St Albans City & District Council

Core Strategy Issues and Options Papers

Study to Inform Appropriate Assessment
(Screening Report)
April 2008

Halcrow Group Limited

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Contents Amendment Record

This report has been issued and amended as follows:

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1	0	Draft for Natural England and client comments.	12.10.07	S. Isaac	
	1		19.10.07		Katie Born
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Non-technical Summary

The Core Strategy Issues and Options Development Plan Document (DPD) for St Albans District Council and the St Albans City and District/ Dacorum Borough Councils' Core Strategies Supplementary Issues and Options Paper: 'Growth at Hemel Hempstead' have been analysed as part of an Appropriate Assessment (AA) screening process, the findings of which are presented in this Screening Report. In parallel with this, the Issues and Options DPDs of three other Councils in South Hertfordshire (Dacorum Borough Council, Three Rivers District Council and Watford Borough Council) were also subjected to Appropriate Assessment screening, the outcome of which is presented in separate reports, one for each council.

Appropriate Assessment screening is required where any plan, alone or 'in combination' with other plans, could have an adverse affect on the integrity of Natura 2000 Site (i.e. Special Protection Areas (SPAs) and Special Area of Conservation (SACs)) following Article 6(3) of the European Habitats Directive, and therefore determines whether a full Appropriate Assessment is required.

The first phase of this screening involved an analysis of St Albans Core Strategy Issues and Options DPD and St Albans City and District/ Dacorum Borough Councils' Core Strategies Supplementary Issues and Options Paper: 'Growth at Hemel Hempstead' to ascertain any likely significant effects that may compromise the conservation objectives of nearby Natura 2000 sites. In agreement with Natural England, the statutory consultee for AA screening, it was decided that Chilterns Beechwoods SAC is the only site of relevance to this screening. The next phase of the AA screening involved examining all other plans, programmes and projects that may affect the Chilterns Beechwoods SAC in conjunction with the St Albans Issues and Options. This included the Issues and Options DPDs of neighbouring councils, including Dacorum Borough Council, Three Rivers District Council and Watford Borough Council, and regional planning documents.

The screening process concluded, in agreement with Natural England, that any likely potential impacts of the St Albans Issues and Options (including the combined Dacorum/ St Albans Issues and Options for Hemel Hempstead growth), either alone or in combination with other plans and programmes, are not considered to be significant, providing that Option 21(c) in the St Alban's Issues

and Options is only pursued under certain circumstances. Mitigation measures were nevertheless recommended as being necessary if these options were pursued. These would need to be agreed with Natural England and could also be used as best practice to limit recreational pressure on Chilterns Beechwoods SAC even if the above options were not pursued.

In light of the assessment it was concluded that it would not be necessary to undertake a full Appropriate Assessment on the St Albans Core Strategy Issues and Options DPDs.

Table 1: Summary of potential impacts of the St Albans CSIOP DPDs and other plans on the integrity of the Chilterns Beechwoods SAC.

Designated interest feature	Conditions required to support site integrity	Possible impacts from the St Albans CSIOP	Possible impacts in combination with other plans and projects	Potential impact on site integrity	Recommendations to ensure no adverse effects on Chilterns Beechwoods SAC.
Extensive tract of *Asperulo-Fagetum* beech forests	- No reduction in mixed broadleaved woodland except where clearance will result in benefit for juniper scrub or red helleborine *Cephalanthera rubra* - Limit impact of browsing/grazing -Natural processes and structural development of woodland - Reduce occurrence of conifer plantations - No reduction in stag beetle habitat - No loss of box dominated scrub	Impacts are associated with the wider region, rather than specifically the SAC. Impacts that could arise from long-term strategic policy option 21c (employment land options), under a worst case scenario involving increased road traffic and road building could lead to the impacts described below. Question 15 (development at Pouchen End) in the 'Growth at Hemel Hempstead' paper could potentially lead to: • Loss of habitat and biodiversity through land take • Habitat fragmentation and reduced landscape connectivity • Increased light and noise pollution associated with urbanisation of countryside and construction works • Increased air pollution	1. Dacorum CSIOP environmental impacts (in combination with other plans) on Chilterns Beechwoods SAC are: • increased air pollution from construction works and transport emissions • increased tourist pressure resulting in disturbance and noise affecting wildlife and trampling impacts affecting sapling regeneration from increased visitors 2. East of England Plan impacts (as above) caused by: a) housebuilding targets before 2021, including: • 83,200 new homes in Hertfordshire • 26,300 new homes in S Beds • 1350 new homes in S Bucks b) Regional Transport Strategy Objectives (M25 widening, M1 improvements) South East Plan impacts (as above) caused by: • 5,620 new homes in Windsor & Maidenhead	In line with the precautionary principal the following potential impacts on site integrity have been identified: • increased disturbance to beech woodland habitat • trampling impacts • reduction in numbers or deterioration in health of species sensitive to air pollution, e.g. beech trees, epiphytes However, the risk of this effect occurring is considered to be low if the recommendations in the next column are followed.	As a precautionary measure, to reduce the need for building an expanded transport network and therefore decrease traffic and air pollution, and disturbance, it is recommended that Core Strategy long-term strategic policy Option 21(c) is only pursued in if: a) Employment sites outside the district were located close to the district boundary (e.g. Hemel Hempstead, Hatfield). b) Roads that pass near to Chilterns Beechwoods SAC (i.e. A41, A4251, A4146) do not undergo any significant increase in traffic as a result of siting of new employment land. c) Sustainable transport requirements such as improved public transport, improved cycle routes and Green Travel Plans were met.

