

North Somerset Futures  
Local Development Framework

# Core Strategy

Habitats Regulations  
Assessment Report

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# Habitats Regulations Assessment Report

## North Somerset Council Core Strategy Publication Draft

February 2011

### **1. Introduction.**

- 1.1 This report documents the Habitats Regulations Assessment (HRA) work which has been carried out on the North Somerset Core Strategy, which forms part of the North Somerset Local Development Framework. The relevant regulations are the Conservation of Habitats and Species Regulations 2010, which relate to Articles 6(3) and (4) of the Habitats Directive.
- 1.2 Screening work has been undertaken. It considers whether policies in plans such as Development Plan Documents, like the Core Strategy, are likely to have significant effects on the integrity of a European Site in light of its conservation objectives. That will determine whether an Appropriate Assessment is necessary, under section 102 of the above regulations.
- 1.3 "European sites" are Natura 2000 sites. They include Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites, under the EC Birds and Habitats Directives.
- 1.4 Consistent with the regulations, the screening exercise has taken account of whether significant effects are likely from the Core Strategy alone, and also whether in-combination effects are likely (taking account of other plans and projects in combination with the Core Strategy).

### **2. North Somerset Core Strategy**

- 2.1 The Core Strategy is part of the emerging North Somerset Local Development Framework and sets out strategic planning policies for the district up to 2026. It is a strategic, not a detailed document. The HRA has been at an appropriate level of detail for this high level document. More detailed Development Plan Documents (DPDs) such as the Site Allocations DPD are emerging and are likely to need to be subject to separate HRA.
- 2.2 A Consultation Draft version of the Core Strategy was subject to public consultation in November 2009. A Publication version has been produced for public consultation (regarding issues of soundness only) in February 2011. Screening for HRA has occurred at both stages.

### **3. How has the HRA been carried out?**

- 3.1 The HRA work has been carried out by the Council, (including Planning Policy Officers and the Council's Ecologist), with the help of consultants (Halcrow) who were commissioned to provide expertise on technical matters, notably air quality.
- 3.2 Natural England have been involved throughout, and have attended progress meetings. These meetings agreed the scope of the exercise and the format of the screening matrices to be used. It was agreed that all four European Sites within North Somerset district, (the Severn Estuary SAC/ SPA/ Ramsar, Mendip Limestone Grasslands SAC, North Somerset and Mendip Bats SAC and Avon Gorge Woodlands SAC) should be considered in the assessment. Details on these European sites are shown in Appendix A, including their qualifying interests and conservation objectives.
- 3.3 The screening exercise was undertaken using Screening Assessment Matrices covering all potential sources of effects, and Air Quality Assessment Matrices covering possible effects on air quality.
- 3.4 The matrices were first drawn up as part of the screening assessment of the Consultation Draft Core Strategy (November 2009). That version of the Core Strategy can be seen through the following link.

<http://www.n-somerset.gov.uk/Environment/Planning+policy/Local+Development+Framework/core+strategy.htm>

- 3.5 In completing the Screening Assessment matrices, officers initially categorised each Core Strategy policy on whether (without considering any avoidance/mitigation measures) the policy seemed potentially likely to have a significant effect on the relevant European site, alone or in combination etc. (See third column of Screening Assessment matrices in Appendix C). In doing so they used the categories recommended in the Natural England draft guidance on carrying out HRA. Eg. B: No significant effect, C: Likely significant effect alone, D: Likely significant effect in combination. That guidance is Revised Draft Guidance: The Habitats Regulations Assessment of Local Development Documents, (David Tyldesley and Associates for Natural England, January 2009.)
- 3.6 Potential possible impacts were considered, and following consideration of these, and potential avoidance/mitigation measures, the policies were then reassessed and re categorised where appropriate, assuming that avoidance/mitigation measures would be carried out. (See penultimate column of Screening Assessment matrices in Appendix C). Consideration was also given (in the final column of the matrices) to whether further HRA might be required, notably at the project level (planning application stage).
- 3.7 A list of policies which might have potential effects regarding air quality was identified, for closer investigation. Halcrow produced detailed Air Quality Assessment matrices in respect of all those policies. (See Appendix D. The methodology is set out at the end of that appendix). The Air Quality assessment matrices were then used to help complete the impacts section of the Screening Assessment matrices, cross referring where appropriate.

- 3.8 Also, since it was considered that there might be potential for in-combination effects relating to air quality (from emissions from road traffic and point sources such as energy from waste plants), Halcrow carried out further work on this. They considered whether there would be such in-combination effects, looking at the Core Strategy alongside other projects and plans. That assessment is in table 15 on page 66 of Appendix D.
- 3.9 This high level assessment of the Consultation Draft Core Strategy found that, with avoidance/mitigation measures, no significant effects were predicted on European sites. Water abstraction was considered in screening but, as indicated in Appendix C against Policy CS14, no significant effects were predicted for that, confirmed by the Environment Agency.
- 3.10 This assessment was sent to Natural England, for comment, in September 2010. Natural England replied in a letter of 27 October 2010, stating that they were “in general agreement” with the assessment’s findings. However they advised that the HRA should be updated in due course so that it relates to the Publication version of the document.
- 3.11 Accordingly, following production of the Publication version of the Core Strategy, the Council updated the HRA. A table was produced identifying the main changes to policies made between the Consultation Draft and Publication stages, and their implications; (See Appendix B). The Publication version policies were reassessed using the Screening Assessment matrices. Rows were inserted in those matrices as part of that process, relating to the Publication version. For each policy, they sit beneath the rows relating to the Consultation Draft document, in Appendix C, and are highlighted in red.
- 3.12 Screening assessment of the Publication version found that no likely significant effects (LSEs) would result from the changes it introduced. Those changes largely related to reduced levels of development for the district resulting from local determination of development requirements.
- 3.13 In updating the HRA, the Council responded to points made by Natural England. We amended the Screening Assessment matrices to indicate what mechanisms may underpin delivery of certain avoidance/mitigation measures. We also added specific reference to such measures in the Core Strategy itself, stressing the importance of their delivery, in paragraph 1.10.

#### **4. Conclusions from the HRA work**

- 4.1 Screening has found that, with the avoidance/mitigation measures identified in the matrices, no likely significant effects are predicted from the Publication Core Strategy, regarding the European sites, both from the Core Strategy alone and in combination with other plans or projects. This is shown by Appendix C and table 15 of Appendix D.
- 4.2 Therefore the screening suggests that there is not a need for Appropriate Assessment of the Core Strategy.
- 4.3 However this is a high level assessment and there might be instances where project level HRA is required. The Screening Assessment matrices suggest that such detailed HRA may need to be carried out in respect of some

individual planning applications. The Council's Ecologist would be involved in determining which applications need HRA. Natural England would be consulted where appropriate.

- 4.4 This HRA report is a supporting document to the Publication Core Strategy. We are pleased to have carried out the HRA process in close liaison with Natural England and to note that they have written to state that they are "very satisfied with the HRA process undertaken".
- 4.5 The importance of protecting European Sites, and of maintaining and enhancing biodiversity in general, is reflected in the Core Strategy itself. Policy CS4 on nature conservation is particularly relevant here, referring to protection and enhancement of important habitats, particularly designated sites. Its supporting text refers to all the European sites in North Somerset and the HRA process.

## APPENDIX A

### The European Sites considered

#### Severn Estuary SAC, SPA, Ramsar

Severn Estuary SAC (73715.4 ha) is located between Wales and England in south-west Britain. It is a large estuary with extensive intertidal mud-flats and sand-flats, rocky platforms and islands. Saltmarsh fringes the coast backed by grazing marsh with freshwater ditches and occasional brackish ditches. The seabed is rock and gravel with sub-tidal sandbanks. The estuary's classic funnel shape, unique in the UK, is a factor causing the Severn to have the second highest tidal range in the world (after the Bay of Fundy in Canada).

#### Qualifying Interests:

*Annex I* habitats that are a Primary reason for the selection of the site:

1. **Estuaries** – Estuaries are defined as the downstream part of a river valley, subject to the tide and extending from the limit of brackish water. There is a gradient of salinity from freshwater in the river to increasingly marine conditions towards open sea.
2. **Mudflats and Sandflats not covered by seawater at low tide** – Mudflats form in the most sheltered areas of the coast, usually where large quantities of silt derived from rivers are deposited in estuaries. The sediment is stable and communities are typically dominated by polychaete worms and bivalve molluscs and may support very high densities of the mud-snail *Hydrobia ulvae*. The high biomass of invertebrates in such sediments often provides an important food source for waders and wildfowl, such as common shelduck *Tadorna tadorna*, knot *Calidris canuta* and dunlin *Calidris alpina*.
3. **Atlantic salt meadows** develop when halophytic vegetation colonises soft intertidal sediments of mud and sand in areas protected from strong wave action. This vegetation forms the middle and upper reaches of saltmarshes, where tidal inundation still occurs but with decreasing frequency and duration. A wide range of community types is represented and the saltmarshes can cover large areas, especially where there has been little or no enclosure on the landward side. The vegetation varies with climate and the frequency and duration of tidal inundation. Grazing by domestic livestock is particularly significant in determining the structure and species composition of the habitat type and in determining its relative value for plants, for invertebrates and for wintering or breeding waterfowl.
4. **Reefs** are rocky marine habitats or biological concretions that rise from the seabed. They are generally subtidal but may extend as an unbroken transition into the intertidal zone, where they are exposed to the air at low tide. Intertidal areas are only included within this *Annex I* type where they are connected to subtidal reefs. Reefs are very variable in form and in the communities that they support. Two main types of reef can be recognised: those where animal and plant communities develop on rock or stable boulders and cobbles, and those where structure is created by the animals themselves (biogenic reefs).
5. **Sandbanks slightly covered by sea water all the time** consist of sandy sediments that are permanently covered by shallow sea water. Shallow sandy sediments are typically colonised by a burrowing fauna of worms, crustaceans,

bivalve molluscs and echinoderms. Mobile epifauna occur at the surface of the sandbank.

Annex II species present on the site:

Sea Lamprey (*Petromyzon marinus*), River Lamprey (*Lampetra fluviatilis*) and Twaite Shad (*Alosa fallax*) are Annex II species present as a qualifying feature here, but not a primary reason for site selection. However, they still need to be considered when assessing the qualifying interests and conservation objectives of the site.

**Conservation Objectives:**

The conservation objectives of the Severn Estuary are to keep the above interest features in a favourable condition

**Mendip Limestone Grasslands SAC**

Mendip Limestone Grasslands Special Area of Conservation (SAC) comprises three scattered component SSSIs which are located to the west of the Mendip Hills and extend to the Severn Estuary. Mendip Limestone Grasslands (417.47ha) is primarily designated for the presence of the Annex I habitat, semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*). This site comprises coastal headland and inland hill sections of the Carboniferous Limestone outcrops of the Mendips, and supports the largest area of CG1 *Festuca ovina* – *Carlina vulgaris* grassland in England, including two sub-types (CG1a *Carex humilis* and CG1c *Trinia glauca* sub-communities) which are known at no other site in the UK.

**Qualifying Interests:**

Mendip Limestone Grasslands Special Area of Conservation SAC was primarily selected as an SAC for:

1. Its ***semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco-Brometalia)*** for which this is considered to be one of the best areas in the UK. *Festuco-Brometalia* grasslands are found on thin, well-drained, lime-rich soils associated with chalk and limestone. Often maintained by grazing, a large number of rare plants are associated with this habitat, including the Annex II species *Gentianella anglica* (early gentian). The invertebrate fauna is also noteworthy and includes rarities such as the Adonis blue *Lysandra bellargus* and silver-spotted skipper *Hesperia comma*.
2. ***European dry heaths*** typically occur on freely-draining, acidic to circumneutral soils with generally low nutrient content. The vegetation is dominated by ericaceous dwarf-shrubs, commonly *Calluna vulgaris* (heather), which often occurs in combination with *Ulex* spp. (gorse), *Vaccinium* spp. (bilberry) or *Erica cinerea* (bell heather). Other dwarf-shrubs are important locally. Nearly all dry heath is semi-natural (derived from woodland through a long history of grazing and burning) and most heathlands are managed for livestock grazing or, in upland areas, grouse moors.
3. ***Tilio-Acerion forests of slopes, scree and ravines*** for which this is considered to be one of the best areas in the UK. *Tilio-Acerion* forests are woods of ash *Fraxinus excelsior*, wych elm *Ulmus glabra* and lime (mainly small-leaved lime *Tilia cordata* but more rarely large-leaved lime *T. platyphyllos*). Introduced sycamore *Acer pseudoplatanus* is often present and is a common part of the community in mainland Europe, where it is native.



4. **Natural caves that are not routinely exploited for tourism**, and which host specialist or endemic cave-dwelling species (cavernicoles) or support important populations of *Annex II* species. Cavernicoles in the UK include bacteria, algae, fungi and various groups of invertebrates (e.g. insects, spiders and crustaceans). Some caves are important hibernation sites for bat species, including all four *Annex II* species found in the UK.

Annex II Species present on the site:

Greater Horseshoe Bat (*Rhinolophus ferrumequinum*) are *Annex II* species present as a qualifying feature here, but not a primary reason for site selection. However they still need to be considered when assessing the qualifying interests and conservation objectives of the site.

**Conservation Objectives:**

The Conservation Objectives for the Mendip Limestone Grasslands SAC are focussed on the component SSSIs. Those in/adjoining North Somerset are:

- Brean Down
- Crook Peak to Shute Shelve Hill
- Uphill Cliff

The conservation objectives are to maintain in favourable condition the semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*).

**Additional Information:**

These sites are all open-access and are heavily used for informal recreation. The balance of habitats is heavily dependant upon adequate grazing, which is not always available. The communing system on which the management of the Crook Peak part of the site depends is breaking down and may cause serious problems in the future.

**North Somerset and Mendip Bats SAC**

North Somerset and Mendip Bats Special Area of Conservation (SAC) comprises seven component SSSIs located approximately 5km to the north west of the Mendip Hills and immediately south of the Mendip Hills. This SAC (561.19ha) comprises a number of component areas. The Cheddar complex and Wookey Hole areas support a wide range of semi-natural habitats including *Tilio-Acerion* forest and semi-natural dry grasslands, which support a large number of rare plants. Kings and Urchin's Wood has a large block of *Tilio-Acerion* forest which has developed over limestone which out crops in parts of the site and forms a steep scarp to the south-east.

The limestone caves of the Mendips in this area provide a range of hibernation sites for horseshoe bat species. The SAC represents 3% of the UK greater horseshoe bat population, comprising an exceptional range of sites used by the population, including two maternity sites in lowland North Somerset and a variety of cave and mine hibernation sites in the Mendip Hills.

**Qualifying Interests:**

North Somerset and Mendip Bats SAC was primarily selected as a SAC for:

1. Its **semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*)** for which this is considered to be one of the best

areas in the UK. *Festuco-Brometalia* grasslands are found on thin, well-drained, lime-rich soils associated with chalk and limestone. Often maintained by grazing, a large number of rare plants are associated with this habitat, including the *Annex II* species *Gentianella anglica* (early gentian). The invertebrate fauna is also noteworthy and includes rarities such as the Adonis blue *Lysandra bellargus* and silver-spotted skipper *Hesperia comma*.

**2. *Tilio-Acerion* forests of slopes, screes and ravines** for which this is considered to be one of the best areas in the UK. *Tilio-Acerion* forests are woods of ash *Fraxinus excelsior*, wych elm *Ulmus glabra* and lime (mainly small-leaved lime *Tilia cordata* but more rarely large-leaved lime *T. platyphyllos*). Introduced sycamore *Acer pseudoplatanus* is often present and is a common part of the community in mainland Europe, where it is native.

**3. *Natural caves that are not routinely exploited for tourism***, and which host specialist or endemic cave-dwelling species (cavernicoles) or support important populations of *Annex II* species. Cavernicoles in the UK include bacteria, algae, fungi and various groups of invertebrates (e.g. insects, spiders and crustaceans). Some caves are important hibernation sites for bat species, including all four *Annex II* species found in the UK.

**Annex II species present on the site:**

Lesser Horseshoe Bat (*Rhinolophus hipposideros*) and Greater Horseshoe Bat (*Rhinolophus ferrumequinum*) are *Annex II* species present as a qualifying feature here, but not a primary reason for site selection. They still need to be considered however, when assessing the qualifying interests and conservation objectives of the site.

**Conservation Objectives:**

The Conservation Objectives for the North Somerset and Mendip Bats SAC are focussed on the component SSSIs, which within North Somerset are :

- Banwell Caves
- Banwell Ochre Caves
- Brockley Hall Stables
- Kings Wood and Urchin Wood

The conservation objectives are to maintain in favourable condition the *Rhinolophus ferrumequinum* (Greater Horseshoe Bat), for which this is considered one of the best areas in the UK, and the *Rhinolophus hipposideros* (Lesser Horseshoe Bat).

**Additional Information:**

There are significant management problems associated with both the grassland and woodland elements of the SAC. Low levels of grazing have led to scrub invasion and the development of secondary woodland. The woodland has been badly managed in the past and requires a considerable amount of restoration.

**Avon Gorge Woodlands SAC**

Avon Gorge Woodlands Special Area of Conservation (SAC) is situated to the west of the A4, on the edge of Bristol city. Avon Gorge Woodlands (152.35ha) occurs on the limestone cliffs and screes of a large river gorge. It is important because of the high concentration of small-leaved lime *Tilia cordata*, compared with other sites in the

region, the presence of rare whitebeams *Sorbus* spp., including two unique to the Avon Gorge (*S. bristoliensis* and *S. wilmottiana*), and other uncommon plants, such as green hellebore *Helleborus viridis*. Species-rich transitions to scrub and grasslands are associated with the woodland.

**Qualifying Interests:**

Avon Gorge Woodlands SAC was primarily selected as a SAC for:

1. **Tilio-Acerion forests of slopes, screes and ravines.** *Tilio-Acerion* ravine forests are woods of ash *Fraxinus excelsior*, wych elm *Ulmus glabra* and lime (mainly small-leaved lime *Tilia cordata* but more rarely large-leaved lime *T. platyphyllos*). Introduced sycamore *Acer pseudoplatanus* is often present and is a common part of the community in mainland Europe, where it is native.

2. Its **semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco-Brometalia).** Festuco-Brometalia grasslands are found on thin, well-drained, lime-rich soils associated with chalk and limestone. Often maintained by grazing, a large number of rare plants are associated with this habitat, including the Annex II species *Gentianella anglica* (early gentian). The invertebrate fauna is also noteworthy and includes rarities such as the Adonis blue *Lysandra bellargus* and silver-spotted skipper *Hesperia comma*.

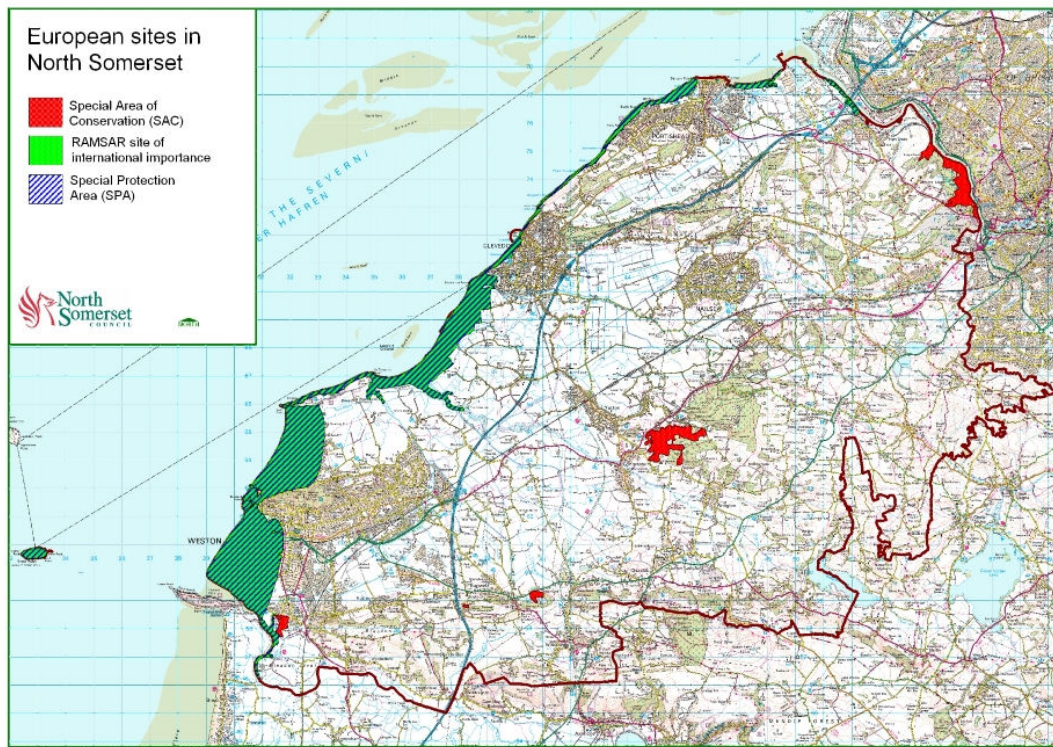
**Conservation Objectives:**

The Conservation Objectives for the Avon Gorge Woodlands SAC are focussed on the component Site of Special Scientific Interest (SSSI), in/adjoining North Somerset:

- Avon Gorge

The conservation objectives are to maintain in favourable condition the *Tilio-Acerion* forests of slopes, screes and ravines and the semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*).

## Map of European Sites within North Somerset



## APPENDIX B

### Table summarising changes made to Core Strategy policies between the Consultation Draft and Publication stages, and their implications

<b>Core Strategy Policy</b>	<b>Main changes to policy made by Publication version of Core Strategy (from 2009 Consultation Draft version)</b>	<b>Implications: Do Likely Significant Effects (LSEs) for European Sites result from the changes?</b>
CS1 Addressing climate change and carbon reduction	Very minor changes to wording, none detrimental, and some positive; eg. addition that green infrastructure would “include not only green spaces but also creation and enhancement of woodland areas”. Policy is still positive environmentally (eg. commitment to reducing carbon emissions, etc.)	No LSEs
CS2 Delivering sustainable design and construction	Minor changes not affecting generally positive nature of policy, eg. slight variations in requirements regarding Code for Sustainable Homes requirements. Some improvements environmentally: eg addition of requirement for Sustainable Drainage Systems.	No LSEs
CS3 Environmental impacts and flood risk assessment	None.	No LSEs
CS4 Nature Conservation	Minor changes not affecting positive nature of policy for nature conservation.	No LSEs
CS5 Landscape and Historic Environment	None.	No LSEs
CS6 North Somerset's Green Belt	No significant change: proposal to not change the Green Belt boundaries retained and effectively strengthened.	No LSEs
CS7 Planning for Waste	None.	No LSEs
CS8 Minerals Planning	Minor positive change for environment: reference to local testing of North Somerset's apportionment share for provision of aggregates, including environmental acceptability.	No LSEs
CS9 Green Infrastructure	Minor changes not affecting generally positive nature of policy, and some enhancing it: eg. reference to value of trees and tree planting to biodiversity, and of Sustainable Drainage Systems for Green Infrastructure.	No LSEs

CS10 Transportation and Movement	Minor change, positive: addition of text stating that transport schemes should contribute towards carbon reduction.	No LSEs
CS11 Parking	No significant change, just added reference to promoting town centre attractiveness and vitality	No LSEs
CS12 Achieving high quality design and place- making	No significant change, just added reference to maintaining and enhancing historic built environment, coastal areas, historic rural settlements.	No LSEs
CS13 Scale of new housing	Significant reduction in number of dwellings in North Somerset for which land will be identified 2006-2026, from 17,750 to minimum of 13,400	No LSEs
CS14 Distribution of new housing	No significant change, Weston still to be focus for new residential development, with some in the other towns, and small scale development in Service Villages. Positive elements retained (priority to previously developed land and no conflict with nature conservation).	No LSEs
CS15 Mixed and balanced communities	Very minor change, just reference to supporting greater community cohesion.	No LSEs
CS16 Affordable housing	Very minor change to thresholds for size of developments for which affordable housing will be sought.	No LSEs
CS17 Rural exception sites	Minor change making policy stricter in not allowing exception schemes in locations other than within or adjoining Service Villages and Infill Villages.	No LSEs
CS18 Gypsies, travellers and travelling show people	No significant change, some of detail moved to supporting text.	No LSEs
CS19 Strategic gaps	No change	No LSEs
CS20 Supporting a successful economy	Significant reduction in number of jobs to be provided in North Somerset, from 29,500 to 10,100 2006-2026, reflecting introduction of reduced (locally derived) housing requirement. Supporting text shows indicative employment land allocations (B1,B2 and B8 allocations) to be as in adopted Replacement Local Plan, except for about 38ha at the Weston Villages (a reduction from the 61 ha that was proposed in that broad location in the Consultation Draft Core Strategy, for the Weston Urban Extension).	No LSEs
CS21 Delivering a prosperous economy	Minor change requiring all proposals for town centre uses outside existing centres to meet sequential test etc, rather than those above a size threshold.	No LSEs
CS22 Tourism Strategy	No significant change. Addition to statement on improving the range and quality of tourist accommodation, including hotels, giving priority	No LSEs.

