16628.19	N to NW	North Pennine Moors	16628.19	N to NW
CH/1.11	Channel	South Pennine Moors Phase 2	9694.23	N to NW	South Pennine Moors	9694.23	N to NW	North Pennine Moors	16808.28	N to NW	North Pennine Moors	16808.28	N to NW
CH/1.12	Channel	South Pennine Moors Phase 2	8693.56	N to NW	South Pennine Moors	8693.56	N to NW	North Pennine Moors	15947.88	N to NW	North Pennine Moors	15947.88	N to NW
CH/1.13	Channel	South Pennine Moors Phase 2	8816.44	N to NW	South Pennine Moors	8816.44	N to NW	North Pennine Moors	16052.98	N to NW	North Pennine Moors	16052.98	N to NW
LQ/1.1	Learning Quarter	South Pennine Moors Phase 2	8747.34	W	South Pennine Moors	8747.34	W	North Pennine Moors	17212.59	N to NW	North Pennine Moors	17212.59	N to NW
LQ/1.2	Learning Quarter	South Pennine Moors Phase 2	8907.40	W	South Pennine Moors	8907.40	W	North Pennine Moors	17076.07	N to NW	North Pennine Moors	17076.07	N to NW
LQ/1.3	Learning Quarter	South Pennine Moors Phase 2	8822.45	W	South Pennine Moors	8822.45	W	North Pennine Moors	17339.77	N to NW	North Pennine Moors	17339.77	N to NW



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M/1.1	Markets	South Pennine Moors Phase 2	8974.73	N to NW	South Pennine Moors	8974.73	N to NW	North Pennine Moors	16416.48	N to NW	North Pennine Moors	16416.48	N to NW
M/1.2	Markets	South Pennine Moors Phase 2	8925.40	N to NW	South Pennine Moors	8925.40	N to NW	North Pennine Moors	16308.86	N to NW	North Pennine Moors	16308.86	N to NW
M/1.3	Markets	South Pennine Moors Phase 2	9079.47	N to NW	South Pennine Moors	9079.47	N to NW	North Pennine Moors	16426.55	N to NW	North Pennine Moors	16426.55	N to NW
M/1.4	Markets	South Pennine Moors Phase 2	9197.00	N to NW	South Pennine Moors	9197.00	N to NW	North Pennine Moors	16679.14	N to NW	North Pennine Moors	16679.14	N to NW
M/1.5	Markets	South Pennine Moors Phase 2	9263.01	N to NW	South Pennine Moors	9263.01	N to NW	North Pennine Moors	16755.97	N to NW	North Pennine Moors	16755.97	N to NW

## SCRC

AAP Name	AAP Site	SPA Name	Distance to SPA (m)	Direction to SPA	SAC Name	Distance to SAC (m)	Direction to SAC	SPA Name	Distance to SPA (M)	Direction to SPA	SAC Name	Distance to SAC (m)	Direction to SAC
SE2	SE	South Pennine Moors Phase 2	5043.09	N to NW	South Pennine Moors	5043.09	N to NW	North Pennine Moors	12748.73	N to NW	North Pennine Moors	12748.73	N to NW
SE1	SE	South Pennine Moors Phase 2	4847.74	N to NW	South Pennine Moors	4847.74	N to NW	North Pennine Moors	12561.36	N to NW	North Pennine Moors	12561.36	N to NW
STC1	STC	South Pennine Moors Phase 2	4717.09	N to NW	South Pennine Moors	4717.09	N to NW	North Pennine Moors	12671.66	N to NW	North Pennine Moors	12671.66	N to NW
STC2	STC	South Pennine Moors Phase 2	4753.40	N to NW	South Pennine Moors	4753.40	N to NW	North Pennine Moors	12697.06	N to NW	North Pennine Moors	12697.06	N to NW
STC3	STC	South Pennine Moors Phase 2	4882.12	N to NW	South Pennine Moors	4882.12	N to NW	North Pennine Moors	12732.34	N to NW	North Pennine Moors	12732.34	N to NW