		from construction works and transport emissions These impacts would only apply under certain circumstances – see column 6. The development of a Hemel Hempstead Northern Bypass would also likely lead to a deterioration in local air quality and a possible increase in recreation pressure on the SAC.	• 10,200 new homes in S Oxfordshire • 6,600 new homes in Wycombe Hertfordshire Minerals Local Plan impacts (as above) caused by: • Increased mineral extraction • Associated infrastructure and traffic • After-use and changes in type and intensity of land use. 3. Appropriate Assessment Screening for the Hertfordshire Waste Development Plan Documents/ Waste Core Strategy Preferred Options Addendum Air pollution effects from site operation and transportation 4. Report on the likely significant effects of proposed waste sites on SACs/SPAs in Buckinghamshire and surrounding area Air pollution effects from site operation and transportation		Following these recommendations should result in no significant effect on the Chilterns Beechwoods SAC. However, best practice mitigation of recreational pressure and water abstraction pressures is provided in section 6.2.

1 Introduction

In April 2007, Halcrow Group Ltd was appointed by four councils in South Hertfordshire; St Albans City and District Council, Dacorum Borough Council, Watford Borough Council and Three Rivers District Council, to undertake an Appropriate Assessment (AA) screening exercise of each of their Core Strategy Issues and Options Development Plan Documents (DPDs).

Each of the councils is in the process of preparing a 'Local Development Framework' (LDF) for its administrative region, which will replace the Local Plan. A key part of the Local Development Framework is the 'Core Strategy'; a Development Plan Document which sets out the vision and strategy for the district and to which all other Development Plan Documents must comply. The Core Strategy Issues and Options DPD is a document that sets out a variety of issues that are relevant to St Albans and a series of options for future development in the council's administrative area.

The aim of this AA screening report is to analyse the following Development Plan Documents:

a) St Albans City and District Core Strategy Development Plan Document Issues and Options Consultation Paper, July 2007

b) St Albans City and District/ Dacorum Borough Councils' Core Strategies Supplementary Issues and Options Paper: 'Growth at Hemel Hempstead', November 2006.

These two documents shall be collectively referred to in this report as the Core Strategy Issues and Options papers (CSIOPs). The aim of this AA screening report is to analyse these two documents and attempt to ascertain any potential effects on European protected sites of nature conservation interest, as described below. Appropriate Assessments are required under the Habitat Regulations (Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora) for proposed plans or projects that may have a significant effect on a Natura 2000 site. The AA process and requirements under the Habitats Regulations are described further in Section 2.

The other three Council's CSIOPs (Three Rivers District Council, Dacorum Borough Council and Watford Borough Council) are examined in Sections 4 and 5 as part of the "in combination" analysis. The findings of each of their AA screening exercises are presented in separate AA Screening Reports for each of the Councils.

1.1 Structure of the report

This AA Screening Report is structured as follows:

- Section 1: Introduction: provides background to the St Albans CSIOP and the need to undertake the AA screening
- Section 2: Appropriate Assessment: sets out the AA methodology and the legislative requirements
- Section 3: Relevant Natura 2000 sites: describes the site that the screening report focuses on and its conservation requirements
- Section 4: Analysis of St Albans CSIOP: focuses on any parts of the DPD that may have an impact on the Natura 2000 site
- Section 5: In-combination effects: describes elements and policies contained in other plans and programmes that may have a combined impact with policies contained in the St Albans CSIOP
- Section 6: Final Screening Assessment: provides an evaluation of predicted impacts, possible mitigation measures, including the use of Suitable Areas of Natural Greenspace (SANGS), and concludes whether or not a full AA is required to satisfy the requirements of the EU Habitats Directive

1.2 Sustainability Appraisal and Strategic Environmental Assessment requirements

In parallel with the AA the Issues and Options DPDs will also be the subject of a Sustainability Appraisal (incorporating Strategic Environmental Assessment (SEA)) which takes a wider approach to broader sustainability and environmental impacts, rather than the narrow approach that AA takes by focusing on the predicted impacts of plans on Natura 2000 sites. Further, Sustainability Appraisal follows the requirements of the Strategic Environmental Assessment Directive (2001/42/EC) whereas Appropriate Assessment follows the requirements of the Habitats Directive, as described in Section 2.2.

2 The Appropriate Assessment Process

2.1 *Requirements of the Habitats Directive*

Appropriate Assessment is required where any plan, alone or 'in combination' with other plans, could have an adverse affect on the integrity of Natura 2000 Sites (i.e. Special Protection Areas (SPAs) and Special Areas of Conservation (SACs)) following Article 6(3) of the European Habitats Directive[1]:

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

Article 6(4) of the Habitats Directive goes on to discuss alternative solutions, the Imperative Reasons of Overriding Public Interest (IROPI) test and compensatory measures:

If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

The Habitats Directive applies to "Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon" (Article 6(3)).