	to locations within Weston's seafront area. However Screening Assessment matrices already include mitigation measures regarding potential impacts of increased recreational pressures, for Severn Estuary site	
CS23 Bristol airport	No change	No LSEs
CS24 Royal Portbury Dock	No change	No LSEs
CS25 Children, young people and higher education	No change	No LSEs
CS26 Supporting healthy living and the provision of health care facilities	No significant change. New references to making provision for needs of an ageing population, and to resisting new developments likely to have an adverse impact on the wider community.	No LSEs
CS27 Sport, recreation and community facilities	No change	No LSEs
CS28 Weston super Mare	Reduction in housing provision for Weston, (from about 12,000 dwellings 2006-2026 to 5,850 2010-2026), reflecting introduction of reduced (locally derived) housing requirement.	No LSEs
CS29 Weston super Mare town centre	No significant changes. Major retail development still proposed at retail core, with tourism and entertainment uses at seafront and commercial office development at the Gateway area.	No LSEs
CS30 Weston Villages	Significant reduction in housing provision for this area (formerly referred to as the Weston Urban Extension area) from about 9,000 new dwellings 2006-2026 to 5,500, reflecting introduction of reduced (locally derived) housing requirement.	No LSEs
CS31 Clevedon, Nailsea and Portishead	No significant changes. Principles still to support development within settlement boundaries of these towns where they increase self containment, improve availability of jobs and services, and improve town's role as a service centre.	No LSEs
CS32 Service Villages	Some changes but overall potential impact on European sites unlikely to increase. Consultation Draft policy permitted employment development of "appropriate" scale within or adjacent to settlement boundaries of these villages. Publication version tends to restrict residential or employment development to within those boundaries, but where this is not possible allows scope for <u>small scale</u> mixed use schemes outside the limits to come forward as	No LSEs

CS33 Infill villages, smaller settlements and countryside	allocations. Some changes with introduction of Infill Villages, but they are restricted to small scale developments. Overall potential impact on European sites unlikely to increase. Reference to strict control of development outside Service Villages retained.	No LSEs
CS34 Infrastructure Delivery and Development Contributions	Policy condenses the Consultation Draft policies CS34 and CS35 into one. (CS35 is deleted from the Publication version). The resultant policy makes no significant changes to the principles of those policies (that there should be mechanisms and funding for delivery of infrastructure requirements, such as development contributions.)	No LSEs
CS35 Implementation	Policy is deleted in the Publication version.	No LSEs



## Appendix C

### Screening Assessment Matrices

(Note: For each policy the upper row (black) text relates to the Consultation Draft North Somerset Core Strategy, November 2009, the lower row (red) to the Publication version, February 2011)

### Screening Assessment Matrix for Severn Estuary SAC, SPA, Ramsar

<b>Severn Estuary Assessment Matrix</b>							<b>HRA requir ed?</b>	
<b>Policy/Proposal</b>	<b>Description</b>	<b>Assessment Category<sup>1</sup></b>	<b>Impacts</b>			<b>Avoidance/ Mitigation Measures</b>		<b>Assessment Category post mitigation</b>
			<b>Decreased Air Quality</b>	<b>Decreased Water Quality</b>	<b>Disturbance to wildlife</b>		<b>Land take from European site</b>	
<b>Living within Environmental Limits</b>								
<b>Policy CS1: Addressing Climate Change and Carbon Reduction</b>	Renewable energy in development re.g. Energy from Waste Plant at Weston urban extension, green infrastructure networks, sustainable transport, enhancing and /protecting biodiversity, re-use of previously developed land etc.	<b>C (Likely significant effect alone)</b>	Mostly neutral. Some projects will need to be individually assessed as part of the planning process. Air pollution impacts unlikely to be significant (see HRA Air Quality Appendix D).	N/A	N/A	N/A	<b>B (No significant effect)</b>	Potential y on individual planning applicatio ns. Energy from Waste Plants may require an HRA. There is likely to

<sup>1</sup> Based on the Natural England Habitats Regulations Assessment of Local Development Documents by David Tydesley, Jan 2009



Severn Estuary Assessment Matrix										
Policy/Proposal	Description	Assessment Category <sup>1</sup>	Impacts					Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required?
			Decreased Air Quality	Decreased Water Quality	Disturbance to wildlife	Land take from European site	Other			
<b>CS2 Publication</b>	<b>As above</b>	<b>As above</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Policy CS3: Environmental Risk Management.</b>	Sets out the Sequential Test for development with regard to flood zones.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>CS3 Publication Environmental Impacts and Flood Risk Assessment</b>	<b>As above</b>	<b>As above</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Policy CS4: Nature Conservation.</b>	Maintain and enhance biodiversity within the district.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>CS4 Publication</b>	<b>As above</b>	<b>As above</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Policy CS5: Landscape and the Historic Environment.</b>	Protect and enhance the character, distinctiveness, diversity and quality of North Somerset's landscape and townscape.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>CS5 Publication</b>	<b>As above</b>	<b>As above</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Policy CS6: North Somerset's Green Belt</b>	Protect the existing Green Belt.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>CS6 Publication</b>	<b>As above</b>	<b>As above</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Policy CS7: Planning for Waste in North Somerset</b>	Support for sustainable management of waste, recovery of energy from waste in line with Joint Waste Core Strategy policies	<b>C</b> (Likely significant effect alone)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Mostly neutral. Some projects will need to be individually assessed as part of the	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Potentiality on individual planning applications.

<b>Severn Estuary Assessment Matrix</b>										
Policy/Proposal	Description	Assessment Category <sup>1</sup>	Impacts					Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required?
			Decreased Air Quality	Decreased Water Quality	Disturbance to wildlife	Land take from European site	Other			
			planning process. Air pollution impacts unlikely to be significant (see HRA Air Quality Appendix).						consents or Environmental Permits from Environment Agency) .	Energy from Waste Plants may require an HRA. There is likely to be scope and flexibility for proposals to include detailed mitigation measures, as necessary.
<b>CS7 Publication Planning for Waste</b>	<b>As above</b>	<b>As above.</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>As above</b>	<b>As above</b>
<b>Policy CS8: Minerals Planning in North Somerset</b>	Provision will be made for North Somerset to contribute towards approximately 40% of the West of England's aggregates requirement. The council will seek to maintain a land bank for crushed rock of at least 10 years.	<b>C</b> <b>(Likely significant effect alone)</b>	Mostly neutral. Some projects will need to be individually assessed as part of the planning process. Air pollution impacts	N/A	Potential impacts of quarrying activity	N/A	N/A	N/A	Use of appropriate technology. Strict locational control of quarrying, leaving adequate minimum	Potentialy required on individual planning applications. There is likely to be

<b>Severn Estuary Assessment Matrix</b>										
Policy/Proposal	Description	Assessment Category <sup>1</sup>	Impacts					Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required?
			Decreased Air Quality	Decreased Water Quality	Disturbance to wildlife	Land take from European site	Other			
			unlikely to be significant (see HRA Air Quality Appendix (D))					distance between quarry and European site		adequate scope and flexibility for proposals to include detailed mitigation measures, as necessary.
<b>CS8 Publication Minerals Planning</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>
<b>Policy CS9: Green Infrastructure</b>	Safeguard, improve and enhance the existing network of green infrastructure.	<b>C (Likely significant effect alone)</b>	N/A	N/A	Potential for increased recreational use of beaches and potential disturbance of waders and wildfowl	N/A	N/A	Consider use of interpretation if necessary.	<b>B (No significant effect)</b>	<b>No</b>
<b>CS9 Publication</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>
<b>Policy CS10: Transport and Movement</b>	Encouragement for travel management policies and development proposals that encourage an improved and integrated transport network and allow for wide choice of transport modes. Lists	<b>C (Likely significant effect alone)</b>	Projects will need to be individually assessed as part of the planning process. However air pollution	N/A	<b>N/A</b>	N/A	N/A	Implementation of measures to promote non-car travel modes as promoted in policies such as CS10 and in LTP3.	<b>B (No significant effect)</b>	Potentially required on individual planning applications.



<b>Severn Estuary Assessment Matrix</b>							<b>HRA requir ed?</b>		
<b>Policy/Proposal</b>	<b>Description</b>	<b>Assessment Category<sup>1</sup></b>	<b>Impacts</b>			<b>Avoidance/ Mitigation Measures</b>		<b>Assessment Category post mitigation</b>	
			<b>Decreased Air Quality</b>	<b>Decreased Water Quality</b>	<b>Disturbance to wildlife</b>	<b>Land take from European site</b>	<b>Other</b>		
<b>Place Making</b>									
<b>CS12 Publication</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	
<b>Policy CS13: Scale of New Housing.</b>	Provision of 17,750 dwellings across the district over the plan period. 3000 dwellings in Weston-super-Mare urban area and 9,000 dwellings as an urban extension to Weston-super-Mare. The remainder of 5,750 dwellings will be met by land from existing identified sources and no additional allocation will be required in the plan period.	<b>C (Likely significant effect alone)</b>	Projects will need to be individually assessed as part of the planning process. Air pollution impacts unlikely to be significant (see HRA Air Quality Appendix)	Water abstraction has been assessed as part of the Regional Spatial Strategy Habitats Regulations Assessment which concluded that despite the amount of development proposed in North Somerset it won't result in a likely significant effect on water abstraction. Further Specialist advice was provided by the Environment Agency which confirmed this.	Disturbance to wading birds and wildfowl in the Severn Estuary, due to increased noise and light and increased recreational pressures for new development in Weston-super-Mare.	<b>N/A</b>	<b>N/A</b>	<b>B (No significant effect)</b>	
								<b>N/A</b>	
								Encourage and facilitate sustainable modes of transport such as public transport, walking and cycling. Require best practice construction techniques at sites close to the Estuary to ensure minimal disruption. Ensure (through planning conditions etc) that key construction activities which cause significant vibration and noise, such as piling, is undertaken between April	





Severn Estuary Assessment Matrix							HRA required?	
Policy/Proposal	Description	Assessment Category <sup>1</sup>	Impacts			Avoidance/ Mitigation Measures		Assessment Category post mitigation
			Decreased Air Quality	Decreased Water Quality	Disturbance to wildlife	Land take from European site	Other	
<p><b>Policy CS14: Distribution of New Housing</b></p>	<p><b>Green Belt</b> New housing development will be concentrated in Weston-super-Mare. At Clevedon, Portishead and Nailsea residential development will be acceptable within their existing settlement boundaries on brownfield land. Within the Service Villages small scale infill development may be appropriate where it will support the retention of existing services. Elsewhere housing development will not be permitted unless it is for essential workers in rural enterprises, replacement dwellings or affordable housing need.</p>	<p><b>C</b> <b>(Likely significant effect alone)</b></p>	<p>Projects will need to be individually assessed as part of the planning process. Air pollution impacts unlikely to be significant (see HRA Air Quality Appendix)</p>	<p>Water abstraction has been assessed as part of the Regional Spatial Strategy Habitats Regulations Assessment which concluded that despite the amount of development proposed in North Somerset it won't result in a likely significant effect on water abstraction. Further Specialist advice was provided by the Environment Agency which confirmed this.</p>	<p>Disturbance to wading birds and wildfowl in the Severn Estuary, due to increased noise and light and increased recreational pressures for new development in Weston-super-Mare.</p>	<p>N/A</p>	<p>N/A</p>	
						<p>N/A</p>	<p>Encourage and facilitate sustainable modes of transport such as public transport, walking and cycling. Require best practice construction techniques at sites close to the Estuary to ensure minimal disruption. Ensure (through planning conditions etc) that key construction activities which cause significant vibration and noise, such as piling, is undertaken between April and August to avoid disturbance to</p>	<p><b>B</b> <b>(No significant effect)</b></p>





Severn Estuary Assessment Matrix										
Policy/Proposal	Description	Assessment Category <sup>1</sup>	Impacts					Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required?
			Decreased Air Quality	Decreased Water Quality	Disturbance to wildlife	Land take from European site	Other			
	communities will be supported provided it meets certain criteria.									
<b>Policy CS18: Gypsies and Travellers and Travelling Show People</b>	Provision will be made for an additional 36 residential and 10 transit pitches for Gypsies and travellers for the period 2006 – 2011.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>CS18 Publication</b>	Sets out considerations for determination of locations for sites for Gypsies, travellers and travelling show people	<b>As above</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Policy CS19: Green Wedges/Strategic Gaps.</b>	The Council will seek to protect green wedges/strategic gaps to help retain the separate identity, character or landscape setting of settlements.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>CS19 Publication Strategic gaps</b>	<b>As above, but reference to strategic gaps, not green wedges</b>	<b>As above</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Delivering a Prosperous Economy</b>										
<b>Policy CS20: Supporting a Successful Economy</b>	Employment-led strategy to both deliver significant employment development and to ensure that new residential development is provided in association with employment	<b>C</b> (Likely significant effect alone)	Air pollution impacts unlikely to be significant (see HRA Air Quality Appendix)	Water abstraction has been assessed as part of the Regional Spatial Strategy Habitats Regulations	Disturbance to wading birds and wildfowl in the Severn Estuary, due to increased noise and light and increased population due to amount of new	N/A	N/A	Encourage and facilitate sustainable modes of transport such as public transport, walking and cycling.	<b>B</b> (No significant effect)	Projects will need to be individually assessed as part of the planning

<b>Severn Estuary Assessment Matrix</b>								
<b>Policy/Proposal</b>	<b>Description</b>	<b>Assessment Category<sup>1</sup></b>	<b>Impacts</b>				<b>Assessment Category post mitigation</b>	<b>HRA required?</b>
			<b>Decreased Air Quality</b>	<b>Decreased Water Quality</b>	<b>Disturbance to wildlife</b>	<b>Land take from European site</b>		
	opportunities. The Core Strategy provides for around 29,500 jobs. Supporting text suggests indicative employment requirement for B1-B8 uses would include 61 ha at Weston Urban Extension			Assessment which concluded that despite the amount of development proposed in North Somerset it won't result in a likely significant effect on water abstraction. Further specialist advice was provided by the Environment Agency which confirmed this.	development in Weston-super-Mare.		Require best practice construction techniques at sites close to the Estuary to ensure minimal disruption.  Ensure (through planning conditions etc) that key construction activities which cause significant vibration and noise, such as piling, is undertaken between April and August to avoid disturbance to wading birds and wildfowl, if site is within 300m (guideline only) of wading bird foraging zones.	process.
<b>CS20 Publication</b>	The Core Strategy seeks to provide for at	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>As above</b>	<b>As above</b>

<b>Severn Estuary Assessment Matrix</b>										
Policy/Proposal	Description	Assessment Category <sup>1</sup>	Impacts					Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required?
			Decreased Air Quality	Decreased Water Quality	Disturbance to wildlife	Land take from European site	Other			
	least 10,100 additional jobs. Supporting text suggests indicative employment land allocations (B1-B8 uses) to be as in adopted Replacement Local Plan, plus about 38ha at Weston Villages.									
<b>Policy CS21: Retail Hierarchy and Provision.</b>	Identifies retail hierarchy across the district.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	<b>B</b> (No significant effect)	N/A
<b>CS21 Publication</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>As above</b>	<b>N/A</b>
<b>Policy CS22: Tourism Strategy</b>	Supports visitor facilities and accommodation across the district provided they meet certain criteria.	<b>C</b> (Likely significant effect alone)	Projects may need to be individually assessed as part of the planning process.	Water abstraction has been assessed as part of the Regional Spatial Strategy Habitats Regulations Assessment which concluded that despite the amount of development proposed in North Somerset it won't result in a likely significant	Disturbance to wading birds and wildfowl in the Severn Estuary, due to increased noise and light and increased recreational pressures.	Some leisure developments within the seafront area in Weston-super-Mare may have potential impacts (including land take in some cases) on the Severn Estuary SAC.	The sites that include land take from the Severn Estuary have had Appropriate Assessments undertaken as part of the planning application process.	Encourage and facilitate sustainable modes of transport such as public transport, walking and cycling. Require best practice construction techniques to ensure minimal disruption. Ensure key construction activities which	<b>B</b> (No significant effect)	Projects will need to be individually assessed as part of the planning process.

<b>Severn Estuary Assessment Matrix</b>										
Policy/Proposal	Description	Assessment Category <sup>1</sup>	Impacts					Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required?
			Decreased Air Quality	Decreased Water Quality	Disturbance to wildlife	Land take from European site	Other			
				effect on water abstraction. Further specialist advice was provided by the Environment Agency which confirmed this.				cause significant vibration and noise, such as piling, is undertaken between April and August to avoid disturbance to wading birds and wildfowl, if site is within 300m (guideline only) of wading bird foraging zones. Consider use of interpretation if necessary.		
<b>CS22 Publication</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>
<b>Policy CS23: Bristol International Airport</b>	Proposals will be required to demonstrate the satisfactory resolution of environmental issues, including the impact of growth on surrounding communities and surface access infrastructure.	<b>B (No significant effect)</b>	Air pollution impacts unlikely to be significant (see HRA Air Quality Appendix)	N/A	N/A	N/A	N/A	N/A	<b>B (No significant effect)</b>	Projects may need to be individually assessed as part of the planning process.

## Severn Estuary Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>1</sup>	Impacts					Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA requir ed?
			Decreased Air Quality	Decreased Water Quality	Disturbance to wildlife	Land take from European site	Other			
<b>CS23 Publication Bristol Airport</b>	As above	As above	As above	N/A	N/A	N/A	N/A	N/A	As above	As above
<b>Policy CS24: Royal Portbury Dock</b>	Identified land will continue to be safeguarded for port uses, subject to demonstrable need for those uses that cannot be accommodated elsewhere within the existing port estate. Further expansion of the port within North Somerset is not supported.	<b>C</b> <b>(Likely significant effect alone)</b>	Dock located near to SAC but dock uses not likely to be enough source of NOx air pollution to have a significant effect (see HRA Air Quality Appendix)	N/A	Potential disturbance of wading birds and wildfowl in the Severn Estuary, due to increased noise and light.	N/A	Require best practice construction techniques to ensure minimal disruption.  Ensure (through planning conditions etc) that key construction activities which cause significant vibration and noise, such as piling, is undertaken between April and August to avoid disturbance to wading birds and wildfowl, if site is within 300m (guideline only) of wading bird foraging zones.  Use of appropriate	<b>B</b> <b>(No significant effect)</b>	Projects will need to be individually assessed as part of the planning process. Project-level HRA/EIA may be needed for any developments at Royal Portbury Dock.	





Severn Estuary Assessment Matrix									
Policy/Proposal	Description	Assessment Category <sup>1</sup>	Impacts				Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required?
			Decreased Air Quality	Decreased Water Quality	Disturbance to wildlife	Land take from European site			
Recreation and Community Facilities.	recreation and community facilities	B (No significant effect)						B (No significant effect)	
<b>CS27 Publication</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>As above</b>	<b>N/A</b>
<b>Area Policies</b>									
<b>Policy CS28: Weston-super-Mare</b>	W-s-M will be the primary focus for development within North Somerset. The town will accommodate 12,000 new dwellings and 10,000 new jobs between 2006-2026 as part of an employment-led strategy to deliver improved self-containment and reduced out-commuting over the plan period.	<b>C (Likely significant effect alone)</b>	Air pollution impacts unlikely to be significant (see HRA Air Quality Appendix)	Water abstraction has been assessed as part of the Regional Spatial Strategy Habitats Regulations Assessment which concluded that despite the amount of development proposed in Weston-super-Mare it won't result in a likely significant effect on water abstraction. Further specialist advice was provided by the Environment Agency which	Disturbance of wading birds and wildfowl in the Severn Estuary, due to increased noise and light and increased recreational pressures.	N/A	N/A	<b>B (No significant effect)</b>	Projects will need to be individually assessed as part of the planning process.

<b>Severn Estuary Assessment Matrix</b>									
Policy/Proposal	Description	Assessment Category <sup>1</sup>	Impacts				Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA requir ed?
			Decreased Air Quality	Decreased Water Quality	Disturbance to wildlife	Land take from European site			
				confirmed this.			<p>pling, is undertaken between April and August to avoid disturbance to wading birds and wildfowl, if site is within 300m of (guideline only) wading bird foraging zones.</p> <p>Consider use of interpretation if necessary.</p>		
<b>CS28 Publication</b>	W-s-M will be the primary focus for development within North Somerset. The town will accommodate around 5,850 additional new dwellings with approx 10,500 employment opportunities between 2010-2026 as part of an employment-led strategy to deliver improved self-containment and reduced out-commuting over the plan period.	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>

<b>Severn Estuary Assessment Matrix</b>										
<b>Policy/Proposal</b>	<b>Description</b>	<b>Assessment Category<sup>1</sup></b>	<b>Impacts</b>			<b>Assessment Category post mitigation</b>	<b>HRA required?</b>			
			<b>Decreased Air Quality</b>	<b>Decreased Water Quality</b>	<b>Disturbance to wildlife</b>			<b>Land take from European site</b>	<b>Other</b>	<b>Avoidance/ Mitigation Measures</b>
<b>Policy CS29: Weston-super-Mare Town Centre</b>	Town centre regeneration: major retail-led development in retail core; entertainment and leisure uses, tourist facilities and accommodation at seafront; creation of an office quarter within the gateway area	<b>C</b> <b>(Likely significant effect alone)</b>	Air pollution impacts unlikely to be significant (see HRA Air Quality Appendix)	Water abstraction has been assessed as part of the Regional Spatial Strategy Habitats Regulations Assessment which concluded that despite the amount of development proposed in Weston-super-Mare it won't result in a likely significant effect on water abstraction. Further specialist advice was provided by the Environment Agency which confirmed this.	Disturbance of wading birds and wildfowl in the Severn Estuary, due to increased noise and light and increased recreational pressures.	N/A	N/A	Encourage and facilitate sustainable modes of transport such as public transport, walking and cycling.  Require best practice construction techniques to ensure minimal disruption.  Ensure (through planning conditions etc) that key construction activities which cause significant vibration and noise, such as piling, is undertaken between April and August to avoid disturbance to wading birds and wildfowl, if site is within	<b>B</b> <b>(No significant effect)</b>	Projects will need to be individually assessed as part of the planning process.

<b>Severn Estuary Assessment Matrix</b>									
Policy/Proposal	Description	Assessment Category <sup>1</sup>	Impacts					Assessment Category post mitigation	HRA required?
			Decreased Air Quality	Decreased Water Quality	Disturbance to wildlife	Land take from European site	Other		
<b>CS29 Publication</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>A above</b>
<b>Policy CS30: Weston Urban Extension</b>	A major mixed use, employment-led urban extension will be developed south-east of Weston-super-Mare. This will include 9,000 homes, 42ha of employment land along with other necessary community, social and transport infrastructure to support the development.	<b>C</b> <b>(Likely significant effect alone)</b>	Air pollution impacts unlikely to be significant (see HRA Air Quality Appendix)	Water abstraction has been assessed as part of the Regional Spatial Strategy Habitats Regulations Assessment which concluded that despite the amount of development proposed in Weston-super-Mare it won't result in a likely significant effect on water abstraction. Further specialist	Disturbance of wading birds and wildfowl in the Severn Estuary, due to increased noise and light and increased recreational pressures.	N/A	N/A	<b>B</b> <b>(No significant effect)</b>	Projects will need to be individually assessed as part of the planning process.











**Screening Assessment Matrix for Mendip Limestone Grasslands SAC**

<b>Mendip Limestone Grasslands Assessment Matrix</b>									
Policy/Proposal	Description	Assessment Category <sup>2</sup>	Impacts				Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?
			Decreased Air Quality	Decreased Water Quality	Recreational Disturbance	Land take from European Site			
<b>Living within Environmental Limits</b>									
<b>Policy CS1: Addressing Climate Change and Carbon Reduction</b>	Renewable energy in development; e.g. Energy from Waste Plant at Weston urban extension, green infrastructure networks, sustainable transport, enhancing/protecting biodiversity, re-use of previously developed land etc.	<b>C (Likely significant effect alone)</b>	Mostly neutral. Some projects will need to be assessed as part of the planning process. Only possible significance if energy facilities were to be located < 10km from site. Only specific reference to energy from waste plant is for Weston urban extension, within that distance of Uphill Cliff.	N/A	N/A	N/A	N/A	<b>B (No significant effect)</b>	Potential on individual planning applications. Energy from waste plants may require an HRA. There is likely to be scope and flexibility for proposals to include detailed mitigation

<sup>2</sup> Based on the Natural England Habitats Regulations Assessment of Local Development Documents by David Tydesley, Jan 2009

<b>Mendip Limestone Grasslands Assessment Matrix</b>									
Policy/Proposal	Description	Assessment Category <sup>2</sup>	Impacts				Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA re quired ?
			Decreased Air Quality	Decreased Water Quality	Recreational Disturbance	Land take from European Site			
									n measure s, as necessar y.
<b>Policy CS1 of Publication version of Core Strategy</b>	As above	<b>As above</b>	As above. Note: Weston Villages now replace Weston Urban Extension	N/A	N/A	N/A	N/A	<b>As above</b>	<b>As above</b>
<b>Policy CS2: Delivering Sustainable Design and Construction.</b>	Sustainable design and construction. Policy sets targets e.g. for on site renewable energy, Code for Sustainable homes, BREEAM ratings etc	<b>B (No significant effect)</b>	N/A	N/A	N/A	N/A	N/A	<b>B (No significant effect)</b>	N/A
<b>CS2 Publication</b>	As above	<b>As above</b>	N/A	N/A	N/A	N/A	N/A	<b>As above</b>	<b>As above</b>
<b>Policy CS3: Environmental Risk Management.</b>	Sets out the Sequential Test for development with regard to flood zones.	<b>B (No significant effect)</b>	N/A	N/A	N/A	N/A	N/A	<b>B (No significant effect)</b>	N/A
<b>CS3 Publication Environmental Impacts and Flood Risk Assessment</b>	As above	<b>As above</b>	N/A	N/A	N/A	N/A	N/A	<b>As above</b>	<b>N/A</b>
<b>Policy CS4: Nature Conservation.</b>	Maintain and enhance biodiversity within the district.	<b>B (No significant effect)</b>	N/A	N/A	N/A	N/A	N/A	<b>B (No significant effect)</b>	N/A
									Planting needs to take into account the loss of interest features
									Part 5 of policy refers to tree planting.