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STC4	STC	South Pennine Moors Phase 2	4878.58	N to NW	South Pennine Moors	4878.58	N to NW	North Pennine Moors	12799.61	N to NW	North Pennine Moors	12799.61	N to NW
STC5	STC	South Pennine Moors Phase 2	4691.89	N to NW	South Pennine Moors	4691.89	N to NW	North Pennine Moors	12637.12	N to NW	North Pennine Moors	12637.12	N to NW
STC6	STC	South Pennine Moors Phase 2	4681.00	N to NW	South Pennine Moors	4681.00	N to NW	North Pennine Moors	12524.53	N to NW	North Pennine Moors	12524.53	N to NW
BWQ1	BWQ	South Pennine Moors Phase 2	6447.96	N to NW	South Pennine Moors	6447.96	N to NW	North Pennine Moors	13511.45	N to NW	North Pennine Moors	13511.45	N to NW
CCF1	CCF	South Pennine Moors Phase 2	7929.98	N to NW	South Pennine Moors	7929.98	N to NW	North Pennine Moors	15077.92	N to NW	North Pennine Moors	15077.92	N to NW
CCF2	CCF	South Pennine Moors Phase 2	8369.34	N to NW	South Pennine Moors	8369.34	N to NW	North Pennine Moors	15588.13	N to NW	North Pennine Moors	15588.13	N to NW
CCF3	CCF	South Pennine Moors Phase 2	8552.12	N to NW	South Pennine Moors	8552.12	N to NW	North Pennine Moors	15745.56	N to NW	North Pennine Moors	15745.56	N to NW
CCF4	CCF	South Pennine Moors Phase 2	8556.23	N to NW	South Pennine Moors	8556.23	N to NW	North Pennine Moors	15845.62	N to NW	North Pennine Moors	15845.62	N to NW
DF7	DF	South Pennine Moors Phase 2	4657.12	N to NW	South Pennine Moors	4657.12	N to NW	North Pennine Moors	12213.00	N to NW	North Pennine Moors	12213.00	N to NW
DF8	DF	South Pennine Moors Phase 2	4576.43	N to NW	South Pennine Moors	4576.43	N to NW	North Pennine Moors	12115.43	N to NW	North Pennine Moors	12115.43	N to NW
DF9	DF	South Pennine Moors Phase 2	4575.10	N to NW	South Pennine Moors	4575.10	N to NW	North Pennine Moors	12166.77	N to NW	North Pennine Moors	12166.77	N to NW
DF4	DF	South Pennine Moors Phase 2	4505.54	N to NW	South Pennine Moors	4505.54	N to NW	North Pennine Moors	12216.90	N to NW	North Pennine Moors	12216.90	N to NW
DF5	DF	South Pennine Moors Phase 2	4582.73	N to NW	South Pennine Moors	4582.73	N to NW	North Pennine Moors	12288.37	N to NW	North Pennine Moors	12288.37	N to NW
DF6	DF	South Pennine Moors Phase 2	4605.38	N to NW	South Pennine Moors	4605.38	N to NW	North Pennine Moors	12262.49	N to NW	North Pennine Moors	12262.49	N to NW



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<b>DF2</b>	DF	South Pennine Moors Phase 2	4715.56	N to NW	South Pennine Moors	4715.56	N to NW	North Pennine Moors	12354.29	N to NW	North Pennine Moors	12354.29	N to NW
<b>DF3</b>	DF	South Pennine Moors Phase 2	4805.65	N to NW	South Pennine Moors	4805.65	N to NW	North Pennine Moors	12435.59	N to NW	North Pennine Moors	12435.59	N to NW
<b>DF1</b>	DF	South Pennine Moors Phase 2	4579.25	N to NW	South Pennine Moors	4579.25	N to NW	North Pennine Moors	11906.98	N to NW	North Pennine Moors	11906.98	N to NW
<b>NBW5</b>	NBW	South Pennine Moors Phase 2	5719.84	N to NW	South Pennine Moors	5719.84	N to NW	North Pennine Moors	13517.83	N to NW	North Pennine Moors	13517.83	N to NW
<b>NBW6</b>	NBW	South Pennine Moors Phase 2	7646.84	N to NW	South Pennine Moors	7646.84	N to NW	North Pennine Moors	15134.71	N to NW	North Pennine Moors	15134.71	N to NW
<b>NBW1</b>	NBW	South Pennine Moors Phase 2	5888.34	N to NW	South Pennine Moors	5888.34	N to NW	North Pennine Moors	13572.38	N to NW	North Pennine Moors	13572.38	N to NW
<b>NBW3</b>	NBW	South Pennine Moors Phase 2	6354.69	N to NW	South Pennine Moors	6354.69	N to NW	North Pennine Moors	13655.30	N to NW	North Pennine Moors	13655.30	N to NW
<b>NBW4</b>	NBW	South Pennine Moors Phase 2	6384.02	N to NW	South Pennine Moors	6384.02	N to NW	North Pennine Moors	13752.53	N to NW	North Pennine Moors	13752.53	N to NW
<b>NBW2</b>	NBW	South Pennine Moors Phase 2	6373.86	N to NW	South Pennine Moors	6373.86	N to NW	North Pennine Moors	14079.73	N to NW	North Pennine Moors	14079.73	N to NW
<b>NBW7</b>	NBW	South Pennine Moors Phase 2	6616.81	N to NW	South Pennine Moors	6616.81	N to NW	North Pennine Moors	14007.07	N to NW	North Pennine Moors	14007.07	N to NW