In England, most SACs on land or freshwater areas are underpinned by notification as Sites of Special Scientific Interest (SSSI). AA relates specifically and exclusively to the qualifying interests of Natura 2000 sites and not to the broader

[1] Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora

conservation interests or requirements under other SSSIs. However, the Scott Wilson guidance[2] argues that the latter should be factored into plan-making as part of the SEA / SA process and the planning authority's duty under section 28G of the Wildlife and Countryside Act 1981 to conserve and enhance SSSIs in carrying out their functions.

2.2 The Appropriate Assessment Process

AA is an assessment of the potential effects of a proposed plan 'in combination' with other plans and projects on one or more Natura 2000 sites (also known as European sites). The 'assessment' proper is a statement that says whether the plan does or does not affect the integrity of a Natura 2000 site. The process of determining whether or not the plan will affect the site(s) is also commonly referred to as 'appropriate assessment'. The following AA methodology is based on the requirements of EU and UK Legislation (described below) and the guidance provided by the Department for Communities and Local Government (DCLG). [3]

A summary of where the AA screening phase fits into the AA process can be seen in Table 2 below.

Table 2: Stages of Appropriate Assessment, based on (DCLG 2006)

Task AA1	Screening – identifying likely significant effects
Task AA2	Appropriate Assessment and ascertaining the effect on site integrity
Task AA3	Mitigation measures and alternative solutions

This report presents the findings of Task AA1; the AA screening phase. If the screening assessment, in agreement with Natural England (the statutory consultee), considered that St Albans' Issues and Options are likely to cause significant adverse

[2] *Appropriate Assessment of Plans*. Scott Wilson, Levett-Therivel, Treweek Environmental Consultants, Land Use Consultants, September 2006.

[3] DCLG, 2006. Planning for the Protection of European Sites: Appropriate Assessment. Guidance for Regional Spatial Strategies and Local Development Documents.

impacts on any Natura 2000 site then a full AA report incorporating Task AA2 would need to be carried out.

(a) Tasks AA1 and AA2

Through Tasks AA1 and AA2, Appropriate Assessment promotes a hierarchy of avoidance, mitigation and compensatory measures. First, the plan should aim to avoid any negative impacts on Natura 2000 sites by identifying possible impacts early in plan-making, and altering the plan in order to avoid such impacts. These possible impacts should be identified during the screening phase; Task AA1, and more detailed effects on the integrity of Natura 2000 sites should be identified in Task AA2.

(b) Task AA3

Mitigation measures should also be applied during the AA process to the point where no adverse impacts on the site(s) remain. In fact, if the plan is likely to result in any adverse effects, and no further practicable mitigation is possible, then it will be rejected (i.e. not taken forward in its current form). Under such a worst-case scenario, the plan may have to undergo an assessment of alternative solutions (third stage). Compensatory measures are required, as a fourth stage, for any remaining adverse effects, but they are permitted only if (a) there are no alternative solutions and (b) the plan is required for imperative reasons of overriding public interest (the IROPI test). These are very onerous tests which plans are generally considered unlikely to pass.

2.3 Appropriate Assessment and Land Use Planning Documents

In October 2005, the European Court of Justice ruled that 'appropriate assessments' must be carried out on all land use planning documents in the United Kingdom in order to demonstrate that that their implementation would not adversely affect sites designated as of being of European importance. Following the ruling, the Department for Environment, Food and Rural Affairs (DEFRA) published draft amendments to the Habitats Regulations[4] on 8th May, 2006 and

[4] European Communities (1992) Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the "Habitats Directive)

the amendments came into force in full on 21st November 2007. DEFRA[5] has summarised the amendments as enacting the following changes:

- simplifying the species protection regime to better reflect the Habitats Directive;
- providing a clear legal basis for surveillance and monitoring of European protected species;
- toughening the regime on trading European Protected Species that are not native to the UK;

The Habitats Regulations – formally known as the Conservation (Natural Habitats, & c.) Regulations 1994 – aim to transpose the requirements of the Habitats Directive into domestic legislation. These amendments apply to England and Wales only.

2.4 *Role of Organisations*

(a) Competent Authorities

In the case of local development documents such as the St Albans Issues and Options CSIOPs, the Local Planning Authority takes the role of Competent Authority for the purposes of the Habitats Regulations[6].

Competent Authorities are responsible for:

- making an appropriate assessment before deciding to undertake, or give any consent, permission or other authorisation for a plan or project likely to have a significant effect on a Natura 2000 site, either alone or in combination with other plans and projects;
- for the purposes of the assessment, consulting the appropriate nature conservation body and having regard to its representations; and
- ensuring that if there is a negative assessment of a plan or project, agreement to that plan or programme is only given if there are no

[5] 'European Wild Birds and Habitats Directives'. Available on http://www.defra.gov.uk/wildlife-countryside/ewd/ewd09.htm, accessed on 23/04/08.

[6] European Communities (1992) Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the "Habitats Directive)

alternative solutions, it must be carried out for imperative reasons of over-riding public interest, and any compensatory measures that may be required are secured.