<b>Mendip Limestone Grasslands Assessment Matrix</b>										
<b>Policy/Proposal</b>	<b>Description</b>	<b>Assessment Category<sup>2</sup></b>	<b>Impacts</b>					<b>Avoidance/ Mitigation Measures</b>	<b>Assessment Category post mitigation</b>	<b>HRA re quired ?</b>
			<b>Decreased Air Quality</b>	<b>Decreased Water Quality</b>	<b>Recreational Disturbance</b>	<b>Land take from European Site</b>	<b>Other</b>			
								of European Sites.		
<b>CS4 Publication</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>
<b>Policy CS5: Landscape and the Historic Environment.</b>	Protect and enhance the character, distinctiveness, diversity and quality of North Somerset's landscape and townscape.	<b>B (No significant effect)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>B (No significant effect)</b>	<b>N/A</b>
<b>CS5 Publication</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>As above</b>	<b>N/A</b>
<b>Policy CS6: North Somerset's Green Belt</b>	Protect the existing Green Belt.	<b>B (No significant effect)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>B (No significant effect)</b>	<b>N/A</b>
<b>CS6 Publication</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>As above</b>	<b>N/A</b>
<b>Policy CS7: Planning for Waste in North Somerset</b>	Support for sustainable management of waste, recovery of energy from waste in line with Joint Waste Core Strategy policies	<b>C (Likely significant effect alone)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>As above</b>	<b>N/A</b>
		Mostly neutral. Some projects will need to be individually assessed as part of the planning process. Only of possible significance if energy facilities were to be located < 10km from site. (See HRA air quality	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>B (No significant effect)</b>	Potential y on individual planning applicatio ns. Energy from Waste Plants may require an HRA. There is likely to

## Mendip Limestone Grasslands Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>2</sup>	Impacts				Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA re quired ?
			Decreased Air Quality	Decreased Water Quality	Recreational Disturbance	Land take from European Site			
			appendix)					be scope and flexibility for proposals to include detailed mitigation measures, as necessary.	
<b>CS7 Publication Planning for Waste</b>	As above	<b>As above</b>	As above	N/A	N/A	N/A	As above	As above	
<b>Policy CS8: Minerals Planning in North Somerset</b>	Provision will be made for North Somerset to contribute towards approximately 40% of the West of England's aggregates requirement. The council will seek to maintain a land bank for crushed rock of at least 10 years.	<b>C (likely significant effect alone)</b>	Mostly neutral. Some projects will need to be individually assessed as part of the planning process. Unlikely to be significant air pollution impacts (see HRA air quality appendix)	N/A	N/A	N/A	Use of appropriate technology. Strict locational control of quarrying, leaving adequate minimum distance between quarry and European site	Potential for individual planning applications. There is likely to be scope and flexibility for proposals to include detailed mitigation	

<b>Mendip Limestone Grasslands Assessment Matrix</b>									
Policy/Proposal	Description	Assessment Category <sup>2</sup>	Impacts					Assessment Category post mitigation	HRA required?
			Decreased Air Quality	Decreased Water Quality	Recreational Disturbance	Land take from European Site	Other		
									measure s, as necessar y.
<b>CS8 Publication Minerals Planning</b>	As above	As above	As above	N/A	N/A	N/A	N/A	N/A	As above
<b>Policy CS9: Green Infrastructure</b>	Safeguard, improve and enhance the existing network of green infrastructure.	C (Likely significant effect alone)	N/A	N/A	Promoting an accessible green infrastructure network could lead to extra pressure from increased visitor numbers – eg. recreational impacts including trampling (physical damage), erosion, collection/digging, disturbance, fires and litter on Mendip Limestone Grasslands SAC.	N/A	N/A	The NSC Green Infrastructure Strategy will identify opportunities for green infrastructure elsewhere such as public open space provision, which is likely to provide alternative locations for recreation .  Seek to maintain seasonal wardening presence	Potential y on individual planning applicatio ns.
<b>CS9 Publication</b>	As above	As above	N/A	N/A	As above	N/A	N/A	As above	As above
<b>Policy CS10: Transport and Movement</b>	Encouragement for travel management policies and development proposals that	C (Likely significant effect alone)	Transport schemes which would significantly increase traffic	N/A	Potentially increased number of visitors.	N/A	N/A	Encourage and facilitate sustainable modes of transport such as	Potential y on individual planning applicatio

## Mendip Limestone Grasslands Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>2</sup>	Impacts				Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA re quired ?
			Decreased Air Quality	Decreased Water Quality	Recreational Disturbance	Land take from European Site			
	encourage an improved and integrated transport network and allow for wide choice of transport modes. Lists proposed transport schemes over the plan period.		on sections of A38 and A371 alongside component site are potentially significant with respect to airborne nitrogen deposition (see HRA air quality appendix)				public transport, walking and cycling.  The NSC Green Infrastructure Strategy will identify opportunities for green infrastructure elsewhere such as public open space provision, which is likely to provide alternative locations for recreation .  Seek to maintain seasonal wardening presence	ns.	
<b>CS10 Publication Transportation and Movement</b>	As above	<b>AS above</b>	As above	N/A	As above	N/A	As above	As above	
<b>Policy CS11: Parking</b>	Provision of adequate car parking to meet the needs of anticipated users.	<b>C (Likely significant effect alone)</b>	Any parking measures which could increase traffic on section of A38 and A371	N/A	N/A	N/A	Encourage and facilitate sustainable modes of transport such as public transport,	Potential y on individual planning applicatio ns.  <b>B (No significant effect)</b>	

## Mendip Limestone Grasslands Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>2</sup>	Impacts				Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA re quired ?
			Decreased Air Quality	Decreased Water Quality	Recreational Disturbance	Land take from European Site			
			alongside component site are potentially significant with regard to airborne nitrogen deposition (see HRA air quality appendix)				walking and cycling.		
<b>CS11 Publication</b>	As above	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A.</b>	<b>AS above</b>	<b>As above</b>	
<b>Delivering Strong and Inclusive Communities</b>									
<b>Policy CS12: Achieving High Quality Design and Place Making</b>	High quality architecture and urban design will be expected from all developments.	<b>B (No significant effect)</b>	N/A	N/A	N/A	N/A	N/A	N/A	
<b>CS12 Publication</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	
<b>Policy CS13: Scale of New Housing.</b>	Provision of 17,750 dwellings across the district over the plan period. 3000 dwellings in Weston-super-Mare urban area and 9,000 dwellings as an urban extension to Weston-super-Mare. The remainder of 5,750 dwellings will be met by land from	<b>C (Likely significant effect alone)</b>	Weston urban extension located generally over 2km from nearest component site (Uphill Cliff). Traffic emissions unlikely to be significant (see HRA air quality	Water abstraction has been assessed as part of the Regional Spatial Strategy Habitats Regulations Assessment which concluded that despite the	Increased population could lead to extra pressure from increased visitor numbers; eg. recreational impacts including trampling (physical damage), erosion, collection/digging, disturbance, fires	N/A	The NSC Green Infrastructure Strategy will identify opportunities for green infrastructure elsewhere such as public open space provision, which is likely to provide alternative	<b>B (No significant effect)</b>	Potentiality on individual planning applications.





## Mendip Limestone Grasslands Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>2</sup>	Impacts				Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?
			Decreased Air Quality	Decreased Water Quality	Recreational Disturbance	Land take from European Site			
	<p>villages small scale infill development or site allocations can occur. All new housing to not conflict with nature conservation policies</p>								
<p><b>Policy CS14: Distribution of New Housing</b></p>	<p>New housing development will be concentrated in Weston-super-Mare. At Clevedon, Portishead and Nailsea residential development will be acceptable within their existing settlement boundaries on brownfield land. Within the Service Villages small scale infill development may be appropriate where it will support the retention of existing services. Elsewhere housing development will not be permitted unless it is for essential workers in rural enterprises, replacement dwellings or affordable housing</p>	<p><b>C (Likely significant effect alone)</b></p>	<p>Weston urban extension located generally over 2km from nearest component site (Uphill Cliff). Traffic emissions unlikely to be significant (see HRA air quality appendix)</p>	<p>Water abstraction has been assessed as part of the Regional Spatial Strategy Habitats Regulations Assessment which concluded that despite the amount of development proposed in North Somerset it won't result in a likely significant effect on water abstraction. Further specialist advice was provided by the Environment Agency which confirmed this.</p>	<p>Increased population could lead to increased visitor numbers resulting in erosion.</p>	<p>N/A</p>	<p>N/A</p>	<p><b>B (No significant effect)</b></p>	<p>Potential on individual planning applications.</p>





## Mendip Limestone Grasslands Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>2</sup>	Impacts					Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA re quired ?
			Decreased Air Quality	Decreased Water Quality	Recreational Disturbance	Land take from European Site	Other			
	local need within small rural communities will be supported provided it meets certain criteria.									
<b>Policy CS18: Gypsies and Travellers and Travelling Show People</b>	Provision will be made for an additional 36 residential and 10 transit pitches for Gypsies and Travellers for the period 2006 – 2011.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>CS18 Publication</b>	Sets out considerations for determination of locations for sites for Gypsies, travellers and travelling show people	<b>As above</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Policy CS19: Green Wedges/Strategic Gaps.</b>	The Council will seek to protect green wedges/strategic gaps to help retain the separate identity, character or landscape setting of settlements.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>CS19 Publication Strategic gaps</b>	As above, but reference to strategic gaps, not green wedges	<b>As above</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Delivering a</b>										

## Mendip Limestone Grasslands Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>2</sup>	Impacts				Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA re quired ?
			Decreased Air Quality	Decreased Water Quality	Recreational Disturbance	Land take from European Site			
<b>Prosperous Economy</b>									
<b>Policy CS20: Supporting a Successful Economy</b>	Employment-led strategy to both deliver significant employment and to ensure that new residential development is provided in association with employment opportunities. The Core Strategy provides for around 29,500 jobs Supporting text suggests indicative employment requirement for B1-B8 uses would include 61 ha at Weston Urban Extension.	<b>C (Likely significant effect alone)</b>	Weston urban extension located generally over 2km from nearest component site (Uphill Cliff). Traffic emissions unlikely to be significant (see HRA air quality appendix)	N/A	Increased population could lead to increased visitor numbers resulting in erosion.	N/A	The NSC Green Infrastructure Strategy will identify opportunities for green infrastructure elsewhere such as public open space provision, which is likely to provide alternative locations for recreation .  Seek to maintain seasonal wardening presence	<b>B (No significant effect)</b>	N/A
<b>CS20 Publication</b>	The Core Strategy seeks to provide for at least 10, 100 additional jobs. Supporting text suggests indicative employment land allocations (B1-B8 uses) to be as in adopted	<b>As above</b>	As above but urban extension now replaced by Weston Villages	N/A	As above	As above	<b>As above</b>	N/A	







<b>Mendip Limestone Grasslands Assessment Matrix</b>										
Policy/Proposal	Description	Assessment Category <sup>2</sup>	Impacts					Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?
			Decreased Air Quality	Decreased Water Quality	Recreational Disturbance	Land take from European Site	Other			
<b>CS25 Publication</b>	<b>As above</b>	<b>As above</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Policy CS26: Supporting Healthy Living and the Provision of Health Care Facilities.</b>	Requires Health Impact Assessment (HIA) on all large scale developments, Joint working with health providers to deliver a district wide network of health facilities, reduce health inequalities in the district, encourage development that promotes active lifestyles.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>CS26 Publication</b>	<b>As above</b>	<b>As above</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Policy CS27: Sport, Recreation and Community Facilities.</b>	Provision of sport, recreation and community facilities	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>CS27 Publication</b>	<b>As above</b>	<b>As above</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Area Policies</b>										
<b>Policy CS28: Weston-super-Mare</b>	W-s-M will be the primary focus for development within North Somerset. The town will accommodate 12,000 new	<b>C</b> (Likely significant effect alone)	Impact from traffic unlikely to be significant. (see HRA air quality Appendix D)	N/A	Extra pressure from increased visitor numbers; eg. recreational impacts including trampling (physical)	No – Although potential disturbance to natural habitats due to increased recreational	N/A	Encourage and facilitate sustainable modes of transport such as public transport, walking and	<b>B</b> (No significant effect)	N/A

## Mendip Limestone Grasslands Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>2</sup>	Impacts				Other	Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA re quired ?
			Decreased Air Quality	Decreased Water Quality	Recreational Disturbance	Land take from European Site				
	<p>dwellings and 10,000 new jobs between 2006-2026 as part of an employment-led strategy to deliver improved self-containment and reduced out-commuting over the plan period.</p>			<p>damage), erosion, collection/digging, disturbance, fires and litter on Mendip Limestone Grasslands SAC.</p>	<p>related activities.</p>		<p>cycling.</p> <p>The NSC Green Infrastructure Strategy will identify opportunities for green infrastructure elsewhere such as public open space provision, which is likely to provide alternative locations for recreation .</p> <p>Seek to maintain seasonal wardening presence</p>			
<b>CS28 Publication</b>	<p>W-s-M will be the primary focus for development within North Somerset. The town will accommodate around 5,850 additional new dwellings with approx 10,500 employment opportunities</p>	<b>As above</b>	N/A	<b>As above</b>	<b>As above</b>	N/A	<b>As above</b>	<b>As above</b>	N/A	

## Mendip Limestone Grasslands Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>2</sup>	Impacts				Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA re quired ?
			Decreased Air Quality	Decreased Water Quality	Recreational Disturbance	Land take from European Site			
	<p style="color: red;">between 2010-2026 as part of an employment-led strategy to deliver improved self-containment and reduced out-commuting over the plan period.</p> <p>Town centre regeneration: major retail-led development in retail core; entertainment and leisure uses, tourist facilities and accommodation at seafront; creation of an office quarter within the gateway area</p>								
<b>Policy CS29: Weston-super-Mare Town Centre</b>		<b>C (Likely significant effect alone)</b>	Impact from traffic unlikely to be significant. (see HRA air quality Appendix D)	N/A	Extra pressure from increased visitor numbers; eg. recreational impacts including trampling (physical damage), erosion, collection/digging, disturbance, fires and litter on Mendip Limestone Grasslands SAC.	No – although potential disturbance to natural habitats due to increased recreation related activities.	N/A	<b>B (No significant effect)</b>	N/A
						Encourage and facilitate sustainable modes of transport such as public transport, walking and cycling.  The NSC Green Infrastructure Strategy will identify opportunities for green infrastructure elsewhere which are likely to provide alternative locations for recreation.  Seek to maintain seasonal wardening presence			

## Mendip Limestone Grasslands Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>2</sup>	Impacts				Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?
			Decreased Air Quality	Decreased Water Quality	Recreational Disturbance	Land take from European Site			
<b>CS29 Publication</b>	<b>As above</b>	<b>AS above</b>	<b>AS above</b>	<b>AS above</b>	<b>AS above</b>	<b>AS above</b>	<b>AS above</b>	<b>N/A</b>	
<b>Policy CS30: Weston Urban Extension</b>	A major mixed use, employment-led urban extension will be developed south-east of Weston-super-Mare. This will include 9,000 homes, 42ha of employment land along with other necessary community, social and transport infrastructure to support the development.	<b>C (Likely significant effect alone)</b>	Impact from traffic unlikely to be significant. (see HRA air quality Appendix D) Point source air pollution impacts could be significant from on site energy generation (see HRA air quality appendix)	N/A	Recreational impacts on the site have been considered as a result of increased site usage resulting from population growth. Experience to date suggests that recreational impacts can currently be accommodated without a likely significant effect on the qualifying features of the European Site.	No – Although potential disturbance to natural habitats due to increased recreational related activities.	<b>B (No significant effect)</b>	N/A	
						Encourage and facilitate sustainable modes of transport such as public transport, walking and cycling.  The NSC Green Infrastructure Strategy will identify opportunities for green infrastructure elsewhere which are likely to provide alternative locations for recreation.  Seek to maintain seasonal wardening presence  HRA/EIA may be needed for any renewable energy projects			











## Screening Assessment Matrix for North Somerset and Mendip Bats SAC

<b>North Somerset and Mendip Bats SAC Assessment Matrix</b>										
Policy/Proposal	Description	Assessment Category <sup>3</sup>	<b>Potential Impacts on SAC</b>				Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required?	
			Decreased Air Quality	Decreased Water Quality	Disturbance to habitat	Land-take from Horseshoe bat foraging area				Other
<b>Living within Environmental Limits</b>										
<b>Policy CS1: Addressing Climate Change and Carbon Reduction</b>	Renewable energy in development; e.g. Energy from Waste Plant at Weston urban extension, green infrastructure networks, sustainable transport, enhancing/protecting biodiversity, re-use of previously developed land etc..	<b>C (Likely significant effects alone)</b>	Only of possible significance if energy facilities were to be located <10km from site	N/A	N/A	N/A	N/A	Use of appropriate technology/design (through conditions on planning consents or Environmental Permits from Environment Agency) .	<b>B (No significant effect)</b>	N/A
<b>Policy CS1 of Publication version of Core Strategy</b>	As above but urban extension now replaced by Weston Villages	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>
<b>Policy CS2: Delivering Sustainable Design and</b>	Sustainable design and construction. Policy sets targets e.g. for on site renewable energy.	<b>C (Likely significant effect alone)</b>	N/A	N/A	N/A	N/A	N/A	Location of wind turbines following best practice guidance monitoring of	<b>B (No significant effect)</b>	Potentially on individual planning application

<sup>3</sup> Based on the Natural England Habitats Regulations Assessment of Local Development Documents by David Tydesley, Jan 2009



### North Somerset and Mendip Bats SAC Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>3</sup>	Potential Impacts on SAC						Assessment Category post mitigation	HRA required?	
			Decreased Air Quality	Decreased Water Quality	Disturbance to habitat	Land-take from Horseshoe bat foraging area	Other	Avoidance/ Mitigation Measures			
Green Belt		effect)									
<b>CS6 Publication</b>	As above	As above	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
<b>Policy CS7: Planning for Waste in North Somerset</b>	Support for sustainable management of waste, recovery of energy from waste in line with Joint Waste Core Strategy policies	<b>C</b> (Likely significant effects alone)	Only of possible significance if energy facilities were to be located <10km from site	N/A	N/A	N/A	N/A	N/A	Use of appropriate technology/design (through conditions on planning consents or Environmental Permits from Environment Agency)	<b>B</b> (No significant effect)	N/A
<b>CS7 Publication Planning for Waste</b>	As above	As above	As above	N/A	N/A	N/A	N/A	N/A	As above	As above	As above
<b>Policy CS8: Minerals Planning in North Somerset</b>	Provision will be made for North Somerset to contribute towards approximately 40% of the West of England's aggregates requirement. The council will seek to	<b>C</b> (Likely significant effect alone)	Unlikely to be significant air pollution impacts (see HRA air quality appendix)	N/A	N/A	N/A	Potential impact of quarrying on key horseshoe bat foraging area	Effects from quarrying	Strict locational control of quarrying, leaving adequate minimum distance between quarry and European site	<b>B</b> (No significant effect)	Potentially on individual planning applications.



### North Somerset and Mendip Bats SAC Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>3</sup>	Potential Impacts on SAC					Assessment Category post mitigation	HRA required?
			Decreased Air Quality	Decreased Water Quality	Disturbance to habitat	Land-take from Horseshoe bat foraging area	Other		
<b>Policy CS10: Transport and Movement</b>	Encouragement for travel management policies and development proposals that encourage an improved and integrated transport network and allow for wide choice of transport modes. Lists proposed transport schemes over the plan period.	<b>C</b> (Likely significant effect alone)	Transport schemes which could affect traffic on section of A370 and A368 alongside component sites are potentially significant	N/A	Potential noise and light disturbance to bats from vehicles.		Potential bat collision risk with vehicles	<b>B</b> (No significant effect)	Potentially on individual planning applications.
<b>CS10 Publication and Movement</b>	As above	As above	As above	N/A	As above	As above	As above	As above	As above
<b>Policy CS11: Parking</b>	Provision of adequate car parking to meet the needs of anticipated users.	<b>C</b> (Likely significant effect alone)	Parking provision which could affect traffic on section of A370 and A368 alongside component sites is	N/A	N/A	N/A	N/A	<b>B</b> (No significant effect)	N/A





**North Somerset and Mendip Bats SAC Assessment Matrix**

Policy/Proposal	Description	Assessment Category <sup>3</sup>	Potential Impacts on SAC					Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required?
			Decreased Air Quality	Decreased Water Quality	Disturbance to habitat	Land-take from Horseshoe bat foraging area	Other			
	<p>and 5,500 dwellings at Weston villages. Outside Weston most additional development to occur in towns on existing site allocations, or new development within their settlement boundaries, or at Nailsea through site allocations outside Green Belt</p>									
<p><b>Policy CS14: Distribution of New Housing</b></p>	<p>New housing development will be concentrated in Weston-super-Mare. At Clevedon, Portishead and Nailsea residential development will be acceptable within their existing settlement boundaries on brownfield land. Within the Service Villages small scale infill development may be appropriate where it will support the retention of existing services.</p>	<p><b>C</b> <b>(Likely significant effect alone)</b></p>	<p>Impacts from air pollution not likely to be significant; (see HRA air quality appendix)</p>	<p>Water abstraction has been assessed as part of the Regional Spatial Strategy Habitats Regulations Assessment which concluded that despite the amount of development proposed in North Somerset it won't result in</p>	<p>Potential disturbance from increased noise/light. Potential recreational impacts. Recreational impacts on the qualifying features which may result have been considered. These include erosion and the impacts of dogs. Natural England advise that they</p>	<p>Potential loss of foraging area particularly hedgerows.</p>	<p>Retention of dark vegetated corridors within green infrastructure to form part of any large-scale development. A site wide lighting strategy, incorporating a lighting contour plan with details of light intensity and hours of lighting operation, will be required on large-scale developments.</p>	<p><b>B</b> <b>(No significant effect)</b></p>	<p>N/A</p>	









### North Somerset and Mendip Bats SAC Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>3</sup>	Potential Impacts on SAC						Assessment Category post mitigation	HRA required?	
			Decreased Air Quality	Decreased Water Quality	Disturbance to habitat	Land-take from Horseshoe bat foraging area	Other	Avoidance/ Mitigation Measures			
<b>Policy CS18: Gypsies and Travellers and Travelling Show People</b>	Provision will be made for an additional 36 residential and 10 transit pitches for Gypsies and Travellers for the period 2006 – 2011.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
<b>CS18 Publication</b>	Sets out considerations for determination of locations for sites for Gypsies, travellers and travelling show people	<b>As above</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
<b>Policy CS19: Green Wedges/Strategic Gaps.</b>	The Council will seek to protect green wedges/strategic gaps to help retain the separate identity, character or landscape setting of settlements.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
<b>CS19 Publication Strategic gaps</b>	As above, but reference to strategic gaps, not green wedges	<b>As above</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Delivering a Prosperous Economy											
<b>Policy CS20: Supporting a</b>	Employment-led strategy to both	<b>C</b>	Impacts from air pollution	N/A	Potential disturbance	N/A	N/A	N/A	Retention of dark vegetated	<b>B</b>	N/A

### North Somerset and Mendip Bats SAC Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>3</sup>	Potential Impacts on SAC					Assessment Category post mitigation	HRA required?	
			Decreased Air Quality	Decreased Water Quality	Disturbance to habitat	Land-take from Horseshoe bat foraging area	Other			
<b>Successful Economy</b>	<p>deliver significant employment development and to ensure that new residential development is provided in association with employment opportunities. The Core Strategy provides for around 29,500 jobs. Supporting text suggests indicative employment requirement for B1-B8 uses would include 61 ha at Weston Urban Extension.</p>	(Likely significant effect alone)	not likely to be significant; (see HRA air quality appendix)		<p>from increased noise/light.</p> <p>Potential recreational impacts. Recreational impacts on the qualifying features which may result have been considered. These include erosion and the impacts of dogs. Natural England advise that they consider that these impacts are De minimis.</p>			<p>corridors within green infrastructure to form part of any large-scale development.</p> <p>A site wide lighting strategy, incorporating a lighting contour plan with details of light intensity and hours of lighting operation, will be required on large-scale developments.</p> <p>Consideration should be given to providing green (living) roofs on suitable large buildings. This should be covered with local substrates or grass rather than <i>sedum</i> species to maximise its value for wildlife conservation and foraging bats.</p>	(No significant effect)	