(b) Natural England (formerly English Nature, the Rural Development Service (DEFRA), Landcsape, Access and Recreation Department of the Countryside Agency)
Natural England implements, on behalf of the Government, international conventions and EC Directives on nature conservation encompassed in the Conservation (Natural Habitats, &c.) Regulations 1994 and the Conservation (Natural Habitats, &c.) Amendment) (England and Wales) Regulations 2006 consultation draft, as follows:

- provide advice on whether plans and programmes are likely to have a significant effect (either alone or in combination with other plans and projects) when requested to do so;
- advise Competent Authorities whether a plan or programme is necessary for the management of the site;
- comment on appropriate assessments;
- provide advice on the ecological requirements of any compensatory measures; and
- provide advice on the suitability of any proposed compensatory measures.

The draft Habitat Regulations 2006 imply that the competent authority can agree if the strategy is likely to cause significant impacts, but it cannot 'give effect' to the strategy until an appropriate assessment has been carried out and determined that it will not adversely affect the integrity of the Natura 2000 site.

(c) Secretary of State
The Secretary of State is responsible for:

- securing any necessary compensatory measures to ensure that the overall coherence of Natura 2000 is protected;
- confirming that any compensatory measures are sufficient to maintain the coherence of Natura 2000;

- informing the Commission of the measures adopted; and

- directing the plan-making authority not to give effect to a plan that may have an adverse affect on site integrity.

2.5 AA Screening Methodology

The methodology developed for this AA screening is based upon the following guidance documents:

- European Commission (2001). Assessment of plans and projects significantly affecting Natura 2000 sites.

- Department for Communities and Local Government (2006). Planning for the Protection of European Sites: Guidance for Regional Spatial Strategies and Local Development Documents.

The methodology steps are shown in Table 3:

Table 3: AA screening methodology for the St Albans CSIOPs.

Step	Description	Comment for St Albans CSIOPs
AA1 - 1	List any Natura 2000 sites within, adjacent to or associated with the area that the plan(s) cover. Review the site(s)' qualifying interest features, conservation objectives and Favourable Condition Tables. Analyse any underlying trends.	Results given in Section 3.
AA1 - 2	Determine whether the plan is directly connected with or necessary to the management of the Natura 2000 site. If it is, then no further assessment is necessary.	The St Albans City and District Council's Issues and Options are not directly connected with the management of any Natura sites within the District. The remaining steps were followed.
AA1 - 3	Identify and discount all policies and proposals that will have no significant impact on the Natura 2000 site(s) (including direct indirect and secondary impacts).	Results given in Section 4
AA1 - 4	Identify any 'in combination' effects of the plan with other plans and projects (including direct indirect and secondary impacts). i.e. the cumulative effect of influences of all the plans and projects on the site(s)' conditions required to maintain integrity.	Considered in combination with neighbouring regions (Section 5.2) and higher level plans (section 5.3). Results given in Section 5.4
AA1 - 5	Identify policies and proposals that may have a significant impact (including direct indirect and secondary impacts) to take through to the appropriate assessment phase if appropriate assessment is considered necessary (Task AA2).	Results given in Section 6 Continuation to the appropriate assessment phase (Task AA2) was not necessary.

Use of Buffer zones for Dacorum's CSIOP

As part of step AA1-3 in table 3, above, which involved identifying policies and proposals that could potentially cause significant adverse impacts on the SAC, it was agreed with Natural England to use a 5km 'buffer zone' around the nearest SAC. This was agreed in order to protect the SAC from nearby development proposed in the Dacorum CSIOP. This was seen as a precautionary guide to the distance potential impacts could occur from. However, this zone was only used as an approximate guide and it was acknowledged that impacts may still be caused from outside of this zone – for example, a major new point source of air pollution. An additional 3km buffer zone was used to add extra protection to the SAC. In the AA Screening of Dacorum's CSIOP it was stated that significant greenfield development should be avoided within this 3km zone; a full Appropriate Assessment would be needed for development of this kind within 3km of the SAC boundary.

3 Relevant Natura 2000 Sites

3.1 *Background*

The significance of a plan's effects on a Natura 2000 site depends on whether the "integrity" of the site is affected. Article 6(3) of the Habitats Directive requires that:

"the competent national authorities shall agree to the plan... only after having ascertained that it will not adversely affect the ***integrity of the site*** *concerned..."*

To determine what is meant by the "integrity" of the site, it is important to discover why the site was designated. This is a key stage in the AA process. The following information should thus be collated, where possible, for each relevant Natura 2000 site:

- Qualifying interest features: These are the reasons why the Natura 2000 site has been designated, for instance the endangered species that occupy the SAC; rare habitats that occur there; or threatened birds that breed or over-winter in the SPA. The AA focuses on the qualifying interest features that were the primary reasons for the site's designation.

- The site's conservation objectives: These help to focus the assessment. Conservation objectives are a statement of the overall nature conservation requirements for a site, expressed in terms of the favourable condition required for the habitats and/or species for which the site was selected.

- The Favourable Condition Table for the site: Although these tables are designed primarily for monitoring the state of a site, they give information on the trends and environmental conditions required to sustain or promote qualifying interest features and site integrity. However, they should be treated with caution, as favourable conditions as assessed for SSSIs may have little bearing on the conservation status of the features for which a site has been designated.