### North Somerset and Mendip Bats SAC Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>3</sup>	Potential Impacts on SAC						Assessment Category post mitigation	HRA required?
			Decreased Air Quality	Decreased Water Quality	Disturbance to habitat	Land-take from Horseshoe bat foraging area	Other	Avoidance/ Mitigation Measures		
<b>CS20 Publication</b>	The Core Strategy seeks to provide for at least 10,100 additional jobs. Supporting text suggests indicative employment land allocations (B1-B8 uses) to be as in adopted Replacement Local Plan, plus about 38ha at Weston Villages...	<b>As above</b>	As above. Note Weston urban extension now replaced by Weston Villages	N/A	As above	N/A	N/A		As above	N/A
<b>Policy CS21: Retail Hierarchy and Provision.</b>	Identifies retail hierarchy across the district.	<b>B (No significant effect)</b>	N/A	N/A	Potential light pollution	N/A	N/A	Sensitive lighting in new developments to minimise effect of light pollution.	N/A	Impact will be assessed on each individual planning application.
<b>CS21 Publication</b>	As above	As above	N/A	N/A	As above	N/A	N/A	As above	N/A	As above
<b>Policy CS22: Tourism Strategy</b>	Supports visitor facilities and accommodation across the district provided they meet certain criteria.	<b>B (No significant effect)</b>	N/A	N/A	Potential disturbance from increased noise/light. Potential	N/A	N/A	Generally small scale development likely in rural area near to SAC Sensitive lighting in new	N/A	N/A

### North Somerset and Mendip Bats SAC Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>3</sup>	Potential Impacts on SAC					Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required?
			Decreased Air Quality	Decreased Water Quality	Disturbance to habitat	Land-take from Horseshoe bat foraging area	Other			
					recreational impacts. Recreational impacts on the qualifying features which may result have been considered. These include erosion and the impacts of dogs. Natural England advise that they consider that these impacts are de minimis.		developments to minimise effect of light pollution.			
<b>CS22 Publication</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	
<b>Policy CS23: Bristol International Airport</b>	Proposals will be required to demonstrate the satisfactory resolution of environmental issues, including the impact of growth on surrounding communities and surface access infrastructure.	<b>B</b> <b>(No significant effect)</b>	Impacts from air pollution not likely to be significant; (see HRA air quality appendix)	N/A	Potential light pollution	Potential loss of foraging area.	Dedicated land managed for nature conservation. Retain a dark buffer around the edge of the development for commuting and foraging horseshoe bats.	<b>B</b> <b>(No significant effect)</b>	May be required on an individual application basis.	
<b>CS23 Publication Bristol Airport</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>As above</b>	<b>N/A</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	
<b>Policy CS24:</b>	Identified land will		Dock located	N/A	N/A	N/A	N/A	<b>B</b>	N/A	

### North Somerset and Mendip Bats SAC Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>3</sup>	Potential Impacts on SAC					Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required?
			Decreased Air Quality	Decreased Water Quality	Disturbance to habitat	Land-take from Horseshoe bat foraging area	Other			
<b>Royal Portbury Dock</b>	continue to be safeguarded for port uses, subject to demonstrable need for those uses that cannot be accommodated elsewhere within the existing port estate. Further expansion of the port within North Somerset is not supported.	<b>B</b> (No significant effect)	approximately 9 km from site. Furthermore dock uses unlikely to be significant sources of point source air emissions. Significant effects from air pollution unlikely						(No significant effect)	
<b>CS24 Publication</b>	As above	As above	As above	N/A	N/A	N/A	N/A	As above	As above	N/A
Ensuring Safe and Healthy Communities										
<b>Policy CS25: Children, Young People and Higher Education</b>	Provision of educational facilities.	<b>B</b> (No significant effect)	N/A	N/A	Potential light pollution	Potential loss of foraging areas.	N/A	Sensitive lighting in new developments to minimise effect of light pollution.  Green/living roofs on school and larger buildings to provide potential foraging habitats	N/A	Impact will be assessed on each individual planning application.
<b>CS25 Publication</b>	As above	As above	N/A	N/A	As above	As above	N/A	As above	N/A	A above
<b>Policy CS26: Supporting</b>	Requires Health Impact Assessment on all large scale	<b>B</b> (No significant effect)	N/A	N/A	Potential light pollution	Potential loss of foraging areas.	N/A	Sensitive lighting in new developments to	N/A	Impact will be assessed



### North Somerset and Mendip Bats SAC Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>3</sup>	Potential Impacts on SAC						Assessment Category post mitigation	HRA required?
			Decreased Air Quality	Decreased Water Quality	Disturbance to habitat	Land-take from Horseshoe bat foraging area	Other	Avoidance/ Mitigation Measures		
<b>Healthy Living and the Provision of Health Care Facilities.</b>	developments. Joint working with health providers to deliver a district wide network of health facilities, reduce health inequalities in the district, encourage development that promotes active lifestyles.	effect)							minimise effect of light pollution. Green/living roofs on school and larger buildings to provide potential foraging habitats	on each individual planning application.
<b>CS26 Publication</b>	As above	As above	N/A	N/A	As above	As above	N/A	N/A	As above	As above
<b>Policy CS27: Sport, Recreation and Community Facilities.</b>	Provision of sport, recreation and community facilities	<b>B</b> (No significant effect)	N/A	N/A	Potential light pollution	N/A	N/A	N/A	Sensitive lighting in new developments to minimise effect of light pollution.	Impact will be assessed on each individual planning application.
<b>CS27 Publication</b>	As above	As above	N/A	N/A	As above	N/A	N/A	N/A	As above	As above
<b>Area Policies</b>										
<b>Policy CS28: Weston-super-Mare</b>	W-s-M will be the primary focus for development within North Somerset. The town will accommodate 12,000 new dwellings and 10,000 new jobs between 2006-2026 as part of an	<b>B</b> (No significant effect)	Impacts from air pollution not likely to be significant; (see HRA air quality appendix)	N/A	N/A	Impacts of development.	N/A	N/A	Retention of dark vegetated corridors within green infrastructure to form part of any large-scale development. A site wide lighting strategy.	N/A

### North Somerset and Mendip Bats SAC Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>3</sup>	Potential Impacts on SAC					Assessment Category post mitigation	HRA required?
			Decreased Air Quality	Decreased Water Quality	Disturbance to habitat	Land-take from Horseshoe bat foraging area	Other		
	employment-led strategy to deliver improved self-containment and reduced out-commuting over the plan period.							incorporating a lighting contour plan with details of light intensity and hours of lighting operation, will be required on large-scale developments.  Consideration should be given to providing green (living) roofs on suitable large buildings. This should be covered with local substrates or grass rather than <i>sedum</i> species to maximise its value for wildlife conservation and foraging bats.  Off site areas to be grazed to benefit horseshoe bats may be required	
<b>CS28 Publication</b>	W-s-M will be the primary focus for	<b>As above</b>	As above	N/A	N/A	<b>As above</b>	N/A	As above	N/A

### North Somerset and Mendip Bats SAC Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>3</sup>	Potential Impacts on SAC						Assessment Category post mitigation	HRA required?
			Decreased Air Quality	Decreased Water Quality	Disturbance to habitat	Land-take from Horseshoe bat foraging area	Other	Avoidance/ Mitigation Measures		
	development within North Somerset. The town will accommodate around 5,850 additional new dwellings with approx 10,500 employment opportunities between 2010-2026 as part of an employment-led strategy to deliver improved self-containment and reduced out-commuting over the plan period.									
<b>Policy CS29: Weston-super-Mare Town Centre</b>	Town centre regeneration: major retail-led development in retail core; entertainment and leisure uses, tourist facilities and accommodation at seafront; creation of an office quarter within the gateway area	<b>B (No significant effect)</b>	Impacts from air pollution not likely to be significant; (see HRA air quality appendix)	N/A	N/A	N/A	Negligible impact (de minimis) – Already urbanised and lacking connectivity to surrounding habitats.	N/A	<b>B (No significant effect)</b>	N/A
<b>CS29 Publication</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>As above</b>	<b>N/A</b>	<b>As above</b>	<b>N/A</b>
<b>Policy CS30:</b>	A major mixed use, employment-led	<b>C</b>	Impacts from air pollution	Water abstraction	Potential loss of or disturbance	Weston urban extension is	Potential impact of	Retention of dark vegetated	<b>B</b>	Potentially on

**North Somerset and Mendip Bats SAC Assessment Matrix**

Policy/Proposal	Description	Assessment Category <sup>3</sup>	Potential Impacts on SAC				Assessment Category post mitigation	HRA required?		
			Decreased Air Quality	Decreased Water Quality	Disturbance to habitat	Land-take from Horseshoe bat foraging area			Other	Avoidance/ Mitigation Measures
<b>Weston Urban Extension</b>	urban extension will be developed south-east of Weston-super-Mare. This will include 9,000 homes, 42ha of employment land along with other necessary community, social and transport infrastructure to support the development.	<b>(Likely significant effect alone)</b>	not likely to be significant; (see HRA air quality appendix)	has been assessed as part of the Regional Spatial Strategy Habitats Regulations Assessment which concluded that despite the amount of development proposed in Weston-super-Mare it won't result in a likely significant effect on water abstraction. Further specialist advice was provided by the Environment Agency which confirmed this.	to foraging area particularly hedgerows. Potential recreational impacts.	within the 5km North Somerset and Mendip Bat Consultation Zone. Comprehensive Supplementary Planning Document is to be produced for the whole site which will include mitigation measures.	lighting on foraging area	corridors within green infrastructure to form part of any large-scale development. A site wide lighting strategy, incorporating a lighting contour plan with details of light intensity and hours of lighting operation, will be required on large-scale developments. Encourage and facilitate sustainable modes of transport such as public transport, walking and cycling. Consideration should be given to providing green (living) roofs on suitable large	<b>(No significant effect)</b>	individual planning applications within the Urban Extension. There is likely to be scope and flexibility for proposals to include detailed mitigation measures, as necessary.











## Screening Assessment Matrix for Avon Gorge Woodlands SAC

<b>Avon Gorge Woodlands SAC Assessment Matrix</b>						
Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge			HRA required ?
			Decreased Air Quality	Other	Avoidance/ Mitigation Measures	
<b>Living within Environmental Limits</b>						
<b>Policy CS1: Addressing Climate Change and Carbon Reduction</b>	Renewable energy in development: e.g. energy from waste plant at Weston urban extension, green infrastructure networks, sustainable transport, enhancing/protecting biodiversity, re-use of previously developed land etc.	<b>C (Likely significant effect alone)</b>	Mostly neutral. Some projects will need to be individually assessed as part of the planning process.  Only of possible significance if energy facilities were to be located < 10km from site (see HRA air quality appendix).	N/A	Use of appropriate technology/design (through consents or Environmental Permits from Environment Agency)	Potentially on individual application s. Energy from waste plants may require an HRA. There is likely to be scope and flexibility for proposals to include detailed mitigation measures, as necessary  <b>As above</b>
<b>Policy CS1 of Publication version of Core Strategy</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>As above</b>	<b>N/A</b>

<sup>4</sup> Based on the Natural England Habitats Regulations Assessment of Local Development Documents by David Tydesley, Jan 2009

### Avon Gorge Woodlands SAC Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge			Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?
			Decreased Air Quality	Other				
<b>Policy CS2: Delivering Sustainable Design and Construction.</b>	Sustainable design and construction. Policy sets targets e.g. for on site renewable energy, Code for Sustainable Homes BREEAM ratings, etc	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A
<b>CS2 Publication</b>	As above	As above	N/A	N/A	N/A	N/A	N/A	N/A
<b>Policy CS3: Environmental Risk Management.</b>	Sets out the Sequential Test for development with regard to flood zones.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A
<b>CS3 Publication</b>	As above	As above	N/A	N/A	N/A	N/A	N/A	N/A
<b>Policy CS4: Nature Conservation.</b>	Maintain and enhance biodiversity within the district.	<b>B</b> (No significant effect)	N/A	Part 5 of policy refers to tree planting. Inappropriate planting could lead to loss of grasslands.	Planting needs to take into account the potential loss of interest features of European Sites.	N/A	N/A	N/A
<b>CS4 Publication</b>	As above	As above	N/A	N/A	N/A	N/A	N/A	N/A
<b>Policy CS5: Landscape and the Historic Environment.</b>	Protect and enhance the character, distinctiveness, diversity and quality of North Somerset's landscape and townscape.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A

Avon Gorge Woodlands SAC Assessment Matrix									
Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge			Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?	
			Decreased Air Quality	Other					
<b>CS5 Publication</b>	As above Protect the existing Green Belt.	As above	N/A	N/A	N/A	N/A	N/A	N/A	
<b>Policy CS6: North Somerset's Green Belt</b>		<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	
<b>CS6 Publication</b>	As above	As above	N/A	N/A	N/A	N/A	N/A	N/A	
<b>Policy CS7: Planning for Waste in North Somerset</b>	Support for sustainable management of waste, recovery of energy from waste in line with Joint Waste Core Strategy policies	<b>B</b> (No significant effect)	Mostly neutral. Some projects will need to be individually assessed as part of the planning process. Only of possible significance if energy facilities were to be located < 10km from site (see HRA air quality appendix D).	N/A		Use of appropriate technology/design (through conditions on planning consents or Environmental Permits from Environment Agency)	<b>B</b> (No significant effect)	Potentially on individual planning applications. Energy from waste plants may require an HRA. There is likely to be scope and flexibility for proposals to include detailed mitigation measures, as necessary	
<b>CS7 Publication Planning for Waste</b>	As above	As above	As above	N/A		As above	As above	As above	
<b>Policy CS8: Minerals Planning in North</b>	Provision will be made for North Somerset to contribute towards	<b>B</b> (No significant effect)	Mostly neutral. Some projects will need to be	N/A		Use of appropriate technology/design (through conditions on planning consents).	<b>B</b> (No significant effect)	Potentially required on individual	

Avon Gorge Woodlands SAC Assessment Matrix									
Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge			Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ? s.	
			Decreased Air Quality	Other					
<b>Somerset</b>	approximately 40% of the West of England's aggregates requirement. The council will seek to maintain a land bank for crushed rock of at least 10 years.		individually assessed as part of the planning process. Unlikely to be significant effects on SAC (see HRA air quality appendix)						
<b>CS8 Publication Minerals Planning</b>	<b>As above</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>		<b>As above</b>	<b>As above</b>	<b>As above</b>	
<b>Policy CS9: Green Infrastructure</b>	Safeguard, improve and enhance the existing network of green infrastructure.	<b>B</b> (No significant effect)	N/A	Recreational impacts on the SAC were considered in HRA of Bristol Core Strategy. This concluded that the site is not particularly vulnerable to trampling, and largely inaccessible due to steepness.		N/A	N/A	N/A	
<b>CS9 Publication</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>		<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	
<b>Policy CS10: Transport and</b>	Encouragement for travel management	<b>C</b>	Transport Schemes	Potential to increase		Encourage and facilitate sustainable modes of	<b>B</b>	May be needed on	

### Avon Gorge Woodlands SAC Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge			Avoidance/ Mitigation Measures	Assessment Category post mitigation (No significant effect)	HRA required ?
			Decreased Air Quality	Other				
<b>Movement</b>	<p>policies and development proposals that encourage an improved and integrated transport network and allow for wide choice of transport modes. Lists proposed transport schemes over the plan period.</p>	<p>(Likely significant effect alone)</p>	<p>which could affect traffic on section of A4, A369, A4176 and B3129 alongside site are potentially significant</p>	<p>recreational use, from improved transport .</p>		<p>transport such as public transport, walking and cycling, (eg. through CS10 and LTP3)</p> <p>Transport Schemes which could affect traffic on section of A4, A369, A4176 and B3129 alongside site have been considered in terms of in combination effects and are unlikely to have a Likely Significant Effect, assuming avoidance/mitigation; (see Table 15 of Appendix D)</p> <p>(See also HRA of Bristol Core Strategy, 2010 , which suggests that even at worst case scenario, significant traffic growth would result in only marginal, non significant increases in critical pollutants regarding this SAC)</p> <p>Recreational impacts on the SAC were considered in HRA of Bristol Core Strategy. This concluded that the site is not particularly to trampling, and largely</p>	<p>(No significant effect)</p>	<p>individual planning application s.</p>

Avon Gorge Woodlands SAC Assessment Matrix									
Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge			Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?	
			Decreased Air Quality	Other					
						inaccessible due to steepness.			
<b>CS10 Publication and Movement</b>	As above	As above	As above	As above		As above	As above	As above	
<b>Policy CS11: Parking</b>	Provision of adequate car parking to meet the needs of anticipated users.	C (Likely significant effect alone)	Parking provision which could affect traffic on A4, A369, A4176 and B3129 alongside site is potentially significant	N/A		As for CS10 above	B (No significant effect)	N/A	

Avon Gorge Woodlands SAC Assessment Matrix									
Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge			Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?	
			Decreased Air Quality	Other					
<b>CS11 Publication</b>	As above	As above	As above	N/A		As above	N/A	N/A	
Delivering Strong and Inclusive Communities									
<b>Policy CS12: Achieving High Quality Design and Place Making</b>	High quality architecture and urban design will be expected from all developments.	<b>B</b> (No significant effect)	N/A	N/A		N/A	N/A	N/A	
<b>CS12 Publication</b>	As above	As above	N/A	N/A		N/A	N/A	N/A	
<b>Policy CS13: Scale of New Housing.</b>	Provision of 17,750 dwellings across the district over the plan period. 3000 dwellings in Weston-super-Mare urban area and 9,000 dwellings as an urban extension to	<b>B</b> (No significant effect)	Weston urban extension, Clevedon, Nailsea, Portishead located > 6 km from site. Unlikely to be significant	Potential to increase recreational use,		Recreational impacts on the SAC were considered in HRA of Bristol Core Strategy. This concluded that the site is not particularly vulnerable to trampling, and largely inaccessible due to steepness.	<b>B</b> (No significant effect)	N/A	

Avon Gorge Woodlands SAC Assessment Matrix							
Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge			Assessment Category post mitigation	HRA required ?
			Decreased Air Quality	Other	Avoidance/ Mitigation Measures		
	Weston-super-Mare. The remainder of 5,750 dwellings will be met by land from existing identified sources and no additional allocation will be required in the plan period.		traffic impacts (see HRA air quality appendix)				
<b>CS13 Publication</b>	Provision of minimum of 13,400 dwellings across the district over the plan period. 3, 300 net additional dwellings in Weston-super-Mare urban area and 5,500 dwellings at Weston villages. Outside Weston most additional development to occur in towns on existing site allocations, or new development in their settlement boundaries, or Nailsea through site allocations outside Green Belt	As above	As above Note: Weston urban extension now replaced by Weston Villages	As above	As above	N/A	
<b>Policy CS14: Distribution of New Housing</b>	New housing development will be concentrated in Weston-super-Mare. At Clevedon, Portishead and Nailsea residential	<b>B</b> <b>(No significant effect)</b>	Weston urban extension, Clevedon, Nailsea, Portishead located > 6 km from site.		Recreational impacts on the SAC were considered in HRA of Bristol Core Strategy. This concluded that the site is not particularly vulnerable to trampling.	<b>B</b> <b>(No significant effect)</b>	N/A





Avon Gorge Woodlands SAC Assessment Matrix									
Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge			Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?	
			Decreased Air Quality	Other					
	Green Belt. Priority to previously developed land. Within the Service Villages small scale infill developments or site allocations can occur. All new housing to not conflict with nature conservation policies								
<b>Policy CS15: Mixed and Balanced Communities</b>	The Council will seek to ensure a genuine mix of housing types within existing and future communities.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	
<b>CS15 Publication</b>	As above	As above	N/A	N/A	N/A	N/A	N/A	N/A	
<b>Policy CS16: Affordable Housing</b>	On-site affordable housing will be sought to meet local needs on all residential developments of 15 dwellings or more (or site of 0.5ha or above). On other sites the Council will seek to negotiate a financial contribution towards the provision of affordable housing.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	
<b>CS16 Publication</b>	As above	As above	N/A	N/A	N/A	N/A	N/A	N/A	
<b>Policy CS17: Residential Sites</b>	Housing schemes for 100% affordable housing to meet	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	

### Avon Gorge Woodlands SAC Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge			Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?
			Decreased Air Quality	Other				
<b>Providing Affordable Housing Only</b>	local need within small rural communities will be supported provided it meets certain criteria. Specific sites may also be allocated in W-s-M, Portishead, Nailsea and Clevedon and the service villages for 100% affordable housing to meet an identified local need.	effect)						
<b>CS17 Publication Rural Exceptions Schemes</b>	Housing schemes for 100% affordable housing to meet local need within small rural communities will be supported provided it meets certain criteria.	As above	N/A	N/A	N/A	N/A	N/A	N/A
<b>Policy CS18: Gypsies and Travellers and Travelling Show People</b>	Provision will be made for an additional 36 residential and 10 transit pitches for Gypsies and travellers for the period 2006 – 2011.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A
<b>CS18 Publication</b>	Sets out considerations for determination of locations for sites for Gypsies, travellers and travelling show people	As above	N/A	N/A	N/A	N/A	N/A	N/A

Avon Gorge Woodlands SAC Assessment Matrix									
Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge			Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?	
			Decreased Air Quality	Other					
<b>Policy CS19: Green Wedges/Strategic Gaps.</b>	The Council will seek to protect green wedges/strategic gaps to help retain the separate identity, character or landscape setting of settlements.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	
<b>CS19 Publication Strategic gaps</b>	As above, but reference to strategic gaps, not green wedges	As above	N/A	N/A	N/A	N/A	N/A	N/A	
<b>Delivering a Prosperous Economy</b>									
<b>Policy CS20: Supporting a Successful Economy</b>	Employment-led strategy to both deliver significant employment development and to ensure that new residential development is provided in association with employment opportunities. The Core Strategy provides for around 29,500 jobs. Supporting text suggests indicative employment requirement for B1-B8 uses would include 61 ha at	<b>B</b> (No significant effect)	Weston urban extension, Clevedon, Nailsea, Portishead located > 6 km from site. Unlikely to be significant traffic impacts (see HRA air quality appendix)	Potential for increased recreational use.	Recreational impacts on the SAC were considered in HRA of Bristol Core Strategy. This concluded that the site is not particularly to trampling, and largely inaccessible due to steepness.	<b>B</b> (No significant effect)	N/A		

Avon Gorge Woodlands SAC Assessment Matrix									
Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge			Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?	
			Decreased Air Quality	Other					
	Weston Urban Extension								
<b>CS20 Publication</b>	The Core Strategy seeks to provide for at least 10, 100 additional jobs. Supporting text suggests indicative employment land allocations (B1-B8 uses) to be as in adopted Replacement Local Plan, plus about 38ha at Weston Villages.	As above	As above Note: Weston urban extension now replaced by Weston Villages	N/A	N/A	N/A	N/A	N/A	N/A
<b>Policy CS21: Retail Hierarchy and Provision.</b>	Identifies retail hierarchy across the district.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>CS21 Publication</b>	As above	As above	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Policy CS22: Tourism Strategy</b>	Supports visitor facilities and accommodation across the district provided they meet certain criteria.	<b>B</b> (No significant effect)	N/A	Potential for increased recreational use.	Recreational impacts on the SAC were considered in HRA of Bristol Core Strategy. This concluded that the site is not particularly vulnerable to trampling, and largely inaccessible due to steepness	N/A	N/A	N/A	N/A
<b>CS22 Publication</b>	As above	As above	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Policy CS23: Bristol International Airport</b>	Proposals will be required to demonstrate the satisfactory resolution of	<b>B</b> (No significant effect)	Unlikely to be significant air quality impacts (see HRA air	N/A	N/A	N/A	<b>B</b> (No significant effect)	N/A	N/A

Avon Gorge Woodlands SAC Assessment Matrix									
Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge			Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?	
			Decreased Air Quality	Other					
	environmental issues, including the impact of growth on surrounding communities and surface access infrastructure.		quality appendix)						
<b>CS23 Publication Bristol Airport</b>	As above	As above	N/A	N/A	N/A	N/A	N/A	N/A	
<b>Policy CS24: Royal Portbury Dock</b>	Identified land will continue to be safeguarded for port uses, subject to demonstrable need for those uses that cannot be accommodated elsewhere within the existing port estate. Further expansion of the port within North Somerset is not supported.	<b>B (No significant effect)</b>	Dock located approx. 3km from SAC but dock uses not likely to be significant source of point source air emissions. (see HRA Air Quality Appendix D).	N/A		N/A		Use of appropriate technology /design (through conditions on planning consents or Environmental Permits from Environment Agency)	
<b>CS24 Publication Ensuring Safe and Healthy Communities</b>	As above	As above	As above			N/A	N/A	N/A	
<b>Policy CS25: Children, Young People and</b>	Provision of educational facilities.	<b>B (No significant effect)</b>	N/A	N/A		N/A	N/A	N/A	

Avon Gorge Woodlands SAC Assessment Matrix									
Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge			Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?	
			Decreased Air Quality	Other					
Higher Education									
<b>CS25 Publication</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	
<b>Policy CS26: Supporting Healthy Living and the Provision of Health Care Facilities.</b>	Requires HIA on all large scale developments. Joint working with health providers to deliver a district wide network of health facilities, reduce health inequalities in the district, encourage development that promotes active lifestyles.	<b>B</b> <b>(No significant effect)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	
<b>CS26 Publication</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	
<b>Policy CS27: Sport, Recreation and Community Facilities.</b>	Provision of sport, recreation and community facilities	<b>B</b> <b>(No significant effect)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	
<b>CS27 Publication</b>	<b>As above</b>	<b>As above</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	
<b>Area Policies</b>									
<b>Policy CS28: Weston-super-Mare</b>	W-s-M will be the primary focus for development within North Somerset. The town will accommodate 12,000 new dwellings and 10,000 new jobs between 2006-2026	<b>B</b> <b>(No significant effect)</b>	Located > 20 km from site. Unlikely to be significant traffic/energy centre impacts (see HRA air quality appendix)	Potential for increased recreational use.	Recreational impacts on the SAC were considered in HRA of Bristol Core Strategy. This concluded that the site is not particularly vulnerable to trampling, and largely inaccessible due to steepness	<b>B</b> <b>(No significant effect)</b>	<b>N/A</b>	<b>N/A</b>	

### Avon Gorge Woodlands SAC Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge			Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?
			Decreased Air Quality	Other				
	as part of an employment-led strategy to deliver improved self-containment and reduced out-commuting over the plan period.							
<b>CS28 Publication</b>	W-s-M will be the primary focus for development within North Somerset. The town will accommodate around 5,850 additional new dwellings with approx 10,500 employment opportunities between 2010-2026 as part of an employment-led strategy to deliver improved self-containment and reduced out-commuting over the plan period.	As above	N/A		As above	As above	N/A	
<b>Policy CS29: Weston-super-Mare Town Centre</b>	Town centre regeneration: major retail-led development in retail core; entertainment and leisure uses, tourist facilities and accommodation at seafront; creation of	<b>B</b> (No significant effect)	Located > 20 km from site. Unlikely to be significant traffic/energy centre impacts (see HRA air quality	Potential increased recreational use.		Recreational impacts on the SAC were considered in HRA of Bristol Core Strategy. This concluded that the site is not particularly vulnerable to trampling, and largely inaccessible due to steepness	<b>B</b> (No significant effect)	N/A



### Avon Gorge Woodlands SAC Assessment Matrix

Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge			Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?
			Decreased Air Quality	Other				
	an office quarter within the gateway area		appendix)					
<b>CS29 Publication</b>	As above	As above	As above			As above	<b>B (No significant effect)</b>	N/A
<b>Policy CS30: Weston Urban Extension</b>	A major mixed use, employment-led urban extension will be developed south-east of Weston-super-Mare. This will include 9,000 homes, 42ha of employment land along with other necessary community, social and transport infrastructure to support the development.	<b>B (No significant effect)</b>	Located > 20 km from site. Unlikely to be significant traffic/energy centre impacts (see HRA air quality appendix)	Potential for increased recreational use.		Recreational impacts on the SAC were considered in HRA of Bristol Core Strategy. This concluded that the site is not particularly vulnerable to trampling, and largely inaccessible due to steepness	<b>B (No significant effect)</b>	N/A
<b>CS30 Publication Weston Villages</b>	Employment-led development in two villages on mainly previously developed land at Weston airfield and Locking Parklands (the "Weston Villages". To include total of 5,500 new homes and at least 37.7ha of B use employment land.	As above	As above. Note: Weston urban extension now replaced by Weston Villages	As above		As above	As above	N/A
<b>Policy CS31: Market and</b>	Proposals for development at Clevedon, Nailsea	<b>B (No significant effect)</b>	N/A	N/A		N/A	N/A	N/A

Avon Gorge Woodlands SAC Assessment Matrix									
Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge			Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?	
			Decreased Air Quality	Other					
Coastal Towns	and Portishead will be supported if they increase self-containment, ensure the availability of jobs and services for the town and surrounding catchments, and improve the towns role as a service centre.	effect)							
<b>CS31 Publication Clevedon, Nailsea and Portishead</b>	As above	As above	N/A	N/A	N/A	N/A	N/A	N/A	
<b>Policy CS32: Service Villages</b>	Proposals for development which support or enhance their roles as local hubs for community facilities and services, employment and affordable housing, including public transport will be supported.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	
<b>CS32 Publication</b>	Support for small scale development within settlement boundaries which supports and enhances village's role as local hub.	As above	N/A	N/A	N/A	N/A	N/A	N/A	
<b>Policy CS33:</b>	Proposals for development within	<b>B</b>	N/A	N/A	N/A	N/A	N/A	N/A	

<b>Avon Gorge Woodlands SAC Assessment Matrix</b>									
<b>Policy/Proposal</b>	<b>Description</b>	<b>Assessment Category<sup>4</sup></b>	<b>Potential Impacts on Avon Gorge</b>			<b>Avoidance/ Mitigation Measures</b>	<b>Assessment Category post mitigation</b>	<b>HRA required ?</b>	
			<b>Decreased Air Quality</b>	<b>Other</b>					
<b>Smaller Settlements and Countryside.</b>	the rural areas outside of Service Villages will be strictly controlled in order to protect their character and prevent unsustainable development.	(No significant effect)							
<b>CS33 Publication Infill Villages, smaller settlements and countryside</b>	As above	As above	N/A	N/A	N/A	N/A	N/A	N/A	
<b>Delivery Policies</b>									
<b>Policy CS34: Developer Contributions to Infrastructure.</b>	Financial contributions will be sought in the form of a standardised tariff scheme applied across the district to ensure the effective and timely delivery of the key infrastructure requirements to support new development.	<b>B</b> (No significant effect)	N/A	N/A	N/A	N/A	N/A	N/A	
<b>CS34 Publication Infrastructure delivery and development contributions</b>	Concerns mechanisms for funding and delivery of infrastructural elements, with regard to the Weston villages.	As above	N/A	N/A	N/A	N/A	N/A	N/A	

Avon Gorge Woodlands SAC Assessment Matrix									
Policy/Proposal	Description	Assessment Category <sup>4</sup>	Potential Impacts on Avon Gorge				Avoidance/ Mitigation Measures	Assessment Category post mitigation	HRA required ?
			Decreased Air Quality	Other					
	Weston urban area and rest of district								
<b>Policy CS35: Implementation</b>	Implementation will take place as part of a co-ordinated strategy, provided in step with the necessary infrastructure, utilities and service provision needed to support and enable the development.	<b>B (No significant effect)</b>	N/A	N/A		N/A	N/A	N/A	N/A
<b>CS35 is deleted in the Publication version</b>	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A

## **APPENDIX D**

### **Air Quality Assessment matrices, including consideration of in-combination effects**

## CS1 – Addressing Climate Change and Carbon Reduction

**Table 1:** Impact of CS1 (Addressing Climate Change and Carbon Reduction) on nitrogen deposition, acid deposition, nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) in international designated sites.

International Site (SAC, SPA, Ramsar)	Qualifying Interest Features	Nitrogen CL (kg N/ha/yr) <sup>5</sup>	Nitrogen deposition (kg N/ha/yr)	Acidification CL (keg/ ha/yr)	Acid deposition (keg/ ha/yr)		NO <sub>x</sub> (µg/m <sup>3</sup> )		SO <sub>2</sub> (µg/m <sup>3</sup> )	
					Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>
<b>Avon Gorge Woodlands SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	23.4 (234%) Only of possible significance if energy facilities were to be located < 10km from site	5.8	3.3 (57%) Unlikely to be significant (Bd well below CL)	39 (130%) Only of possible significance if energy facilities were to be located < 10km from site	7.1 (36%) Unlikely to be significant (Bd well below objective)			
<b>Avon Gorge Woodlands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	15.4 (103%) Only of possible significance if energy facilities were to be located < 10km from site	4.0	2.1 (53%) Unlikely to be significant (Bd well below CL)	39 (130%) Only of possible significance if energy facilities were to be located < 10km from site	7.1 (36%) Unlikely to be significant (Bd well below objective)			
<b>North Somerset and Mendip Bats SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	27.6 (276%) Only of possible significance if energy facilities were to be located < 10km from site	5.8	3.3 (57%) Unlikely to be significant (Bd well below CL)	10.7 (36%) Unlikely to be significant (Bd well below objective)	1.7 (9%) Unlikely to be significant (Bd well below objective)			
<b>North Somerset and Mendip Bats SAC</b>	Semi-natural dry grasslands and scrubland facies: on	15	16.1 (107%) Only of possible significance if energy facilities were to be located < 10km from site	4.0	1.8 (45%) Unlikely to be significant (Bd well below CL)	10.7 (36%) Unlikely to be significant (Bd well below objective)	1.7 (9%) Unlikely to be significant (Bd well below objective)			

<b>Severn Estuary SAC</b>	calcareous substrates ( <i>Festuco-Brometalia</i> ) Estuaries	30	11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)	from site	11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)		11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Atlantic salt meadows	30	11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)		11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Sandbanks which are slightly covered by seawater all the time	30	11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)		11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Reefs	30	11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)		11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Estuaries	30	11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)		11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)		11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary</b>	Atlantic salt meadows	30	11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)		11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)





- <sup>2</sup> Background deposition or concentration expressed as percentage of critical load or objective in parenthesis. Impacts of a point or area source may be significant if the background + source contribution is greater than 70% of the objective or critical load (cases where this applies are highlighted in bold).
- <sup>3</sup> Impacts are likely to be significant if the source contribution is greater than 1% of the relevant objective or critical load and where the total (background + source) deposition or concentration is greater than 70% of the relevant objective or critical load. Where no information exists to calculate the impact, impacts of a point source could potentially be significant when located within 10 km of international designated sites (or 15 km for coal or oil fired power stations). Potentially significant impacts are highlighted in bold.
- <sup>4</sup> Habitat feature is listed as sensitive to acidity but it tends to occur on limestone soils where it is not sensitive. Source: [www.apis.ac.uk](http://www.apis.ac.uk)

## CS7 – Planning for Waste

**Table 2:** Impact of CS7 (Planning for Waste) on nitrogen deposition, acid deposition, nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) in international designated sites.

International Site (SAC, SPA, Ramsar)	Qualifying Interest Features	Nitrogen CL (kg N/ha/yr) <sup>1</sup>	Nitrogen deposition (kg N/ha/yr)	Acidification CL (keg/ ha/yr)	Acid deposition (keg/ ha/yr)		NO <sub>x</sub> (µg/m <sup>3</sup> )		SO <sub>2</sub> (µg/m <sup>3</sup> )	
					Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>
<b>Avon Gorge Woodlands SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	23.4 (234%) Unlikely to be significant. Sites identified in North Somerset in the Joint Waste Core Strategy are >10km from SAC.	5.8	3.3 (57%) Unlikely to be significant (Bd well below CL)	39 (130%) Unlikely to be significant. Sites identified in North Somerset in the Joint Waste Core Strategy are >10km from SAC.	7.1 (36%) Unlikely to be significant (Bd well below objective)			
<b>Avon Gorge Woodlands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	15.4 (103%) Unlikely to be significant. Sites identified in North Somerset in the Joint Waste Core Strategy are >10km from SAC.	4.0	2.1 (53%) Unlikely to be significant (Bd well below CL)	39 (130%) Unlikely to be significant. Sites identified in North Somerset in the Joint Waste Core Strategy are >10km from SAC.	7.1 (36%) Unlikely to be significant (Bd well below objective)			
<b>North Somerset and Mendip Bats SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	27.6 (276%) <b>Potentially significant where energy from waste facilities &lt; 10km from site</b>	5.8	3.3 (57%) Unlikely to be significant (Bd well below CL)	10.7 (36%) Unlikely to be significant (Bd well below objective)	1.7 (9%) Unlikely to be significant (Bd well below objective)			
<b>North Somerset and Mendip Bats SAC</b>	Semi-natural dry grasslands	15	16.1 (107%) <b>Potentially significant where energy</b>	4.0	1.8 (45%) Unlikely to be significant (Bd well below CL)	10.7 (36%) Unlikely to be significant (Bd well below objective)	1.7 (9%) Unlikely to be significant (Bd well below objective)			

SAC	and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> ) Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>											
<b>Severn Estuary SAC</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Sandbanks which are slightly covered by seawater all the time	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Reefs	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Mudflats and sandflats not covered seawater at	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)

<b>Severn Estuary Ramsar</b>	low tide Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Sandbanks which are slightly covered by seawater all the time	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Mendip Limestone Grasslands SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	22.5 (225%)	<b>Potentially significant where energy from waste facilities &lt; 10km from site</b>	5.7	2.9 (51%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
<b>Mendip Limestone Grasslands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	13.2 (88%)	<b>Potentially significant where energy from waste facilities &lt; 10km from site</b>	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
<b>Mendip Limestone Grasslands SAC</b>	European Dry Heaths	10	13.2 (132%)	<b>Potentially significant where energy from waste facilities &lt; 10km from site</b>	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)

Bd = Background, CL = Critical Load. UK air quality objective for the protection of vegetation and ecosystems: NO<sub>x</sub> = 30 µg/m<sup>3</sup>; SO<sub>2</sub> = 20 µg/m<sup>3</sup> (both as annual mean). The impact significance presented in the table is based on Environment Agency, H1 Environmental Risk Assessment, Annex (f) Air Emissions guidance for point source emissions. All data derived from UK Air Pollution Information System – [www.apis.ac.uk](http://www.apis.ac.uk)

- <sup>1</sup> Critical loads for nitrogen deposition are expressed across a range (lower and upper value is given by APIS). The lower value represents the lowest critical load, and is therefore worst-case in terms of significance when nitrogen deposition is expressed as a percentage of the critical load value. Critical load for nitrogen deposition in this matrix is based on the lowest estimate.
- <sup>2</sup> Background deposition or concentration expressed as percentage of critical load or objective in parenthesis. Impacts of a point or area source may be significant if the background + source contribution is greater than 70% of the objective or critical load (cases where this applies are highlighted in bold).
- <sup>3</sup> Impacts are likely to be significant if the source contribution is greater than 1% of the relevant objective or critical load and where the total (background + source) deposition or concentration is greater than 70% of the relevant objective or critical load. Where no information exists to calculate the impact, impacts of a point source could potentially be significant when located within 10 km of international designated sites (or 15 km for coal or oil fired power stations). Potentially significant impacts are highlighted in bold.
- <sup>4</sup> Habitat feature is listed as sensitive to acidity but it tends to occur on limestone soils where it is not sensitive. Source: [www.apis.ac.uk](http://www.apis.ac.uk)

## CS8 – Minerals Planning in North Somerset

**Table 3:** Impact of CS8 (Minerals Planning in North Somerset) on nitrogen deposition, acid deposition, nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) in international designated sites.

International Site (SAC, SPA, Ramsar)	Qualifying Interest Features	Nitrogen CL (kg N/ha/yr) <sup>1</sup>	Nitrogen deposition (kg N/ha/yr)		Acidification CL (keg/ ha/yr)	Acid deposition (keg/ ha/yr)		NO <sub>x</sub> (µg/m <sup>3</sup> )		SO <sub>2</sub> (µg/m <sup>3</sup> )	
			Bd <sup>2</sup>	Significance <sup>3</sup>		Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>
<b>Avon Gorge Woodlands SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	23.4 (234%)	Unlikely to be significant source of NO <sub>x</sub>	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	39 (130%)	Unlikely to be significant source of NO <sub>x</sub>	7.1 (36%)	Unlikely to be significant (Bd well below objective)
<b>Avon Gorge Woodlands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	15.4 (103%)	Unlikely to be significant source of NO <sub>x</sub>	4.0	2.1 (53%)	Unlikely to be significant (Bd well below CL)	39 (130%)	Unlikely to be significant source of NO <sub>x</sub>	7.1 (36%)	Unlikely to be significant (Bd well below objective)
<b>North Somerset and Mendip Bats SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	27.6 (276%)	Unlikely to be significant source of NO <sub>x</sub>	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
<b>North Somerset and Mendip Bats SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	16.1 (107%)	Unlikely to be significant source of NO <sub>x</sub>	4.0	1.8 (45%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)

<b>Severn Estuary SAC</b>	Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Sandbanks which are slightly covered by seawater all the time	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Reefs	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary</b>	Sandbanks which are	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)

Ramsar	slightly covered by seawater all the time	well below CL)	well below CL)	well below objective)	well below objective)	
<b>Mendip Limestone Grasslands SAC</b>	10 Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	22.5% <b>(225%)</b>	5.7 Unlikely to be significant source of NO <sub>x</sub>	2.9 (51%) Unlikely to be significant (Bd well below CL)	9.9 (33%) Unlikely to be significant (Bd well below objective)	1.7 (9%) Unlikely to be significant (Bd well below objective)
<b>Mendip Limestone Grasslands SAC</b>	15 Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	13.2 <b>(88%)</b>	4.0 Unlikely to be significant source of NO <sub>x</sub>	1.6 (40%) Unlikely to be significant (Bd well below CL)	9.9 (33%) Unlikely to be significant (Bd well below objective)	1.7 (9%) Unlikely to be significant (Bd well below objective)
<b>Mendip Limestone Grasslands SAC</b>	10 European Dry Heaths	13.2 <b>(132%)</b>	4.0 Unlikely to be significant source of NO <sub>x</sub>	1.6 (40%) Unlikely to be significant (Bd well below CL)	9.9 (33%) Unlikely to be significant (Bd well below objective)	1.7 (9%) Unlikely to be significant (Bd well below objective)

Bd = Background, CL = Critical Load. UK air quality objective for the protection of vegetation and ecosystems: NO<sub>x</sub> = 30 µg/m<sup>3</sup>, SO<sub>2</sub> = 20 µg/m<sup>3</sup> (both as annual mean). The impact significance presented in the table is based on Environment Agency, H1 Environmental Risk Assessment, Annex (f) Air Emissions guidance for point source emissions. All data derived from UK Air Pollution Information System – [www.apis.ac.uk](http://www.apis.ac.uk)

<sup>1</sup> Critical loads for nitrogen deposition are expressed across a range (lower and upper value is given by APIS). The lower value represents the lowest critical load, and is therefore worst-case in terms of significance when nitrogen deposition is expressed as a percentage of the critical load value. Critical load for nitrogen deposition in this matrix is based on the lowest estimate.

<sup>2</sup> Background deposition or concentration expressed as percentage of critical load or objective in parenthesis. Impacts of a point or area source may be significant if the background + source contribution is greater than 70% of the objective or critical load (cases where this applies are highlighted in bold).

<sup>3</sup> Impacts are likely to be significant if the source contribution is greater than 1% of the relevant objective or critical load and where the total (background + source) deposition or concentration is greater than 70% of the relevant objective or critical load. Where no information exists to calculate the impact, impacts of a point source could potentially be significant when located within 10 km of international designated sites (or 15 km for coal or oil fired power stations). Potentially significant impacts are highlighted in bold.

<sup>4</sup> Habitat feature is listed as sensitive to acidity but it tends to occur on limestone soils where it is not sensitive. Source: [www.apis.ac.uk](http://www.apis.ac.uk)



## CS10 – Transportation and Movement

**Table 4:** Impact of CS10 (Transportation and Movement) on nitrogen deposition, acid deposition, nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) in international designated sites.

International Site (SAC, SPA, Ramsar)	Qualifying Interest Features	Nitrogen CL (kg N/ha/yr) <sup>1</sup>	Nitrogen deposition (kg N/ha/yr)	Acidification CL (keg/ha/yr)	Acid deposition (keg/ha/yr)		NO <sub>x</sub> (µg/m <sup>3</sup> )		SO <sub>2</sub> (µg/m <sup>3</sup> )	
					Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>
<b>Avon Gorge Woodlands SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	23.4 (234 %)	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	39 (130 %)	Transport schemes which could affect traffic on section of A4, A369, A4176 and B3129 alongside site are potentially significant	7.1 (36%)	Road traffic not a significant source of SO <sub>2</sub> .
<b>Avon Gorge Woodlands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	15.4 (103 %)	4.0	2.1 (53%)	Unlikely to be significant (Bd well below CL)	39 (130 %)	Transport schemes which could affect traffic on section of A4, A369, A4176 and B3129 alongside site are potentially significant	7.1 (36%)	Road traffic not a significant source of SO <sub>2</sub>
<b>North Somerset and Mendip Bats SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	27.6 (276 %)	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Road traffic not a significant source of SO <sub>2</sub>

<b>North Somerset and Mendip Bats SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	16.1 (107%)	sites are potentially significant	Transport schemes which could affect traffic on section of A370 and A368 alongside component sites are potentially significant	4.0	1.8 (45%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary SAC</b>	Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary SAC</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary SAC</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary SAC</b>	Sandbanks which are slightly covered by seawater all the time	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary SAC</b>	Reefs	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary Ramsar</b>	Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>

<b>Severn Estuary Ramsar</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
	Sandbanks which are slightly covered by seawater all the time	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Mendip Limestone Grasslands SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	22.5 (225%)	<b>Transport schemes which could affect traffic on section of A38 and A371 alongside component sites are potentially significant</b>	5.7	2.9 (51%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Mendip Limestone Grasslands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	13.2 (88%)	<b>Transport schemes which could affect traffic on section of A38 and A371 alongside component sites are potentially significant</b>	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Road traffic not a significant source of SO <sub>2</sub>

<b>Mendip Limestone Grasslands SAC</b>	European Dry Heaths	10	13.2 (132 %)	<b>Transport schemes which could affect traffic on section of A38 and A371 alongside component sites are potentially significant</b>	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Road traffic not a significant source of SO <sub>2</sub>
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Bd = Background, CL = Critical Load. UK air quality objective for the protection of vegetation and ecosystems: NO<sub>x</sub> = 30 µg/m<sup>3</sup>, SO<sub>2</sub> = 20 µg/m<sup>3</sup> (both as annual mean). The impact significance presented in the table is based on Environment Agency, H1 Environmental Risk Assessment, Annex (f) Air Emissions guidance and Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality guidance for road traffic emissions. All data derived from UK Air Pollution Information System – www.apis.ac.uk

- <sup>1</sup> Critical loads for nitrogen deposition are expressed across a range (lower and upper value is given by APIS). The lower value represents the lowest critical load, and is therefore worst-case in terms of significance when nitrogen deposition is expressed as a percentage of the critical load value. Critical load for nitrogen deposition in this matrix is based on the lowest estimate
- <sup>2</sup> Background deposition or concentration expressed as percentage of critical load or objective in parenthesis. Deposition impacts may be significant if the background + source contribution is greater than 70% of the critical load (cases where this applies are highlighted in bold). Following Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, impacts on NO<sub>x</sub> may be significant if the NO<sub>x</sub> concentration is close to or in excess of the air quality objective for the protection of vegetation and ecosystems (30 µg/m<sup>3</sup>).
- <sup>3</sup> Road traffic impacts on deposition are likely to be significant if the increase is greater than 1% of the critical load, and where the total (background + source) deposition is greater than 70% of the critical load. Road traffic impacts on NO<sub>x</sub> are likely to be significant where the increase is greater than 2 µg m<sup>-3</sup>, and where total concentrations are close to or in excess of the annual mean air quality objective for the protection of vegetation and ecosystems (30 µg/m<sup>3</sup>). Where no information exists to calculate road-traffic pollutants, impacts could potentially be significant within 200 m of affected roads. Affected roads are defined according to Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, as roads with a change in Annual Average Daily Traffic (AADT) flow of 1000 or more, or a change in HGV (AADT) flow of 200 or more or a change in annual average speed of 10 km/hr or more as a result of a proposal. Potentially significant impacts are highlighted in bold.
- <sup>4</sup> Habitat feature is listed as sensitive to acidity but it tends to occur on limestone soils where it is not sensitive. Source: www.apis.ac.uk

## CS11 – Parking

Table 5: Impact of CS11 (Parking) on nitrogen deposition, acid deposition, nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) in international designated sites.