  Source: *Appropriate Assessment of Plans*. Scott Wilson, Levett-Therivel, Treweek Environmental Consultants, Land Use Consultants, September 2006.

The EC (2000) guidance states, "a site can be described as having a high degree of integrity where the inherent potential for meeting site conservation objectives is realised, the capacity for self repair and self renewal under dynamic conditions is maintained, and a minimum of external management support is required". Some habitats already require heavy management to maintain their site integrity, e.g. through drainage or periodic burning.

The integrity of a site relies on the maintenance of an environment which will sustain its qualifying features and ensure their continuing viability. Legally the focus of AA is on the site's qualifying features and associated conservation objectives, but these rely fundamentally on ecological processes and functions for their maintenance in a favourable condition, and cannot be appraised in isolation from them. Essential to the maintenance of interest features and the integrity of the site are those environmental conditions which enable key ecological processes and functions to persist. These might include the quantity of water reaching a site, the quality of air, the stability of the climate, or a low level of disturbance.

Official citations, conservation objectives and Favourable Condition Tables for each Natura 2000 site are presented within Appendix 2, and a summary is given below.

3.2 Task AA1: Natura 2000 sites that could be affected by the St Albans CSIOPs

The results of Task AA1-1 are presented in this section. Consultation with Natural England confirmed that only one Natura 2000 site is relevant to the screening process for St Albans City and District CSIOPs:

- Chilterns Beechwoods SAC

The Chilterns Beechwoods SAC is predominantly a beech woodland. The closest distance between the St Albans District Boundary and the SAC is approximately 7.2km, as shown in Appendix 3, Figure 1. The SAC lies within the administrative area of the St Albans and Dacorum Councils and spans four separate counties. Details are given in the sections below and in Table 4. The other nearest Natura 2000 site which was discounted from this AA screening report for the plan having no influence on them (as agreed with Natural England) was Wormley-Hoddesdonpark Woods SAC, which is situated 9.1km from the St Albans district boundary.

3.3 *Chilterns Beechwoods SAC*

A map showing the location of the Chilterns Beechwoods SAC in relation to St Albans is given in Appendix 3 Figure 1 and a summary of its details is given in Table 4 below.

Table 4: Summary of details of the Chilterns Beechwoods SAC

Grid Ref	SP975134
SAC EU code	UK0012724
Status	Designated Special Area of Conservation (SAC)
Area (ha)	1276.48
Administrative Regions/ % cover	Buckinghamshire (43.19%) Hertfordshire (35.07%) Oxfordshire (15.03%) Berkshire (6.71%)
Component SSSIs	• Ashridge Commons and Woods • Tring Woods • Bradenham Woods, Park Wood and The Coppice • Aston Rowant Woods • Bisham Woods • Ellesborough & Kimble Warrens • Hollowhill & Pullingshill Woods • Naphill Common • Windsor Hill

Source: http://www.jncc.gov.uk/ Accessed on 24/7/07

3.3.1 *Qualifying interest features*

The primary reason for site selection of the Chiltern Beechwoods SAC is the extensive tract of *Asperulo-Fagetum* beech forests, which are an Annex I Habitat in

the EU Habitats Directive, indicating that they are of European nature conservation importance (JNCC)[7]. The Chilterns Beechwood SAC is in the centre of the habitat's range in the UK. The woodland is part of a grassland-scrub-woodland mosaic. A distinctive feature in the woodland flora is the occurrence of the rare coralroot *Cardamine bulbifera*.

Another Annex I habitat is present; semi-natural dry grasslands and scrubland facies on calcareous substrates, which is a qualifying feature but not a primary reason for site selection. The stag beetle is an Annex II species (in the EU Habitats Directive) that is also a qualifying feature but not a primary reason for site selection.

3.3.2 *Conservation Objectives*

The conservation objectives for the Chilterns Beechwoods SAC vary according to the component SSSI sites, as shown in Table 5 below. Details of these are given in the SSSI citations presented in Appendix 2. These are considered the key factors in maintaining the integrity of the site.

[7] Source: http://www.jncc.gov.uk/ Accessed on 24/7/07

Table 5: Chilterns Beechwoods SAC component SSSIs and their Conservation Objectives

SSSI Sites within Chilterns Beechwoods SAC	Conservation Objectives
Bradenham Woods, Park Wood and The Coppice	Subject to natural change, to maintain, in favourable condition, the beech forest habitat (*Asperulo-Fagetum* beech forest) and habitat for the stag beetle
Ellesborough and Kimble Warrens	Subject to natural change, to maintain, in favourable condition, the internationally important beech woodland habitat and the internationally important dry grassland and scrubland habitat
Naphill Common	Subject to natural change, to maintain, in favourable condition, the beech forest habitat (*Asperulo-Fagetum* beech forest).
Windsor Hill	Subject to natural change, to maintain, in favourable condition, the beech forest habitat (*Asperulo-Fagetum* beech forest).
Hollowhill & Pullingshill Woods	Subject to natural change, to maintain, in favourable condition, the beech forest habitat (*Asperulo-Fagetum* beech forest) and habitat for the Ghost orchid.
Bisham Woods	Subject to natural change, to maintain, in favourable condition, the beech and dog's mercury woodland and beech/bramble woodland habitat and habitat for stag beetle.
Ashridge Commons and Woods	Subject to natural change, to maintain, in favourable condition, beech and dog's mercury woodland and beech/bramble woodland habitat
Aston Rowant Woods	Subject to natural change, to maintain, in favourable condition, the beech forest habitat (*Asperulo-Fagetum* beech forest).
Tring Woods	Subject to natural change, to maintain, in favourable condition, the 'Broadleaved, Mixed and Yew Woodland – Lowland' habitat

Source: Natural England Citations (Appendix 2)

3.3.3 *Favourable Condition Tables*

Although the Favourable Condition Tables are used primarily for monitoring the status of the site, they give information on the trends and environmental conditions required to sustain or promote qualifying interest features and site integrity. Table 6 shows the qualifying features for the Chilterns Beechwoods SAC and key environmental conditions required to support site integrity.

Table 6: Chilterns Beechwoods SAC qualifying features and key environmental conditions required to support the feature

Qualifying features	Comments on nature conservation importance	Key environmental conditions to support site integrity
Asperulo-Fagetum beech forests	A distinctive feature in the woodland flora is the occurrence of populations of the rare coralroot	- No reduction in area of mixed broadleaved woodland except where clearance will result in benefit for juniper scrub or red helleborine *Cephalanthera rubra* - Limit impact of browsing/grazing - Natural processes and structural development of woodland should occur such as presence of open space and old trees; dead wood on ground; standing dead trees - Reduce the occurrence of conifer plantations

Qualifying features	Comments on nature conservation importance	Key environmental conditions to support site integrity
Broadleaved mixed and yew woodland	Beech and dogs mercury woodland and beech/bramble woodland (Bisham Woods and Ashridge Common and Woods only)	- No loss of woodland extent
Broadleaved mixed and yew woodland	Occurrence on the Red list species, Stag beetle *Lucanus cervus* (Bisham Woods only)	- Stag beetle is dependant upon the presence of large diameter, permanently moist, rotting timber in the form of fallen logs or large tree stumps.
Beech/ash woodland	Beech and ash woodland (Ellesborough and Kimble Warrens SSSI only)	- No loss of woodland
Mixed scrub	Box dominated scrub (Ellesborough and Kimble Warrens SSSI only)	- No loss of box dominated scrub

Source of information: Natural England

Chilterns Beechwoods comprise nine SSSIs, 17 units of which have SAC designated interest features. The condition of the SSSIs have been assessed by Natural England[8] and 10 units, 584.2 hectares (59%) have been assessed as being in favourable condition, whilst, 7 units, 400.51 hectares (41%) have been assessed as unfavourable-recovering. The majority of the unfavourable-recovering area is within the Ashridge Commons and Woods SSSI and is due to presence of bracken and non-native species such as laurel.

[8] Natural England Website http://www.english-nature.org.uk/Special/sssi/search.cfm, assessment compiled by Natural England in September 2007, accessed on 19/10/07

3.3.4 *Vulnerability*

The following JNCC citation[9] shows the vulnerability of Chilterns Beechwoods SAC.

'The majority of beechwoods in the Chilterns are very uniform in terms of age-class and species composition, as a result of historical promotion of beech as a timber tree. Significant changes to the structural and species diversity of these woods are required in order to promote a more natural composition.

Beech woodland in the Chilterns is currently facing a decline due to very low market value for timber and damage to young trees by grey squirrels. The availability of financial support through the Woodland Grant Scheme goes some way in helping to address this issue but it is not clear whether this offers sufficient incentive to woodland managers to continue to manage in ways which will promote an increase in structural and species diversity of the characteristic beechwood communities. In particular, there may be a lack of sufficient financial support to provide for the retention of a larger proportion of mature trees in order to increase the provision of dead-wood habitat. This latter issue is the subject of a joint national review by Natural England and the Forestry Commission.

The long-term sustainability of the juniper populations is uncertain due to the lack of natural regeneration and a poor ability to compete with other scrub species. Means of improving the prospects for juniper in the Chilterns are currently being investigated; a joint initiative between Natural England, local authorities and the local wildlife trust is in place'.

As a result of the consultation with Natural England for this AA Screening Report, it was established that water abstraction in the region surrounding the SAC would be unlikely to have an impact on the SAC itself. Groundwater pollution is also unlikely to have any effect as no watercourses run through the SAC. Consultation with the Environment Agency also confirmed that Chilterns Beechwoods SAC were not fed by or connected to any major water courses, so were unlikely to be affected by changes in abstraction in the vicinity:

'*Chilterns beechwoods was never identified as at particular risk from abstractions or discharges to water. The beechwoods are on the Chiltern escarpments, and as a result generally have a deep*

[9] Citation taken from Chilterns Beechwoods SAC site description on http://www.jncc.gov.uk/ accessed on 10/08/07 and amended to reflect updated nomenclature of English Nature

'unsaturated' zone. This in effect means that they are a long way from the groundwater table and are not fed by any major surface watercourses. From this the EA concluded that they are at a low risk of impact form water abstraction and hence none of our existing abstraction licences (Public Water Supplies and others) could be having an impact'. [10]

There is a possibility that increased tourist numbers may cause additional pressure on the SAC. For example, increased trampling could lead to sapling die-off and increased numbers of people may require increased management for health and safety reasons; more dead wood and standing dying trees may subsequently need to be removed from the site.