International Site (SAC, SPA, Ramsar)	Qualifying Interest Features	Nitrogen CL (kg N/ha/yr) <sup>1</sup>	Nitrogen deposition (kg N/ha/yr)	Acidification CL (keg/ ha/yr)	Acid deposition (keg/ ha/yr)		NO <sub>x</sub> (µg/m <sup>3</sup> )		SO <sub>2</sub> (µg/m <sup>3</sup> )	
					Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>
Avon Gorge Woodlands SAC	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	23.4 (234%)	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	39 (130%)	Parking provision which could affect traffic on section of A4, A369, A4176 and B3129 alongside site is potentially significant	7.1 (36%)	Road traffic not a significant source of SO <sub>2</sub> .
			15.4 (103%)	4.0	2.1 (53%)	Unlikely to be significant (Bd well below CL)	39 (130%)	Parking provision which could affect traffic on section of A4, A369, A4176 and B3129 alongside site is potentially significant	7.1 (36%)	Road traffic not a significant source of SO <sub>2</sub>
North Somerset and Mendip Bats SAC	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	27.6 (276%)	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Road traffic not a significant source of SO <sub>2</sub>

<b>North Somerset and Mendip Bats SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	16.1 (107%)	sites is potentially significant	4.0	1.8 (45%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Road traffic not a significant source of SO <sub>2</sub>
				<b>Parking provision which could affect traffic on section of A370 and A368 alongside component sites is potentially significant</b>						
<b>Severn Estuary SAC</b>	Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary SAC</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary SAC</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary SAC</b>	Sandbanks which are slightly covered by seawater all the time	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary SAC</b>	Reefs	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary Ramsar</b>	Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>

<b>Severn Estuary Ramsar</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary Ramsar</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary Ramsar</b>	Sandbanks which are slightly covered by seawater all the time	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Mendip Limestone Grasslands SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	22.5 (225%)	<b>Parking provision which could affect traffic on section of A38 and A371 alongside component sites is potentially significant</b>	5.7	2.9 (51%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Mendip Limestone Grasslands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	13.2 (88%)	<b>Parking provision which could affect traffic on section of A38 and A371 alongside component sites is potentially significant</b>	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Mendip Limestone Grasslands SAC</b>	European Dry Heaths	10	13.2 (132%)	<b>Parking provision which could affect traffic on section of A38 and A371 alongside component sites is potentially significant</b>	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Road traffic not a significant source of SO <sub>2</sub>

**affect traffic  
on section of  
A38 and A371  
alongside  
component  
sites is  
potentially  
significant**

objective)

Bd = Background, CL = Critical Load. UK air quality objective for the protection of vegetation and ecosystems:  $\text{NO}_x = 30 \mu\text{g}/\text{m}^3$ ,  $\text{SO}_2 = 20 \mu\text{g}/\text{m}^3$  (both as annual mean). The impact significance presented in the table is based on Environment Agency, H1 Environmental Risk Assessment, Annex (f) Air Emissions guidance and Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality guidance for road traffic emissions. All data derived from UK Air Pollution Information System – [www.apis.ac.uk](http://www.apis.ac.uk)

<sup>1</sup> Critical loads for nitrogen deposition are expressed across a range (lower and upper value is given by APIS). The lower value represents the lowest critical load, and is therefore worst-case in terms of significance when nitrogen deposition is expressed as a percentage of the critical load value. Critical load for nitrogen deposition in this matrix is based on the lowest estimate

<sup>2</sup> Background deposition or concentration expressed as percentage of critical load or objective in parenthesis. Deposition impacts may be significant if the background + source contribution is greater than 70% of the critical load (cases where this applies are highlighted in bold). Following Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, impacts on  $\text{NO}_x$  may be significant if the  $\text{NO}_x$  concentration is close to or in excess of the air quality objective for the protection of vegetation and ecosystems ( $30 \mu\text{g}/\text{m}^3$ ).

<sup>3</sup> Road traffic impacts on deposition are likely to be significant if the increase is greater than 1% of the critical load, and where the total (background + source) deposition is greater than 70% of the critical load. Road traffic impacts on  $\text{NO}_x$  are likely to be significant where the increase is greater than  $2 \mu\text{g}/\text{m}^3$ , and where total concentrations are close to or in excess of the annual mean air quality objective for the protection of vegetation and ecosystems ( $30 \mu\text{g}/\text{m}^3$ ). Where no information exists to calculate road-traffic pollutants, impacts could potentially be significant within 200 m of affected roads. Affected roads are defined according to Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, as roads with a change in Annual Average Daily Traffic (AADT) flow of 1000 or more, or a change in HGV (AADT) flow of 200 or more or a change in annual average speed of 10 km/hr or more as a result of a proposal. Potentially significant impacts are highlighted in bold.

<sup>4</sup> Habitat feature is listed as sensitive to acidity but it tends to occur on limestone soils where it is not sensitive. Source: [www.apis.ac.uk](http://www.apis.ac.uk)



## CS13 – Scale of New Housing

**Table 6:** Impact of CS13 (Scale of New Housing) on nitrogen deposition, acid deposition, nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) in international designated sites.

International Site (SAC, SPA, Ramsar)	Qualifying Interest Features	Nitrogen CL (kg N/ha/yr) <sup>1</sup>	Nitrogen deposition (kg N/ha/yr)	Acidification CL (keg/ ha/yr)	Acid deposition (keg/ ha/yr)	NO <sub>x</sub> (µg/m <sup>3</sup> )		SO <sub>2</sub> (µg/m <sup>3</sup> )	
						Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>
<b>Avon Gorge Woodlands SAC</b>	Tilio-Acerion forests of slopes, screens and ravines <sup>4</sup>	10	23.4 <b>(234%)</b> Weston urban extension, Clevedon, Nailsea, Portishead located > 6 km from site. Unlikely to be significant traffic impacts.	5.8	3.3 (57%) Unlikely to be significant (Bd well below CL)	39 <b>(130%)</b> Weston urban extension, Clevedon, Nailsea, Portishead located > 6 km from site. Unlikely to be significant traffic impacts.	7.1 (36%) Unlikely to be significant (Bd well below objective)		
<b>Avon Gorge Woodlands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco- Brometalia</i> )	15	15.4 <b>(103%)</b> Weston urban extension, Clevedon, Nailsea, Portishead located > 6 km from site. Unlikely to be significant traffic impacts.	4.0	2.1 (53%) Unlikely to be significant (Bd well below CL)	39 <b>(130%)</b> Weston urban extension, Clevedon, Nailsea, Portishead located > 6 km from site. Unlikely to be significant traffic impacts.	7.1 (36%) Unlikely to be significant (Bd well below objective)		
<b>North Somerset and Mendip Bats SAC</b>	Tilio-Acerion forests of slopes, screens and ravines <sup>4</sup>	10	27.6 <b>(276%)</b> Weston urban extension located within 2 km of the nearest of the component sites ( Banwell Caves).	5.8	3.3 (57%) Unlikely to be significant (Bd well below CL)	10.7 (36%) Unlikely to be significant (Bd well below objective)	1.7 (9%) Unlikely to be significant (Bd well below objective)		

<b>North Somerset and Mendip Bats SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	16.1 (107%)	However they are not known to contain these features, so impacts unlikely to be significant.	4.0	1.8 (45%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
		30	11.1 (37%)	Weston urban extension located within 2 km of the nearest of the component sites (Banwell Caves). However they are not known to contain these features, so impacts unlikely to be significant.	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Sandbanks which are slightly covered by seawater all the time	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)

<b>Severn Estuary SAC</b>	Reefs	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Sandbanks which are slightly covered by seawater all the time	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Mendip Limestone Grasslands SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	22.5 (225%)	Weston urban extension generally located over 2km from nearest component site at Uphill Cliff. DMRB (Design Manual for Roads and Bridges) (2009) guidance suggests a 2km zone for NOx impacts from traffic.	5.7	2.9 (51%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)

<b>Mendip Limestone Grasslands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	13.2 (88%)	Therefore impact unlikely to be significant. Weston urban extension generally located over 2km from nearest component site at Uphill Cliff. DMRB (Design Manual for Roads and Bridges) (2009) guidance suggests a 2km zone for NOx impacts from traffic. Therefore impact unlikely to be significant	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
	European Dry Heaths	10	13.2 (132%)	Therefore impact unlikely to be significant	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)

suggests a  
2km zone for  
NOx impacts  
from traffic.  
Therefore  
impact unlikely  
to be  
significant

Bd = Background, CL = Critical Load. UK air quality objective for the protection of vegetation and ecosystems:  $\text{NO}_x = 30 \mu\text{g}/\text{m}^3$ ,  $\text{SO}_2 = 20 \mu\text{g}/\text{m}^3$  (both as annual mean). The impact significance presented in the table is based on Environment Agency, H1 Environmental Risk Assessment, Annex (f) Air Emissions guidance for point source emissions and Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality guidance for road traffic emissions. All data derived from UK Air Pollution Information System – [www.apis.ac.uk](http://www.apis.ac.uk)

<sup>1</sup> Critical loads for nitrogen deposition are expressed across a range (lower and upper value is given by APIS). The lower value represents the lowest critical load, and is therefore worst-case in terms of significance when nitrogen deposition is expressed as a percentage of the critical load value. Critical load for nitrogen deposition in this matrix is based on the lowest estimate.

<sup>2</sup> Background deposition or concentration expressed as percentage of critical load or objective in parenthesis. For point source emissions, impacts may be significant if the background + source contribution is greater than 70% of the objective or critical load (cases where this applies are highlighted in bold). Following Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, road traffic impacts on  $\text{NO}_x$  may be significant if the  $\text{NO}_x$  concentration is close to or in excess of the air quality objective for the protection of vegetation and ecosystems ( $30 \mu\text{g}/\text{m}^3$ ).

<sup>3</sup> Impacts on deposition and  $\text{SO}_2$  and  $\text{NO}_x$  for point sources are likely to be significant if the increase is greater than 1% of the critical load or objective, and where the total (background + source) deposition is greater than 70% of the critical load or objective. Road traffic impacts on  $\text{NO}_x$  are likely to be significant where the increase is greater than  $2 \mu\text{g}/\text{m}^3$ , and where total concentrations are close to or in excess of the annual mean air quality objective for the protection of vegetation and ecosystems ( $30 \mu\text{g}/\text{m}^3$ ). Where no information exists to calculate point source emissions, impacts of a point source could potentially be significant within 10 km of international designated sites (or 15 km for coal or oil fired power stations). Where no information exists to calculate road-traffic pollutants, impacts could potentially be significant within 200 m of affected roads. Affected roads are defined according to Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, as roads with a change in Annual Average Daily Traffic (AADT) flow of 1000 or more, or a change in HGV (AADT) flow of 200 or more or a change in annual average speed of 10 km/hr or more as a result of a proposal. Potentially significant impacts are highlighted in bold.

<sup>4</sup> Habitat feature is listed as sensitive to acidity but it tends to occur on limestone soils where it is not sensitive. Source: [www.apis.ac.uk](http://www.apis.ac.uk)

## CS14 – Distribution of New Housing

**Table 7:** Impact of CS14 (Distribution of New Housing) on nitrogen deposition, acid deposition, nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) in international designated sites.

International Site (SAC, SPA, Ramsar)	Qualifying Interest Features	Nitrogen CL (kg N/ha/yr) <sup>1</sup>	Nitrogen deposition (kg N/ha/yr)		Acidification CL (keg/ ha/yr)		Acid deposition (keg/ ha/yr)		NO <sub>x</sub> (µg/m <sup>3</sup> )		SO <sub>2</sub> (µg/m <sup>3</sup> )	
			Bd <sup>2</sup>	Significance <sup>3</sup>	Lower	Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>
<b>Avon Gorge Woodlands SAC</b>	Tilio-Acerion forests of slopes, screens and ravines <sup>4</sup>	10	23.4 <b>(234%)</b>	Weston urban extension, Clevedon, Nailsea, Portishead located > 6 km from site. Unlikely to be significant traffic impacts.	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	39 <b>(130%)</b>	Weston urban extension, Clevedon, Nailsea, Portishead located > 6 km from site. Unlikely to be significant traffic impacts.	7.1 (36%)	Unlikely to be significant (Bd well below objective)	
<b>Avon Gorge Woodlands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco- Brometalia</i> )	15	15.4 <b>(103%)</b>	Weston urban extension, Clevedon, Nailsea, Portishead located > 6 km from site. Unlikely to be significant traffic impacts.	4.0	2.1 (53%)	Unlikely to be significant (Bd well below CL)	39 <b>(130%)</b>	Weston urban extension, Clevedon, Nailsea, Portishead located > 6 km from site. Unlikely to be significant traffic impacts.	7.1 (36%)	Unlikely to be significant (Bd well below objective)	
<b>North Somerset and Mendip Bats SAC</b>	Tilio-Acerion forests of slopes, screens and ravines <sup>4</sup>	10	27.6 <b>(276%)</b>	Weston urban extension located within 2 km of the nearest of the component sites (Banwell Caves).	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)	

<b>North Somerset and Mendip Bats SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	16.1 (107%)	However they are not known to contain these features, so impacts unlikely to be significant. Weston urban extension located within 2 km of the nearest of the component sites (Banwell Caves). However they are not known to contain these features, so impacts unlikely to be significant.	4.0	1.8 (45%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Mudflats and sandflats not covered by seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Sandbanks which are slightly covered by seawater all the time	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)

<b>Severn Estuary SAC</b>	Reefs	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Sandbanks which are slightly covered by seawater all the time	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Mendip Limestone Grasslands SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	22.5 (225%)	Weston urban extension generally located over 2km from nearest component site at Uphill Cliff. DMRB (Design Manual for Roads and Bridges) (2009) guidance suggests a 2km zone for NOx impacts from traffic.	5.7	2.9 (51%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)



<b>Mendip Limestone Grasslands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	13.2 (88%)	Therefore impact unlikely to be significant	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
	Western urban extension generally located over 2km from nearest component site at Uphill Cliff. DMRB (Design Manual for Roads and Bridges) (2009) guidance suggests a 2km zone for NOx impacts from traffic. Therefore impact unlikely to be significant										
<b>Mendip Limestone Grasslands SAC</b>	European Dry Heaths	10	13.2 (132%)	Therefore impact unlikely to be significant	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
	Western urban extension generally located over 2km from nearest component site at Uphill Cliff. DMRB (Design Manual for Roads and Bridges) (2009) guidance										

suggests a  
2km zone for  
NOx impacts  
from traffic.  
Therefore  
impact unlikely  
to be  
significant

Bd = Background, CL = Critical Load. UK air quality objective for the protection of vegetation and ecosystems:  $\text{NO}_x = 30 \mu\text{g}/\text{m}^3$ ,  $\text{SO}_2 = 20 \mu\text{g}/\text{m}^3$  (both as annual mean). The impact significance presented in the table is based on Environment Agency, H1 Environmental Risk Assessment, Annex (f) Air Emissions guidance for point source emissions and Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality guidance for road traffic emissions. All data derived from UK Air Pollution Information System – [www.apis.ac.uk](http://www.apis.ac.uk)

<sup>1</sup> Critical loads for nitrogen deposition are expressed across a range (lower and upper value is given by APIS). The lower value represents the lowest critical load, and is therefore worst-case in terms of significance when nitrogen deposition is expressed as a percentage of the critical load value. Critical load for nitrogen deposition in this matrix is based on the lowest estimate.

<sup>2</sup> Background deposition or concentration expressed as percentage of critical load or objective in parenthesis. For point source emissions, impacts may be significant if the background + source contribution is greater than 70% of the objective or critical load (cases where this applies are highlighted in bold). Following Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, road traffic impacts on  $\text{NO}_x$  may be significant if the  $\text{NO}_x$  concentration is close to or in excess of the air quality objective for the protection of vegetation and ecosystems ( $30 \mu\text{g}/\text{m}^3$ ).

<sup>3</sup> Impacts on deposition and  $\text{SO}_2$  and  $\text{NO}_x$  for point sources are likely to be significant if the increase is greater than 1% of the critical load or objective, and where the total (background + source) deposition is greater than 70% of the critical load or objective. Road traffic impacts on  $\text{NO}_x$  are likely to be significant where the increase is greater than  $2 \mu\text{g}/\text{m}^3$ , and where total concentrations are close to or in excess of the annual mean air quality objective for the protection of vegetation and ecosystems ( $30 \mu\text{g}/\text{m}^3$ ). Where no information exists to calculate point source emissions, impacts of a point source could potentially be significant within 10 km of international designated sites (or 15 km for coal or oil fired power stations). Where no information exists to calculate road-traffic pollutants, impacts could potentially be significant within 200 m of affected roads. Affected roads are defined according to Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, as roads with a change in Annual Average Daily Traffic (AADT) flow of 1000 or more, or a change in HGV (AADT) flow of 200 or more or a change in annual average speed of 10 km/hr or more as a result of a proposal. Potentially significant impacts are highlighted in bold.

<sup>4</sup> Habitat feature is listed as sensitive to acidity but it tends to occur on limestone soils where it is not sensitive. Source: [www.apis.ac.uk](http://www.apis.ac.uk)

## CS20 – Supporting a Successful Economy

**Table 8:** Impact of CS20 (Supporting a Successful Economy) on nitrogen deposition, acid deposition, nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) in international designated sites.

International Site (SAC, SPA, Ramsar)	Qualifying Interest Features	Nitrogen CL (kg N/ha/yr)	Nitrogen deposition (kg N/ha/yr)		Acidification CL (keg/ ha/yr)	Acid deposition (keg/ ha/yr)		NO <sub>x</sub> (µg/m <sup>3</sup> )		SO <sub>2</sub> (µg/m <sup>3</sup> )	
			Bd <sup>2</sup>	Significance <sup>3</sup>		Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>
<b>Avon Gorge Woodlands SAC</b>	Tilio-Acerion forests of slopes, screes <sup>4</sup> and ravines <sup>4</sup>	10	23.4 <b>(234%)</b>	Weston urban extension/town centre, Clevedon, Nailsea, Portishead located > 6 km from site. Unlikely to be significant traffic impacts.	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	39 <b>(130%)</b>	Weston urban extension/town centre, Clevedon, Nailsea, Portishead located > 6 km from site. Unlikely to be significant traffic impacts.	7.1 (36%)	Road traffic not a significant source of SO <sub>2</sub> .
<b>Avon Gorge Woodlands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco- Brometalia</i> )	15	15.4 <b>(103%)</b>	Weston urban extension/town centre, Clevedon, Nailsea, Portishead located > 6 km from site. Unlikely to be significant traffic impacts.	4.0	2.1 (53%)	Unlikely to be significant (Bd well below CL)	39 <b>(130%)</b>	Weston urban extension/town centre, Clevedon, Nailsea, Portishead located > 6 km from site. Unlikely to be significant traffic impacts.	7.1 (36%)	Road traffic not a significant source of SO <sub>2</sub>
<b>North Somerset and Mendip Bats SAC</b>	Tilio-Acerion forests of slopes, screes <sup>4</sup> and ravines <sup>4</sup>	10	27.6 <b>(276%)</b>	Weston urban extension located within 2 km of the nearest of the component sites (Banwell Caves).	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Road traffic not a significant source of SO <sub>2</sub>

<b>North Somerset and Mendip Bats SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	16.1 (107%)	However they are not known to contain these features, so impacts unlikely to be significant.	4.0	1.8 (45%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Road traffic not a significant source of SO <sub>2</sub>
		30	11.1 (37%)	Weston urban extension located within 2 km from the nearest of the component sites (Banwell Caves). However they are not known to contain these features, so impacts unlikely to be significant.	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary SAC</b>	Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary SAC</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary SAC</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary SAC</b>	Sandbanks which are slightly covered by seawater all the time	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>

<b>Severn Estuary SAC</b>	Reefs	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary Ramsar</b>	Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary Ramsar</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary Ramsar</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Severn Estuary Ramsar</b>	Sandbanks which are slightly covered by seawater all the time	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Road traffic not a significant source of SO <sub>2</sub>
<b>Mendip Limestone Grasslands SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	22.5 (225%)	Weston urban extension generally located over 2km from nearest component site at Uphill Cliff. DMRB (Design Manual for Roads and Bridges) (2009) guidance suggests a 2km zone for NOx impacts from traffic.	5.7	2.9 (51%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Road traffic not a significant source of SO <sub>2</sub>

<b>Mendip Limestone Grasslands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	13.2 (88%)	Therefore impact unlikely to be significant	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Road traffic not a significant source of SO <sub>2</sub>
	Western urban extension generally located over 2km from nearest component site at Uphill Cliff. DMRB (Design Manual for Roads and Bridges) (2009) guidance suggests a 2km zone for NOx impacts from traffic. Therefore impact unlikely to be significant										
<b>Mendip Limestone Grasslands SAC</b>	European Dry Heaths	10	13.2 (132%)	Therefore impact unlikely to be significant	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Road traffic not a significant source of SO <sub>2</sub>
	Western urban extension generally located over 2km from nearest component site at Uphill Cliff. DMRB (Design Manual for Roads and Bridges) (2009) guidance										

suggests a  
2km zone for  
NOx impacts  
from traffic.  
Therefore  
impact unlikely  
to be  
significant

Bd = Background, CL = Critical Load. UK air quality objective for the protection of vegetation and ecosystems:  $\text{NO}_x = 30 \mu\text{g}/\text{m}^3$ ,  $\text{SO}_2 = 20 \mu\text{g}/\text{m}^3$  (both as annual mean). The impact significance presented in the table is based on Environment Agency, H1 Environmental Risk Assessment, Annex (f) Air Emissions guidance and Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality guidance for road traffic emissions. All data derived from UK Air Pollution Information System – [www.apis.ac.uk](http://www.apis.ac.uk)

<sup>1</sup> Critical loads for nitrogen deposition are expressed across a range (lower and upper value is given by APIS). The lower value represents the lowest critical load, and is therefore worst-case in terms of significance when nitrogen deposition is expressed as a percentage of the critical load value. Critical load for nitrogen deposition in this matrix is based on the lowest estimate.

<sup>2</sup> Background deposition or concentration expressed as percentage of critical load or objective in parenthesis. Deposition impacts may be significant if the background + source contribution is greater than 70% of the critical load (cases where this applies are highlighted in bold). Following Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, impacts on  $\text{NO}_x$  may be significant if the  $\text{NO}_x$  concentration is close to or in excess of the air quality objective for the protection of vegetation and ecosystems ( $30 \mu\text{g}/\text{m}^3$ ).

<sup>3</sup> Road traffic impacts on deposition are likely to be significant if the increase is greater than 1% of the critical load, and where the total (background + source) deposition is greater than 70% of the critical load. Road traffic impacts on  $\text{NO}_x$  are likely to be significant where the increase is greater than  $2 \mu\text{g}/\text{m}^3$ , and where total concentrations are close to or in excess of the annual mean air quality objective for the protection of vegetation and ecosystems ( $30 \mu\text{g}/\text{m}^3$ ). Where no information exists to calculate road-traffic pollutants, impacts could potentially be significant within 200m of affected roads. Affected roads are defined according to Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, as roads with a change in Annual Average Daily Traffic (AADT) flow of 1000 or more, or a change in HGV (AADT) flow of 200 or more or a change in annual average speed of 10 km/hr or more as a result of a proposal. Potentially significant impacts are highlighted in bold.

<sup>4</sup> Habitat feature is listed as sensitive to acidity but it tends to occur on limestone soils where it is not sensitive. Source: [www.apis.ac.uk](http://www.apis.ac.uk)

## CS23 – Bristol International Airport

**Table 9:** Impact of CS23 (Bristol International Airport) on nitrogen deposition, acid deposition, nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) in international designated sites.

International Site (SAC, SPA, Ramsar)	Qualifying Interest Features	Nitrogen CL (kg N/ha/yr) <sup>1</sup>	Nitrogen deposition (kg N/ha/yr)		Acidification CL (keg/ ha/yr)	Acid deposition (keg/ ha/yr)		NO <sub>x</sub> (µg/m <sup>3</sup> )		SO <sub>2</sub> (µg/m <sup>3</sup> )		Likely significant effect from air pollution?
			Bd <sup>2</sup>	Wd <sup>3</sup>		Bd <sup>2</sup>	Wd <sup>3</sup>	Bd <sup>2</sup>	Wd <sup>3</sup>	Bd <sup>2</sup>	Wd <sup>3</sup>	
<b>Avon Gorge Woodlands SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	PC < 1%	Benchmark	5.8	PC < 1%	Benchmark	PC < 1%	Benchmark	PC < 1%	Benchmark	No
<b>Avon Gorge Woodlands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	PC < 1%	Benchmark	4.0	PC < 1%	Benchmark	PC < 1%	Benchmark	PC < 1%	Benchmark	No
<b>North Somerset and Mendip Bats SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	36.5 (365%)	36.6 (1%)	5.8	PC < 1%	Benchmark	PC < 1%	Benchmark	No		No
<b>North Somerset and Mendip Bats SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	PC < 1%	Benchmark	4.0	PC < 1%	Benchmark	PC < 1%	Benchmark	PC < 1%	Benchmark	No
<b>Severn Estuary SAC</b>	Estuaries	30	PC < 1%	Benchmark	4.0	PC < 1%	Benchmark	PC < 1%	Benchmark	PC < 1%	Benchmark	No
<b>Severn Estuary SAC</b>	Mudflats and sandflats not covered seawater at	30	PC < 1%	Benchmark	4.0	PC < 1%	Benchmark	PC < 1%	Benchmark	PC < 1%	Benchmark	No



<b>Severn Estuary SAC</b>	low tide Atlantic salt meadows	30	PC < 1% Benchmark	4.0	PC < 1% Benchmark	PC < 1% Benchmark	No
<b>Severn Estuary SAC</b>	Sandbanks which are slightly covered by seawater all the time	30	PC < 1% Benchmark	4.0	PC < 1% Benchmark	PC < 1% Benchmark	No
<b>Severn Estuary Ramsar</b>	Reefs	30	PC < 1% Benchmark	4.0	PC < 1% Benchmark	PC < 1% Benchmark	No
<b>Severn Estuary Ramsar</b>	Estuaries	30	PC < 1% Benchmark	4.0	PC < 1% Benchmark	PC < 1% Benchmark	No
<b>Severn Estuary Ramsar</b>	Mudflats and sandflats not covered seawater at low tide	30	PC < 1% Benchmark	4.0	PC < 1% Benchmark	PC < 1% Benchmark	No
<b>Severn Estuary Ramsar</b>	Atlantic salt meadows	30	PC < 1% Benchmark	4.0	PC < 1% Benchmark	PC < 1% Benchmark	No
<b>Severn Estuary Ramsar</b>	Sandbanks which are slightly covered by seawater all the time	30	PC < 1% Benchmark	4.0	PC < 1% Benchmark	PC < 1% Benchmark	No
<b>Mendip Limestone Grasslands SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	PC < 1% Benchmark	5.7	PC < 1% Benchmark	PC < 1% Benchmark	No
<b>Mendip Limestone Grasslands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	PC < 1% Benchmark	4.0	PC < 1% Benchmark	PC < 1% Benchmark	No

**Mendip  
Limestone  
Grasslands  
SAC**

European Dry Heaths 10 PC < 1% Benchmark 4.0 PC < 1% Benchmark PC < 1% Benchmark No

Bd = Background, Wd = With Development, CL = Critical Load. UK air quality objective for the protection of vegetation and ecosystems:  $\text{NO}_x = 30 \mu\text{g}/\text{m}^3$ ,  $\text{SO}_2 = 20 \mu\text{g}/\text{m}^3$  (both as annual mean). The impact significance reported in the table is based on the air quality assessment submitted with an Environmental Impact Assessment for the proposed expansion of Bristol airport from 7.3 million passengers per annum (mppa) to 10 mppa (Entec UK Ltd (2009) Development and Enhancement of Bristol International Airport, Environmental Statement, Air Quality).

- <sup>1</sup> Critical loads for nitrogen deposition are expressed across a range (lower and upper value is given by APIS). The lower value represents the lowest critical load, and is therefore worst-case in terms of significance when nitrogen deposition is expressed as a percentage of the critical load value. Critical load for nitrogen deposition in this matrix is based on the lowest estimate.
- <sup>2</sup> Background deposition or concentration expressed as percentage of critical load or objective in parenthesis. Following Environment Agency, H1 Environmental Risk Assessment, Annex (f) Air Emissions, impacts of a point or area source may be significant if the background + source contribution is greater than 70% of the objective or critical load (cases where this applies are highlighted in bold).
- <sup>3</sup> Process contribution (PC, contribution from source) expressed as percentage of relevant objective or critical load in parenthesis. Impacts are likely to be significant if this value is greater than 1%, and where the total (background + source) deposition or concentration is greater than 70% of the relevant objective or critical load. Potentially significant impacts are highlighted in bold.
- <sup>4</sup> Habitat feature is listed as sensitive to acidity but it tends to occur on limestone soils where it is not sensitive. Source: [www.apis.ac.uk](http://www.apis.ac.uk)

## CS24 – Royal Portbury Dock

**Table 10:** Impact of CS24 (Royal Portbury Dock) on nitrogen deposition, acid deposition, nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) in international designated sites.

International Site (SAC, SPA, Ramsar)	Qualifying Interest Features	Nitrogen CL (kg N/ha/yr) <sup>1</sup>	Nitrogen deposition (kg N/ha/yr)		Acidification CL (keg/ ha/yr)	Acid deposition (keg/ ha/yr)		NO <sub>x</sub> (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )		
			Bd <sup>2</sup>	Significance <sup>3</sup>		Bd <sup>2</sup>	Significance <sup>3</sup>			Bd <sup>2</sup>	Significance <sup>3</sup>
<b>Avon Gorge Woodlands SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	23.4 (234%)	Dock located approximately 3 km from site. Dock uses unlikely to be significant sources of point source air emissions. Significant effects unlikely.	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	39 (130%)	Dock located approximately 3 km from site. Dock uses unlikely to be significant sources of point source air emissions. Significant effects unlikely.	7.1 (36%)	Unlikely to be significant (Bd well below objective)
<b>Avon Gorge Woodlands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	15.4 (103%)	Dock located approximately 3 km from site. Dock uses unlikely to be significant sources of point source air emissions. Significant effects unlikely.	4.0	2.1 (53%)	Unlikely to be significant (Bd well below CL)	39 (130%)	Dock located approximately 3 km from site. Dock uses unlikely to be significant sources of point source air emissions. Significant effects unlikely.	7.1 (36%)	Unlikely to be significant (Bd well below objective)
<b>North Somerset and Mendip Bats SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	27.6 (276%)	Dock located approximately 9 km from site. Furthermore dock uses unlikely to be significant sources of point	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)

<b>North Somerset and Mendip Bats SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	16.1 (107%)	source air emissions. Significant effects unlikely	4.0	1.8 (45%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
				Dock located approximately 9 km from site.							
				Furthermore dock uses unlikely to be significant sources of point source air emissions. Significant effects unlikely							
<b>Severn Estuary SAC</b>	Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Located nearby to SAC but policy not likely to be enough of a source of NOx to have a significant effect.	2.4 (12%)	Unlikely to be significant (Bd well below objective)
				Effects unlikely							
				Unlikely to be significant (Bd well below CL)							
<b>Severn Estuary SAC</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Located nearby to SAC but policy not likely to be enough of a source of NOx to have a significant effect.	2.4 (12%)	Unlikely to be significant (Bd well below objective)
				Effects unlikely							
				Unlikely to be significant (Bd well below CL)							
<b>Severn Estuary SAC</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Located nearby to SAC but policy not likely to be enough of a source of NOx to have a significant effect.	2.4 (12%)	Unlikely to be significant (Bd well below objective)
				Effects unlikely							
				Unlikely to be significant (Bd well below CL)							
<b>Severn Estuary SAC</b>	Sandbanks which are slightly	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Located nearby to SAC but policy not likely to be enough of a source of NOx to have a significant effect.	2.4 (12%)	Unlikely to be significant (Bd well below objective)
				Effects unlikely							
				Unlikely to be significant (Bd well below CL)							



<b>Mendip Limestone Grasslands SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	22.5 <b>(225%)</b>	Royal Portbury Dock located > 10 km from site, unlikely to have significant effect.	5.7	2.9 (51%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
<b>Mendip Limestone Grasslands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	13.2 <b>(88%)</b>	Royal Portbury Dock located > 10 km from site, unlikely to have significant effect.	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
<b>Mendip Limestone Grasslands SAC</b>	European Dry Heaths	10	13.2 <b>(132%)</b>	Royal Portbury Dock located > 10 km from site, unlikely to have significant effect.	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)

Bd = Background, CL = Critical Load. UK air quality objective for the protection of vegetation and ecosystems: NO<sub>x</sub> = 30 µg/m<sup>3</sup>; SO<sub>2</sub> = 20 µg/m<sup>3</sup> (both as annual mean). The impact significance presented in the table is based on Environment Agency, H1 Environmental Risk Assessment, Annex (f) Air Emissions guidance for point/area source emissions. All data derived from UK Air Pollution Information System – [www.apis.ac.uk](http://www.apis.ac.uk)

<sup>1</sup> Critical loads for nitrogen deposition are expressed across a range (lower and upper value is given by APIS). The lower value represents the lowest critical load, and is therefore worst-case in terms of significance when nitrogen deposition is expressed as a percentage of the critical load value. Critical load for nitrogen deposition in this matrix is based on the lowest estimate.

<sup>2</sup> Background deposition or concentration expressed as percentage of critical load or objective in parenthesis. Impacts of a point or area source may be significant if the background + source contribution is greater than 70% of the objective or critical load (cases where this applies are highlighted in bold).

<sup>3</sup> Impacts are likely to be significant if the source contribution is greater than 1% of the relevant objective or critical load and where the total (background + source) deposition or concentration is greater than 70% of the relevant objective or critical load. Where no information exists to calculate the impact, impacts of a point/area source could potentially be significant when located within 10 km of international designated sites (or 15 km for coal or oil fired power stations). Potentially significant impacts are highlighted in bold.

<sup>4</sup> Habitat feature is listed as sensitive to acidity but it tends to occur on limestone soils where it is not sensitive. Source: [www.apis.ac.uk](http://www.apis.ac.uk)

## CS28 – Weston-super-Mare

**Table 11:** Impact of CS28 (Weston-super-Mare) on nitrogen deposition, acid deposition, nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) in international designated sites.

International Site (SAC, SPA, Ramsar)	Qualifying Interest Features	Nitrogen CL (kg N/ha/yr)	Nitrogen deposition (kg N/ha/yr)		Acidification CL (kg/ ha/yr)		Acid deposition (kg/ ha/yr)		NO <sub>x</sub> (µg/m <sup>3</sup> )		SO <sub>2</sub> (µg/m <sup>3</sup> )	
			Bd <sup>2</sup>	Significance <sup>3</sup>	Lower	Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>
<b>Avon Gorge Woodlands SAC</b>	Tilio-Acerion forests of slopes, screens and ravines <sup>4</sup>	10	23.4 ( <b>234%</b> )	Located > 20 km from site. Unlikely to be significant traffic/energy centre impacts.	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	39 ( <b>130%</b> )	Located > 20 km from site. Unlikely to be significant traffic/energy centre impacts.	7.1 (36%)	Unlikely to be significant (Bd well below objective)	
<b>Avon Gorge Woodlands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco- Brometalia</i> )	15	15.4 ( <b>103%</b> )	Located > 20 km from site. Unlikely to be significant traffic/energy centre impacts.	4.0	2.1 (53%)	Unlikely to be significant (Bd well below CL)	39 ( <b>130%</b> )	Located > 20 km from site. Unlikely to be significant traffic/energy centre impacts.	7.1 (36%)	Unlikely to be significant (Bd well below objective)	
<b>North Somerset and Mendip Bats SAC</b>	Tilio-Acerion forests of slopes, screens and ravines <sup>4</sup>	10	27.6 ( <b>276%</b> )	Habitat not thought to be present on nearest SAC component site to the Weston Urban Extension (Banwell caves). Therefore impact unlikely to be significant.	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)	

<b>North Somerset and Mendip Bats SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> ) Estuaries	15	16.1 (107%)	Other component sites are further than 2km from Weston Urban extension (Design Manual for Roads (DMRB) (2009) guidance suggests a 2km zone for NOx impacts from traffic.)	4.0	1.8 (45%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
		30	11.1 (37%)	As above	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	The closest part of the SAC, SSSI units 4 and 5, are designated for littoral sediment in favourable condition. Effects on this feature are unlikely to be significant.	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Mudflats and sandflats not covered	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	2.4 (12%)	Unlikely to be significant (Bd well below objective)



<b>Severn Estuary SAC</b>	seawater at low tide Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	The closest part of the SAC, SSSI units 4 and 5, are designated for littoral sediment in favourable condition. There are no salt meadow features located near to Weston town centre <sup>5</sup> . Effects on this feature are unlikely to be significant.	2.4 (12%)	Unlikely to be significant (Bd well below objective)
		30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Sandbanks which are slightly covered by seawater all the time	2.4 (12%)	Unlikely to be significant (Bd well below objective)
		30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Reefs	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	The closest part of the SAC, SSSI units 4 and 5, are designated for littoral sediment in	2.4 (12%)	Unlikely to be significant (Bd well below objective)

<b>Severn Estuary Ramsar</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Sandbanks which are slightly covered by seawater all the time	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Mendip Limestone Grasslands SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	22.5 (225%)	Weston urban extension generally located over 2km from	5.7	2.9 (51%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	1.7 (9%)	Unlikely to be significant (Bd well below objective)

<b>Mendip Limestone Grasslands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	13.2 <b>(88%)</b>	nearest component site at Uphill Cliff. DMRB (Design Manual for Roads and Bridges) (2009) guidance suggests a 2km zone for NOx impacts from traffic. Therefore impact unlikely to be significant	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
	Western urban extension generally located over 2km from nearest component site at Uphill Cliff. DMRB (Design Manual for Roads and Bridges) (2009) guidance suggests a 2km zone for NOx impacts from traffic. Therefore impact unlikely to be significant										

Mendip Limestone Grasslands SAC	European Dry Heaths	10	13.2 (132%)	Weston urban extension generally located over 2km from nearest component site at Uphill Cliff. DMRB (Design Manual for Roads and Bridges) (2009) guidance suggests a 2km zone for NOx impacts from traffic. Therefore impact unlikely to be significant	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
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Bd = Background, CL = Critical Load. UK air quality objective for the protection of vegetation and ecosystems: NO<sub>x</sub> = 30 µg/m<sup>3</sup>, SO<sub>2</sub> = 20 µg/m<sup>3</sup> (both as annual mean). The impact significance presented in the table is based on Environment Agency, H1 Environmental Risk Assessment, Annex (f) Air Emissions guidance for point source emissions and Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality guidance for road traffic emissions. All data derived from UK Air Pollution Information System – www.apis.ac.uk

<sup>1</sup> Critical loads for nitrogen deposition are expressed across a range (lower and upper value is given by APIS). The lower value represents the lowest critical load, and is therefore worst-case in terms of significance when nitrogen deposition is expressed as a percentage of the critical load value. Critical load for nitrogen deposition in this matrix is based on the lowest estimate.

<sup>2</sup> Background deposition or concentration expressed as percentage of critical load or objective in parenthesis. For point source emissions, impacts may be significant if the background + source contribution is greater than 70% of the objective or critical load (cases where this applies are highlighted in bold). Following Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, road traffic impacts on NO<sub>x</sub> may be significant if the NO<sub>x</sub> concentration is close to or in excess of the air quality objective for the protection of vegetation and ecosystems (30 µg/m<sup>3</sup>).

<sup>3</sup> Impacts on deposition and SO<sub>2</sub> and NO<sub>x</sub> for point sources are likely to be significant if the increase is greater than 1% of the critical load or objective, and where the total (background + source) deposition is greater than 70% of the critical load or objective. Road traffic impacts on NO<sub>x</sub> are likely to be significant where the increase is greater than 2 µg m<sup>-3</sup>, and where total concentrations are close to or in excess of the annual mean air quality objective for the protection of vegetation and ecosystems (30 µg/m<sup>3</sup>). Where no information exists to calculate point source emissions, impacts of a point source could potentially be significant within 10 km of international designated sites (or 15 km for coal or oil fired power stations). Where no information exists to calculate road-traffic pollutants, impacts could potentially be significant within 200 m of affected roads. Affected roads are defined according to Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, as roads with a change in Annual Average Daily Traffic (AADT) flow of 1000 or more, or a change in HGV (AADT) flow of 200 or more or a change in annual average speed of 10 km/hr or more as a result of a proposal. Potentially significant impacts are highlighted in bold.

<sup>4</sup> Habitat feature is listed as sensitive to acidity but it tends to occur on limestone soils where it is not sensitive. Source: [www.apis.ac.uk](http://www.apis.ac.uk)

<sup>5</sup> Source of mapping: [http://www.naturalengland.org.uk/Images/App5and5a-salt\\_meadows\\_tcm6-11836.pdf](http://www.naturalengland.org.uk/Images/App5and5a-salt_meadows_tcm6-11836.pdf)

<sup>6</sup> Source: JNCC: <http://www.jncc.gov.uk/ProtectedSites>

## CS29 – Weston-super-Mare Town Centre

**Table 12:** Impact of CS29 (Weston-super-Mare Town Centre) on nitrogen deposition, acid deposition, nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) in international designated sites.

International Site (SAC, SPA, Ramsar)	Qualifying Interest Features	Nitrogen CL (kg N/ha/yr) <sup>1</sup>	Nitrogen deposition (kg N/ha/yr)	Acidification CL (keg/ ha/yr)	Acid deposition (keg/ ha/yr)		NO <sub>x</sub> (µg/m <sup>3</sup> )		SO <sub>2</sub> (µg/m <sup>3</sup> )	
					Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>
<b>Avon Gorge Woodlands SAC</b>	Tilio-Acerion forests of slopes, screens and ravines <sup>4</sup>	10	23.4 ( <b>234%</b> ) Town centre located > 20 km from nearest component site. Unlikely to be significant traffic impacts.	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	39 ( <b>130%</b> )	Located > 20 km from site. Unlikely to be significant traffic impacts.	7.1 (36%)	Unlikely to be significant (Bd well below objective)
<b>Avon Gorge Woodlands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco- Brometalia</i> )	15	15.4 ( <b>103%</b> ) Located > 20 km from nearest component site. Unlikely to be significant traffic impacts.	4.0	2.1 (53%)	Unlikely to be significant (Bd well below CL)	39 ( <b>130%</b> )	Located > 20 km from site. Unlikely to be significant traffic impacts.	7.1 (36%)	Unlikely to be significant (Bd well below objective)
<b>North Somerset and Mendip Bats SAC</b>	Tilio-Acerion forests of slopes, screens and ravines <sup>4</sup>	10	27.6 ( <b>276%</b> ) Located >4km from nearest component site. Unlikely to be significant traffic impacts.	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
<b>North Somerset and Mendip Bats SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates	15	16.1 ( <b>107%</b> ) Located >4km from nearest component site. Unlikely to be significant traffic impacts.	4.0	1.8 (45%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)

<b>Severn Estuary SAC</b>	<i>(Festuco-Brometalia)</i> Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	The closest part of the SAC, SSSI units 4 and 5, are designated for littoral sediment in favourable condition. Effects on this feature are unlikely to be significant.	2.4 (12%)	Unlikely to be significant (Bd well below objective)
		30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
		30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	The closest part of the SAC, SSSI units 4 and 5, are designated for littoral sediment in favourable condition. There are no salt meadow features located near to Weston town centre. <sup>5</sup> Effects on this feature are unlikely to be significant. Sandbanks do not occur	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)			
<b>Severn Estuary SAC</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)			
<b>Severn Estuary SAC</b>	Sandbanks which are	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)			

<b>Severn Estuary SAC</b>	slightly covered by seawater all the time	well below CL)	well below CL)	well below objective)						
	Reefs	30	11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	2.4 (12%)	within close proximity of the coast at Weston <sup>6</sup>	Reefs do not occur within close proximity of the coast at Weston <sup>6</sup>	Unlikely to be significant (Bd well below CL)
<b>Severn Estuary Ramsar</b>	Estuaries	30	11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	The closest part of the SAC, SSSI units 4 and 5, are designated for littoral sediment in favourable condition. Effects on this feature are unlikely to be significant.	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	
	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	
<b>Severn Estuary Ramsar</b>	Atlantic salt meadows	30	11.1 (37%)	4.0	1.4 (35%)	10.7 (36%)	The closest part of the SAC, SSSI units 4 and 5, are designated for littoral sediment in favourable condition. There are no salt meadow	Unlikely to be significant (Bd well below CL)	Unlikely to be significant (Bd well below objective)	



<b>Severn Estuary Ramsar</b>	Sandbanks which are slightly covered by seawater all the time	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Mendip Limestone Grasslands SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	10	22.5 (225%)	Weston town centre located about 3km from the nearest component site. However, Design Manual for Roads (DMRB) (2009) guidance suggests a 2km zone for NOx impacts from traffic. Therefore impact unlikely to be significant.	5.7	2.9 (51%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
<b>Mendip Limestone Grasslands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates	15	13.2 (88%)	Weston town centre located about 3km from the nearest component	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	1.7 (9%)	Unlikely to be significant (Bd well below objective)

(*Festuco-Brometalia*)

site. However, Design Manual for Roads (DMRB) (2009) guidance suggests a 2km zone for NOx impacts from traffic. Therefore impact unlikely to be significant. Weston town centre located about 3km from the nearest component site. However, Design Manual for Roads (DMRB) (2009) guidance suggests a 2km zone for NOx impacts from traffic. Therefore impact unlikely to be significant.

**Mendip Limestone Grasslands SAC**

European Dry Heaths

10

13.2 (132%)

4.0

1.6 (40%)  
Unlikely to be significant (Bd well below CL)

9.9 (33%)

Unlikely to be significant (Bd well below objective)

1.7 (9%)

Unlikely to be significant (Bd well below objective)

Bd = Background, CL = Critical Load. UK air quality objective for the protection of vegetation and ecosystems: NO<sub>x</sub> = 30 µg/m<sup>3</sup>, SO<sub>2</sub> = 20 µg/m<sup>3</sup> (both as annual mean). The impact significance presented in the table is based on Environment Agency, H1 Environmental Risk Assessment, Annex (f) Air Emissions guidance and Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality guidance for road traffic emissions. All data derived from UK Air Pollution Information System – www.apis.ac.uk

- <sup>1</sup> Critical loads for nitrogen deposition are expressed across a range (lower and upper value is given by APIS). The lower value represents the lowest critical load, and is therefore worst-case in terms of significance when nitrogen deposition is expressed as a percentage of the critical load value. Critical load for nitrogen deposition in this matrix is based on the lowest estimate.
- <sup>2</sup> Background deposition or concentration expressed as percentage of critical load or objective in parenthesis. Deposition impacts may be significant if the background + source contribution is greater than 70% of the critical load (cases where this applies are highlighted in bold). Following Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, impacts on NO<sub>x</sub> may be significant if the NO<sub>x</sub> concentration is close to or in excess of the air quality objective for the protection of vegetation and ecosystems (30 µg/m<sup>3</sup>).
- <sup>3</sup> Road traffic impacts on deposition are likely to be significant if the increase is greater than 1% of the critical load, and where the total (background + source) deposition is greater than 70% of the critical load. Road traffic impacts on NO<sub>x</sub> are likely to be significant where the increase is greater than 2 µg m<sup>-3</sup>, and where total concentrations are close to or in excess of the annual mean air quality objective for the protection of vegetation and ecosystems (30 µg/m<sup>3</sup>). Where no information exists to calculate road-traffic pollutants, impacts could potentially be significant within 200 m of affected roads. Affected roads are defined according to Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, as roads with a change in Annual Average Daily Traffic (AADT) flow of 1000 or more, or a change in HGV (AADT) flow of 200 or more or a change in annual average speed of 10 km/hr or more as a result of a proposal. Potentially significant impacts are highlighted in bold.
- <sup>4</sup> Habitat feature is listed as sensitive to acidity but it tends to occur on limestone soils where it is not sensitive. Source: [www.apis.ac.uk](http://www.apis.ac.uk)
- <sup>5</sup> Source of mapping: [http://www.naturalengland.org.uk/Images/App5and5a-salt\\_meadows\\_tcm6-11836.pdf](http://www.naturalengland.org.uk/Images/App5and5a-salt_meadows_tcm6-11836.pdf)
- <sup>6</sup> Source: JNCC: <http://www.jncc.gov.uk/ProtectedSites>

## CS30 – Weston Urban Extension

**Table 13:** Impact of CS30 (Weston Urban Extension) on nitrogen deposition, acid deposition, nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) in international designated sites.

International Site (SAC, SPA, Ramsar)	Qualifying Interest Features	Nitrogen CL (kg N/ha/yr) <sup>1</sup>	Nitrogen deposition (kg N/ha/yr)	Acidification CL (kg/ ha/yr)	Acid deposition (kg/ ha/yr)	NO <sub>x</sub> (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	Nitrogen		Acid Deposition		NO <sub>x</sub>		SO <sub>2</sub>	
								Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>
<b>Avon Gorge Woodlands SAC</b>	Tilio-Acerion forests of slopes, screens and ravines <sup>4</sup>	10	23.4 ( <b>234%</b> )	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	39 ( <b>130%</b> )	Located > 20 km from site. Unlikely to be significant traffic/energy centre impacts.	7.1 (36%)	Unlikely to be significant (Bd well below objective)					
<b>Avon Gorge Woodlands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco- Brometalia</i> )	15	15.4 ( <b>103%</b> )	4.0	2.1 (53%)	Unlikely to be significant (Bd well below CL)	39 ( <b>130%</b> )	Located > 20 km from site. Unlikely to be significant traffic/energy centre impacts.	7.1 (36%)	Unlikely to be significant (Bd well below objective)					
<b>North Somerset and Mendip Bats SAC</b>	Tilio-Acerion forests of slopes, screens and ravines <sup>4</sup>	10	27.6 ( <b>276%</b> )	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)					

<b>North Somerset and Mendip Bats SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> ) Estuaries	15	16.1 <b>(107%)</b>	Other component sites are further than 2km from Weston Urban extension (Design Manual for Roads (DMIRB) (2009) guidance suggests a 2km zone for NOx impacts from traffic.)	4.0	1.8 (45%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
		30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Sandbanks which are slightly covered	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)

<b>Severn Estuary SAC</b>	by seawater all the time	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
	Reefs										
	Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Mudflats and sandflats not covered	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
	seawater at low tide										
<b>Severn Estuary Ramsar</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Sandbanks which are slightly covered	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
	by seawater all the time										
<b>Mendip Limestone Grasslands SAC</b>	Tilio-Acerion forests of slopes, screens and ravines <sup>4</sup>	10	22.5 (225%)	Weston urban extension generally located over 2km from nearest component site at Uphill Cliff. DMRB (Design Manual for Roads and Bridges) (2009) guidance suggests a 2km zone for	5.7	2.9 (51%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)

<p>NOx impacts from traffic. Therefore impact unlikely to be significant. On site energy generation may require project level HRA.</p>	<p>13.2 <b>(88%)</b></p>	<p>15</p>	<p>Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>)</p>	<p>4.0</p>	<p>1.6 (40%)</p>	<p>Unlikely to be significant (Bd well below CL)</p>	<p>9.9 (33%)</p>	<p>Unlikely to be significant (Bd well below objective)</p>	<p>1.7 (9%)</p>	<p>Unlikely to be significant (Bd well below objective)</p>
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<b>Mendip Limestone Grasslands SAC</b>	European Dry Heaths	10	13.2 (132%)	Weston urban extension generally located over 2km from nearest component site at Uphill Cliff. DMRB (Design Manual for Roads and Bridges) (2009) guidance suggests a 2km zone for NOx impacts from traffic. Therefore impact unlikely to be significant. On site energy generation may require project level HRA.	4.0	1.6 (40%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
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Bd = Background, CL = Critical Load. UK air quality objective for the protection of vegetation and ecosystems:  $\text{NO}_x = 30 \mu\text{g}/\text{m}^3$ ,  $\text{SO}_2 = 20 \mu\text{g}/\text{m}^3$  (both as annual mean). The impact significance presented in the table is based on Environment Agency, H1 Environmental Risk Assessment, Annex (f) Air Emissions guidance for point source emissions and Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality guidance for road traffic emissions. All data derived from UK Air Pollution Information System – www.apis.ac.uk

<sup>1</sup> Critical loads for nitrogen deposition are expressed across a range (lower and upper value is given by APIS). The lower value represents the lowest critical load, and is therefore worst-case in terms of significance when nitrogen deposition is expressed as a percentage of the critical load value. Critical load for nitrogen deposition in this matrix is based on the lowest estimate.