According to the UK Habitat Action Plan[11] for Lowland Beech and Yew Woodland, the main factors affecting this type of habitat in the UK are as follows:

- Grey squirrels (*Sciurus carolinensis*)(and in the Chilterns, edible dormouse (*Glis glis*)) strip the bark from beech trees (between 10 and 40 years old) which can result in tree death, disruption of normal age structure and shifts in species composition;

- Rabbits can also cause damage (bark stripping and eating regeneration) in some beech and yew areas;

- Deer browsing on seedlings and saplings, is a widespread problem, which limits capacity for regeneration;

- Introduced species, that replace native beech and yew woodland species. Some woods were planted with conifers in the past; locally, invasive species may include sycamore (*Acer pseudoplatanus*), *rhododendron* species, Turkey oak (*Quercus cerris*) and cherry laurel (*Prunus laurocerasus*);

- The predominance of the older age classes in much beech high forest has increased the susceptibility of the beech population to damage from droughts and storms;

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[10] Quoted from South Bucks District Council, Appropriate Assessment: South Bucks Core Strategy Preferred Options Document, May 2007.

[11] Part of the UK Biodiversity Action Plan: http://www.ukbap.org.uk/UKPlans.aspx?ID=2. Accessed on 25/7/07.

- Lack of interest, expertise and incentives amongst some owners results in much beech and yew woodland being unmanaged, or managed unsympathetically;

- Air pollution may cause 'decline' in beech trees (increasing their susceptibility to disease), and damage to epiphyte populations;

- Fragmentation of the habitat as a result of development; and

- Climate change, potentially resulting in changes in the vegetation communities.

4 Analysis of St Albans Issues and Options DPDs

4.1 ***Task AA1-2: Connection with SAC Management Requirements***

Following a review of the St Albans CSIOP and the Dacorum Borough Council and St Albans City and District Council (combined) Supplementary Issues and Options Paper: 'Growth at Hemel Hempstead' and consultation with Natural England, the findings of Task AA1-2 were that neither Issues and Options DPDs were directly connected with the management of any Natura 2000 sites within the District, and therefore the remaining AA screening methodology steps were followed.

4.2 ***Task AA1-3: Options that will not Affect the SAC***

The review of the St Albans CSIOPs and consultation with Natural England identified any aspects of the plan and associated policies and schemes that might influence the conditions required to be maintained or improved to preserve the integrity of the Natura 2000 sites. They are described below and summarised in section 6.

4.2.1 *Quick finds*

The initial sweep of policies contained in the CSIOPs during Task AA1-3 identified that there are only four policies that could have potentially significant impacts on the Chilterns Beechwoods SAC (including direct, indirect and secondary impacts). The majority of policies in the St Albans Issues and Options Consultation Paper were considered unlikely to have any potential impacts on the SAC. For example, these included policies such as 'Sustainable Development', 'Green Spaces' and 'Environmental Protection', which inherently enhance the district's natural and built environment.

The closest development sites[12] to Chilterns Beechwoods SAC that are given in the key diagram of the St Albans CSIOPs are approximately 26km, 28km and 28.5km respectively and were therefore considered to be of sufficient distance from the SAC to not cause any direct physical impacts.

[12] Measured from the nearest point of the SAC to the nearest point of growth locations and strategic locations.

These policies can be discounted from further stages in the AA screening process. However, the remaining policies that required further investigation into their potential impacts on the SAC are discussed below.

4.2.2 *Options requiring further investigation into potential impacts on the SAC*

Two of the nine policies in the Core Strategy Issues and Options Paper (CSIOP) and two policies in the 'Supplementary Issues and Options Paper: Growth at Hemel Hempstead' were investigated in more detail because they were considered to have the potential to affect the conditions required to maintain the integrity of the Chilterns Beechwoods SAC, through direct, indirect or secondary impacts.

St Albans City and District Core Strategy Development Plan Document Issues and Options Consultation Paper, July 2007

The following two CSIOP options and questions in the St Albans Issues and Options paper were considered to have potential adverse consequences for the Chilterns Beechwoods SAC:

a)

Long term strategic policy 3: Employment Land Options in St Albans District

Question 21: With regard to commuting, would you support any of the following options?:

Option 21 (a): Seeking to keep out-commuting from St Albans District at about the current level (net out-commuting of about 10,000 people)

Option 21 (b): Seeking to reduce net out-commuting, by providing more employment land in the District

Option 21(c): Seeking to increase net out-commuting, by meeting the need for new employment land outside the district

As a precautionary measure, to reduce the need for building an expanded transport network and therefore decrease traffic and air pollution, and disturbance outside the existing employment areas, it is recommended that Option 21(c) is only pursued if:

a) Employment sites outside the district were located close to the district boundary (e.g. Hemel Hempstead, Hatfield).

b) Roads that pass near to Chilterns Beechwoods SAC (i.e. A41, A4251, A4146) do not undergo any significant increase in traffic as a result of siting of new employment land.

c) Sustainable transport requirements such as improved public transport, improved cycle routes and Green Travel Plans were met.