<sup>2</sup> Background deposition or concentration expressed as percentage of critical load or objective in parenthesis. For point source emissions, impacts may be significant if the background + source contribution is greater than 70% of the objective or critical load (cases where this applies are highlighted in bold). Following Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, road traffic impacts on  $\text{NO}_x$  may be significant if the  $\text{NO}_x$  concentration is close to or in excess of the air quality objective for the protection of vegetation and ecosystems ( $30 \mu\text{g}/\text{m}^3$ ).



<sup>3</sup> Impacts on deposition and SO<sub>2</sub> and NO<sub>x</sub> for point sources are likely to be significant if the increase is greater than 1% of the critical load or objective, and where the total (background + source) deposition is greater than 70% of the critical load or objective. Road traffic impacts on NO<sub>x</sub> are likely to be significant where the increase is greater than 2 µg m<sup>-3</sup>, and where total concentrations are close to or in excess of the annual mean air quality objective for the protection of vegetation and ecosystems (30 µg/m<sup>3</sup>). Where no information exists to calculate point source emissions, impacts of a point source could potentially be significant within 10 km of international designated sites (or 15 km for coal or oil fired power stations). Where no information exists to calculate road-traffic pollutants, impacts could potentially be significant within 200 m of affected roads. Affected roads are defined according to Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, as roads with a change in Annual Average Daily Traffic (AADT) flow of 1000 or more, or a change in HGV (AADT) flow of 200 or more or a change in annual average speed of 10 km/hr or more as a result of a proposal. Potentially significant impacts are highlighted in bold.

<sup>4</sup> Habitat feature is listed as sensitive to acidity but it tends to occur on limestone soils where it is not sensitive. Source: [www.apis.ac.uk](http://www.apis.ac.uk)

**SW Bristol Urban Extension** (Note: This is not supported by or proposed in the Core Strategy. Halcrow were asked to consider it since the Consultation Draft Core Strategy November 2009 invited comment on options for locating development there, in view of the proposal in the Draft Regional Spatial Strategy at that time).

**Table 14:** Impact of SW Bristol Urban Extension on nitrogen deposition, acid deposition, nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) in international designated sites.

International Site (SAC, SPA, Ramsar)	Qualifying Interest Features	Nitrogen CL (kg N/ha/yr) <sup>1</sup>	Nitrogen deposition (kg N/ha/yr)	Acidification CL (kg/ ha/yr)	Acid deposition (kg/ ha/yr)	NO <sub>x</sub> (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	Bd <sup>2</sup>		Significance <sup>3</sup>	
								Bd <sup>2</sup>	Significance <sup>3</sup>	Bd <sup>2</sup>	Significance <sup>3</sup>
<b>Avon Gorge Woodlands SAC</b>	Tilio-Acerion forests of slopes, screens and ravines <sup>4</sup>	10	23.4 <b>(234%)</b>	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	39 <b>(130%)</b>	7.1 (36%)	Bristol City Council Core Strategy HRA (2010) showed that traffic impacts associated with SW Bristol urban extension (Core Strategy policy BSC4) are likely to be non-significant. Project Level HRA may be required.	Unlikely to be significant (Bd well below objective)	

<b>Avon Gorge Woodlands SAC</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	15	15.4 <b>(103%)</b>	Bristol City Council Core Strategy HRA (2010) showed that traffic impacts associated with SW Bristol urban extension (Core Strategy policy BCS4) are likely to be non-significant. Project Level HRA may be required.	4.0	2.1 (53%)	Unlikely to be significant (Bd well below CL)	39 <b>(130%)</b>	Bristol City Council Core Strategy HRA (2010) showed that traffic impacts associated with SW Bristol urban extension (Core Strategy policy BSC4) are likely to be non-significant. Project Level HRA may be required.	7.1 (36%)	Unlikely to be significant (Bd well below objective)
		10	27.6 <b>(276%)</b>	SSSIs of this SAC in North Somerset's administrative region not known to contain these qualifying features. Therefore no likely significant effect	5.8	3.3 (57%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
<b>North Somerset and Mendip Bats SAC</b>	Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	15	16.1 <b>(107%)</b>	SSSIs of this SAC in North Somerset's administrative region not known to contain these qualifying features.	4.0	1.8 (45%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)

<b>Severn Estuary SAC</b>	Estuaries	30	11.1 (37%)	Therefore no likely significant effect	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Sandbanks which are slightly covered by seawater all the time	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary SAC</b>	Reefs	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Estuaries	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Mudflats and sandflats not covered seawater at low tide	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary Ramsar</b>	Atlantic salt meadows	30	11.1 (37%)	Unlikely to be significant (Bd well below CL)	4.0	1.4 (35%)	Unlikely to be significant (Bd well below CL)	10.7 (36%)	Unlikely to be significant (Bd well below objective)	2.4 (12%)	Unlikely to be significant (Bd well below objective)
<b>Severn Estuary</b>	Sandbanks	30	11.1	Unlikely to be	4.0	1.4	Unlikely to be	10.7	Unlikely to be	2.4	Unlikely to be

<b>Ramsar</b>	which are slightly covered by seawater all the time	(37%)	significant (Bd well below CL)	(35%)	significant (Bd well below CL)	(36%)	significant (Bd well below objective)	(12%)	significant (Bd well below objective)
<b>Mendip Limestone Grasslands SAC</b>	10 Tilio-Acerion forests of slopes, screes and ravines <sup>4</sup>	22.5 ( <b>225%</b> )	Located > 15 km from the site. Traffic and energy centre impacts likely to be non significant.	5.7 (51%)	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
<b>Mendip Limestone Grasslands SAC</b>	15 Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	13.2 ( <b>88%</b> )	Located > 15 km from the site. Traffic and energy centre impacts likely to be non significant.	4.0	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)
<b>Mendip Limestone Grasslands SAC</b>	10 European Dry Heaths	13.2 ( <b>132%</b> )	Located > 15 km from the site. Traffic and energy centre impacts likely to be non significant.	4.0	Unlikely to be significant (Bd well below CL)	9.9 (33%)	Unlikely to be significant (Bd well below objective)	1.7 (9%)	Unlikely to be significant (Bd well below objective)

Bd = Background, CL = Critical Load. UK air quality objective for the protection of vegetation and ecosystems: NO<sub>x</sub> = 30 µg/m<sup>3</sup>; SO<sub>2</sub> = 20 µg/m<sup>3</sup> (both as annual mean). The impact significance presented in the table is based on Environment Agency, H1 Environmental Risk Assessment, Annex (f) Air Emissions guidance for point source emissions and Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality guidance for road traffic emissions. Impact significance of road traffic on air quality in Avon Gorge Woodlands SAC based on Bristol City Council, Habitats Regulation Assessment (2010) which considered growth in traffic between 2010 and 2020 on major roads within 200 m of the site, taking into account SW Bristol Urban Extension (assuming an additional 500 houses) and the expansion of Bristol city centre. The DMRB Screening Tool was used to predict NO<sub>x</sub> and nitrogen deposition in the site. It should be noted that the study did not account for the additional houses in N. Somerset (potentially 9000) under the policy. All data derived from UK Air Pollution Information System – www.apis.ac.uk

<sup>1</sup> Critical loads for nitrogen deposition are expressed across a range (lower and upper value is given by APIS). The lower value represents the lowest critical load, and is therefore worst-case in terms of significance when nitrogen deposition is expressed as a percentage of the critical load value. Critical load for nitrogen deposition in this matrix is based on the lowest estimate.

<sup>2</sup> Background deposition or concentration expressed as percentage of critical load or objective in parenthesis. For point source emissions, impacts may be significant if the background + source contribution is greater than 70% of the objective or critical load (cases where this applies are highlighted in bold). Following Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, road traffic impacts on NO<sub>x</sub> may be significant if the NO<sub>x</sub> concentration is close to or in excess of the air quality objective for the protection of vegetation and ecosystems (30 µg/m<sup>3</sup>).

<sup>3</sup> Impacts on deposition and SO<sub>2</sub> and NO<sub>x</sub> for point sources are likely to be significant if the increase is greater than 1% of the critical load or objective, and where the total (background + source) deposition is greater than 70% of the critical load or objective. Road traffic impacts on NO<sub>x</sub> are likely to be significant where the increase is greater than 2 µg m<sup>-3</sup>, and where total concentrations are close to or in excess of the annual mean air quality objective for the protection of vegetation and ecosystems (30 µg/m<sup>3</sup>). Where no information exists to calculate point source emissions, impacts of a point source could potentially be significant within 10 km of international designated sites (or 15 km for coal or oil fired power stations). Where no information exists to calculate road-traffic pollutants, impacts could potentially be significant within 200 m of affected roads. Affected roads are defined according to Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality, as roads with a change in Annual Average Daily Traffic (AADT) flow of 1000 or more, or a change in HGV (AADT) flow of 200 or more or a change in annual average speed of 10 km/hr or more as a result of a proposal. Potentially significant impacts are highlighted in bold.

<sup>4</sup> Habitat feature is listed as sensitive to acidity but it tends to occur on limestone soils where it is not sensitive. Source: [www.apis.ac.uk](http://www.apis.ac.uk)

## In-combination impacts

The following matrix shows other plans and projects that could potentially cause 'in-combination' impacts on the international sites within and around North Somerset and some possible avoidance and mitigation measures. The table includes projects that fall within the North Somerset administrative area but were not specifically included in the 2009 Core Strategy document.

**Table 15: In-combination impacts**

<b>International Site (SAC, SPA, Ramsar)</b>	<b>Likely significant effect from Core Strategy alone?</b>	<b>In-combination plans or projects</b>	<b>Potential impacts and receptors</b>	<b>Avoidance/mitigation measures</b>	<b>Residual 'likely significant effect'?</b>
Avon Gorge Woodlands SAC	Uncertainty of significant effects from CS1, CS10, CS11, CS24	Bristol Core Strategy West of England Joint Local Transport Plan	Increased air pollution if traffic growth on roads near SAC (A4, A369, A4176, B3129): nitrogen deposition on qualifying habitats  However Bristol City Council, Habitats Regulation Assessment (2010) showed that traffic impacts are likely to be non-significant.	Sustainable transport policies in Bristol Core Strategy <sup>6</sup> (Policy BCS10) and West of England Joint Local Transport Plan  Implementation of measures to promote non-car travel modes as promoted in Core Strategy policies such as CS10.	No

International Site (SAC, SPA, Ramsar)	Likely significant effect from Core Strategy alone?	In-combination plans or projects	Potential impacts and receptors	Avoidance/mitigation measures	Residual 'likely significant effect'? <sup>1</sup>
North Somerset and Mendip Bats SAC	No	West of England Joint Waste Core Strategy - Energy from Waste (EfW) Sites	Increased point source air pollution from EfW Sites: nitrogen deposition on qualifying habitats	Mitigation through design of EfW/ regulation by Environment Agency	No
Mendip Limestone Grasslands SAC	Uncertainty of significant effects from CS1, CS7, CS10, CS11, CS13, CS14, CS20, CS30	Seabank Power Station, Hallen, Bristol (<10km distant)  None thought to be significant	Increased point source air pollution of NO <sub>y</sub> <sup>7</sup> : nitrogen deposition on qualifying habitats  N/A	Mitigation through design of EfW/ regulation by Environment Agency  N/A	No  No
		West of England Joint Local Transport Plan  Somerset Local Transport Plan  Sedgemoor District Council Core Strategy	Increased air pollution if traffic growth on roads near SAC (A38, A371): nitrogen deposition on qualifying habitats	Sustainable transport policies within JLTP	No
		Mendip District Council Core Strategy			



International Site (SAC, SPA, Ramsar)	Likely significant effect from Core Strategy alone?	In-combination plans or projects	Potential impacts and receptors	Avoidance/mitigation measures	Residual 'likely significant effect'? <sup>1</sup>
		West of England Joint Waste Core Strategy (Efw Sites)	Increased point source air pollution from Efw Sites: nitrogen deposition on qualifying habitats	Mitigation through design of Efw/ regulation by Environment Agency	No
Severn Estuary SAC/ Ramsar	No significant effects from CS28, CS29 Uncertainty of significant effects from CS24	Bristol Core Strategy West of England Joint Local Transport Plan	Increased air pollution if traffic growth on roads near SAC; nitrogen deposition on qualifying habitats	Sustainable transport policies in Bristol Core Strategy (Policy BCS10) and West of England Joint Local Transport Plan and Core Strategy	No
		West of England Joint Waste Core Strategy - Energy from Waste (Efw) Sites	Increased point source air pollution from Efw Sites: nitrogen deposition on qualifying habitats	Mitigation through design of Efw/ regulation by Environment Agency	No
		Proposed Renewable Energy Plant at Royal Portbury Dock	Increased point source air pollution – however the ES for this project concluded no LSE for nearby international sites (Eon, 2009).	Project level HRA	No

<sup>1</sup> This is dependant upon the avoidance and mitigation measures being implemented

## **Summary of Core Strategy air quality impacts**

The air quality assessment showed that several Core Strategy policies have the potential to cause likely significant effects (LSE) on the qualifying interest features of the international sites through air pollution.

**Table 16: Summary of Core Strategy policies and the international sites that could have LSE**

<b>Core Strategy Policy</b>	<b>International sites with potential LSE (before mitigation)</b>	<b>Air pollution source</b>	<b>In-combination plans*</b>
CS1 – Addressing climate change and carbon reduction	Avon Gorge Woodlands SAC Mendip Limestone Grasslands SAC	Possible future renewable energy facilities	Bristol Core Strategy  Ashton Park
CS7 – Planning for waste	Avon Gorge Woodlands SAC Mendip Limestone Grasslands SAC	Energy from waste facilities	Seabank Power Station
CS10 – Transportation and movement	Avon Gorge Woodlands SAC	Road transport on A4, A369, A4176 and B3129	Weston Town Centre Area Action Plan
CS11 – Parking	Mendip Limestone Grasslands SAC	Road transport on A38 and A371	West of England Joint Local Transport Plan
			West of England Joint Waste Core Strategy - Energy from Waste (EfW) Sites
			Somerset Local Transport Plan
			Sedgemoor District Council Core Strategy
			Mendip District Council Core Strategy

\* The Natural England (2009) guidance states that these plans and projects should be identified in a targeted way and not list every conceivable plan or project. The list in this table does not mean that every one of these plans or projects will cause LSE on all international sites – the relevant plan or project for each international site is shown in table 15.

The largest potential for air-pollution impacts, principally Nitrogen oxides, on international sites comes from the following potential sources;

- Point source pollution sources, such as energy facilities; and
- Road traffic

Avoidance and mitigation measures are site specific but will, of necessity include sustainable transport policies, including demand management. New energy facilities may also need to be located further than ten kilometres from international sites unless they can demonstrate that pollution emissions will not cause likely significant effects on international sites (and other potential receptors to comply with separate regulations). For all Core Strategy policies the assessment has concluded that avoidance and mitigation measures can prevent likely significant effects on international sites. The Avon Gorge Woodlands SAC may be affected by various potential pollution sources, not necessarily associated with North Somerset's Core Strategy, and hence there are many variables to take into account for assessing impacts on this site. Due to the site being in 'unfavourable condition' and the high background levels of NOx the site is known to be vulnerable to any increase in air pollution levels. However, monitoring at the site to assess the impacts of air pollution on vegetation, which is now taking place, can assist in developing appropriate mitigation measures. HRA is likely to be needed at project level for individual planning applications, to be agreed with Natural England.

## **References**

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- Somerset County Council Local Transport Plan. Website:  
<http://www.somerset.gov.uk/irj/public/services/directory/service?rid=wpcccontent/Sites/SCC/Web%20Pages/Services/Services/Environment/Local%20Transport%20Plan>
- South West Councils. South West Regional Spatial Strategy. Website:  
[http://www.swcouncils.gov.uk/nqcontent.cfm?a\\_id=836](http://www.swcouncils.gov.uk/nqcontent.cfm?a_id=836)
- UK Air Pollution Information System. Website:  
[http://www.apis.ac.uk/cgi\\_bin/query\\_sitebased1.pl?SiteType=SAC](http://www.apis.ac.uk/cgi_bin/query_sitebased1.pl?SiteType=SAC)
- West of England Partnership, 2010. West of England Joint Waste Core Strategy. Website:  
<http://www.westofengland.org/waste/planning/joint-waste-core-strategy>

## **Planning application references**

### **1. Weston Urban Extension**

Planning application no. 09/P/1614/F Locking Parklands  
07/P/1950/O Weston Park, Weston Airfield

### **2. SW Bristol Urban Extension**

10/P/0066/OT2 University of Bristol land  
09/P/1455/OT2 Ashton Park, including ES and HRA report with underpinning information  
09/P/1486/O Land East of Failand

### **3. Other**

09/P/1020/OT2 Bristol International Airport, including ES.  
09/P/1479/F2 Land at Royal Portbury Dock, including ES and air pollution modelling

## Air Quality in Designated Sites – Assessment Methodology

### 1. Introduction

Air pollution can cause direct damage to vegetation and can affect plant productivity and health. Furthermore, deposition of pollutants to the ground can indirectly affect vegetation through modifying soil characteristics such as pH and nitrogen availability. For road traffic and combustion sources, the main pollutants of concern with regards to vegetation and ecosystem effects are oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), nitrogen deposition, and acidification. Table 17 lists the effects air pollutants can have on vegetation and ecosystems.

**Table 17. Air Pollutants and their Effects on Vegetation and Ecosystems**

Pollutant	Vegetation/Ecosystem Effects
Nitrogen oxides	Leaf and needle damage. Reduced growth.
Sulphur dioxide	Degradation of chlorophyll. Reduced photosynthesis. Raised respiration rates.
Nitrogen deposition	Eutrophication and acidification leading to loss of biodiversity.
Acidification	Change of soil characteristics leading to loss of biodiversity.

A matrix has been formulated to screen the potential air quality effects of North Somerset Core Strategy on the following international designated sites within the council's district:

- Avon Gorge Woodlands Special Area of Conservation (SAC)
- Mendip Limestone Grasslands SAC
- North Somerset and Mendip Bats SAC
- Severn Estuary SAC and Ramsar site (see section 4 for rationale for not including SPA designation).

The sources of information and assessment methodology used to examine the potential air quality effects associated with each Core Strategy Policy are outlined here.

### 2. Air Quality Objectives and Critical Loads

Air quality objectives and critical loads have been established in order to reduce the damage to ecosystems associated with air pollution. Table 18 shows the UK air quality objectives and EU limit values introduced for NO<sub>x</sub> and SO<sub>2</sub> for the protection of vegetation and ecosystems.

**Table 18. UK Air Quality Objectives (AQO) and EU Limit Values for the Protection of Vegetation and Ecosystems**

Pollutant	EU Limit Value	UK AQO	Measured as	Date to be Achieved (EU Limit Value)	Date to be Achieved (UK AQO)
Nitrogen oxides	30 µg m <sup>3</sup>	30 µg m <sup>3</sup>	Annual mean	19/07/2001	31/12/2000
Sulphur dioxide	20 µg m <sup>3</sup>	20 µg m <sup>3</sup>	Annual mean	19/07/2001	31/12/2000

Critical loads for nitrogen deposition and acidification represent the threshold level below which there should be no significant harmful effects on the sensitive elements of an ecosystem (according to current knowledge). Critical loads differ depending on the sensitivity of the habitat or species, and are shown in Table 19 for the features of the designated sites in North Somerset. The critical loads have been determined using the Air Pollution Information System (APIS), as outlined in Section 3 of this methodology.

Feature	CL N. Deposition ( kg N/ha/yr)	CL Acidification (kg/ ha/yr)	Designated Site
Tilio-Acerion forests of slopes, screes and ravines	10 to 15	5.8	Avon Gorge Woodlands SAC, Mendip Limestone Grasslands SAC, North Somerset and Mendip Bats SAC

Table 19. Features Critical Loads for	Semi-natural dry grasslands and scrubland facies: on calcareous substrates	European dry heaths	Salt Meadows	15 to 25	10 to 20	30 to 40	4.0	4.0	4.0	Avon Gorge Woodlands SAC, Mendip Limestone Grasslands SAC, North Somerset and Mendip Bats SAC	Mendip Limestone Grasslands SAC	Severn Estuary SAC/Ramsar	and
<b>Acidification (keg/ ha/yr) and Nitrogen Deposition (kg N/ha/yr) in International Designated Sites in North Somerset</b>													

### 3. Determination of Air Quality and Critical Loads

Air pollutant concentrations, rates of nitrogen deposition, acidification and critical loads have been determined in international designated sites in North Somerset using APIS and the UK Air Quality Archive (UKAQA).

The site specific critical loads function of APIS provides information on nitrogen critical loads and rates of nitrogen deposition for specific features in international designated sites throughout the UK. Rates of nitrogen deposition are available for the years 2003 and 2010. The more recent 2010 rates have been used here.

The site specific critical loads function does not provide information on total acidification, NO<sub>x</sub> and SO<sub>2</sub> in each site. Rates of acidification and SO<sub>2</sub> concentrations have been derived using the search by location, habitat and pollutant function of APIS. Table 20 shows the Landranger coordinates used for each designated site, as obtained from the Joint Nature Conservation Committee (JNCC). It should be noted that JNCC coordinates for Severn Estuary are based on the centre point of the estuary, and as such are likely to underestimate pollutant concentrations associated with terrestrial activities. The ordnance survey coordinates 331500, 162500 have been used to determine NO<sub>x</sub>, SO<sub>2</sub> and acidification in Severn Estuary. The coordinates correspond with the portion of the site alongside Weston-super-Mare, and are likely to be worst case in terms of air quality.

**Table 20. Landranger Coordinates for International Designated Sites (JNCC)**

International Designated Site	Landranger Coordinates
Avon Gorge Woodlands	ST560741
Mendip Limestone Grasslands	ST401557
North Somerset and Mendip Bats	ST480544
Severn Estuary	ST321748*

\* Based on OS coordinates 331500, 162500

APIS only provides rates of acidification as a 3 year average over 2003 to 2005, and only provides SO<sub>2</sub> concentrations for the year 2005. Rates of acidification and SO<sub>2</sub> are likely to be overestimated relative to 2011, as emissions of SO<sub>2</sub> and acidifying gases are declining year on year in response to improving emission technologies and air quality legislation. The rate of acidification and SO<sub>2</sub> concentration presented in the air quality matrices can be considered as worst-case. NO<sub>x</sub> concentrations have been determined in designated sites for the year 2011 using the UKAQA (according to the coordinates presented in Table 20).

### 4. Determination of Impact Significance

The significance criteria for changes in air quality in designated sites differ between point source and road-traffic emissions.

Following Environment Agency, H1 Environmental Risk Assessment, Annex (f) Air Emissions guidance for point source emissions, impacts can be considered to be potentially significant if the long term process (source) contribution is greater than 1% of the long term environmental standard (objective or critical load). Where no information exists to calculate the process contribution, impacts could potentially be significant when the sum of the background concentration and process (source) contribution is greater than 70% of the long term environmental standard, and the source is located within the screening distance of the designated site. For SACs, SPAs and Ramsar sites, point sources could potentially be significant when located within a distance of 10 km (or 15 km for coal or oil fired power stations) of the site.

Following Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 (HA 20/07), Air Quality guidance for road traffic emissions, impacts are likely to be significant where there is an increase in NO<sub>x</sub> of 2 µg m<sup>-3</sup> and the predicted concentrations (including background) are very close to or exceed the criterion. Changes in nitrogen deposition should be compared against critical loads. Where no information exists to calculate road-traffic pollutants, impacts could potentially be significant within 200 m of affected roads. Affected roads are defined according to DMRB Volume 11, Section 3, Part 1 (HA 20/07) Air Quality guidance, as roads with a change in Annual Average Daily Traffic (AADT) flow of 1000 or more, or a change in HGV (AADT) flow of 200 or more or a change in annual average speed of 10 km/hr or more as a result of a proposal.



The Severn Estuary SPA has not been included in the air quality assessment due to the qualifying features of the SPA, various overwintering bird species, not being directly vulnerable to air pollution. However, the habitats that support these populations are included in the matrices in the Severn Estuary SAC and Ramsar assessments.

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