This mitigation would result in no significant effect on the Chilterns Beechwoods SAC.

b)

Long term strategic policy 8: Pollution

Question 49: Would you support the inclusion of a generic pollution control policy in the Core Strategy DPD? If yes, what do you think this policy should cover?

The description of a possible generic pollution control policy given in the Issues and Options DPD shows that the policy would cover land, air and water and 'cover the impact of potentially polluting development (both direct and indirect)'.

Given this information, it is recommended that such a policy should be prioritised as it could help to reduce the impacts of air pollution on the Chilterns Beechwoods SAC.

Analysis of Dacorum Borough Council and St Albans City and District Council (combined) Supplementary Issues and Options Paper: Growth at Hemel Hempstead

Analysis of this paper revealed that in Chapter 6, *Urban extensions*, development is proposed for land at Pouchen End (West Hemel Hempstead). This may involve the development of an entirely new neighbourhood in the Green Belt. The following question was posed:

Question 15: Do you think a new neighbourhood should be built at Pouchen End?

According to the Supplementary Issues and Options Paper, this development '*new road infrastructure and highway works to limit congestion in the wider area would be necessary*.' However, westward expansion of Hemel Hempstead at Pouchen End would be limited by Pouchen End Lane, which borders the site earmarked for development and leads down to the Grand Union Canal.

Coupled with the possible development of a Hemel Hempstead Northern Bypass, this combined development and associated road improvements may lead to increased tourist pressure and/or air pollution effects on the south eastern tip (Frithsden area) of the Chilterns Beechwoods SAC.

Further in-combination analysis of this paper is provided in section 5.2.

4.3 Conclusion

If the precautionary recommendations given in section 4.2.2 are recognised, it is not considered that there will be any significant effects of the St Albans CSIOPs on the Chilterns Beechwoods SAC in terms of these options alone. Other plans that are relevant to this SAC are examined in section 5 to identify any possible in-combination effects with the St Albans CSIOPs.

5 In-combination Effects

5.1 *Introduction*

This section presents the findings of Task AA1-4: to identify any direct impacts and any 'in combination' effects of the plans with other plans and projects (including direct, indirect and secondary impacts). In other words, it looks at the cumulative effect of influences of all the plans and projects on the site(s)' conditions required to maintain integrity. They are described below and summarised in the Non-technical Summary at the beginning of this document.

A complete list of plans and programmes that were studied for the purposes of this AA screening are listed in Appendix 1. It was considered that there were no international or national plans of particular relevance to the St Albans Issues and Options CSIOPs or the Chilterns Beechwoods SAC. However, certain key plans of neighbouring districts and regional plans that are particularly relevant to examine for in-combination effects for St Albans are:

- Dacorum Borough Council CSIOP
- Watford Borough Council CSIOP
- Three Rivers District Council CSIOP
- Hertsmere Borough Council CSIOP
- Welwyn Hatfield District Plan, Written Statement

5.2 *Analysis of Local (District) Level Plans*

5.2.1 *Analysis of the Dacorum Borough Council Issues and Options DPD*

a) Analysis of Dacorum's Schedule of Site Appraisals

The following proposed route was considered to have potential implications of relevance to the Chilterns Beechwoods SAC:

- Site Code: H/t3 Hemel Hempstead Northern Bypass

The proposed route of the Hemel Hempstead Northern Bypass passes the south eastern tip of Chilterns Beechwoods SAC, just to the south of Potten End, at a

distance of as near as 2.5 km to the SAC. Figures 1 and 2 in Appendix 3 illustrate the proposed route, based on a figure provided by Dacorum Borough Council. [13]

Various developments at Aldbury, Tring and Berkhamsted (all with closest points less than 1km away from SAC) were also seen as potentially leading to adverse impacts on the SAC. This led to the creation of a 3km buffer zone within which major Greenfield development should be avoided. This buffer zone is shown in figure 2.

Possible environmental impacts on the SAC from the developments listed above are:

- Better road access to the SAC, bringing increased tourist pressure that could lead to increased disturbance and noise affecting wildlife and trampling impacts affecting sapling regeneration from increased visitors;
- Increased transport emissions and air pollution from construction works and post-construction road users affecting species and plant communities sensitive to air quality (e.g. beech trees, epiphytes) especially on the south eastern tip (Frithsden area) of the Chilterns Beechwoods SAC.

b) Analysis of Dacorum Borough Council and St Albans City and District Council (combined) Supplementary Issues and Options Paper: Growth at Hemel Hempstead

This paper has been examined in chapter 4 of this report but is further examined here for in-combination effects:

Analysis of this DPD revealed that in Chapter 6*, Urban extensions*, development is proposed in the following areas:

- Urban development at Pouchen End, West Hemel Hempstead (possibly an entirely new neighbourhood in the Green Belt;

[13] Figure 6.8. Indicative Alignment of the Northern Bypass. Wootton Jeffreys Consultants Ltd.

- Urban development at Boxmoor to the south

Pouchen End is located approximately 3.5km from the SAC, whereas Boxmoor is approximately 5.5km away and hence unlikely to cause any impacts. Development at Pouchen End would also entail new road infrastructure and highway works. Significant expansion into the Green Belt west of Hemel Hempstead, combined with development at Pouchen End could eventually lead to the following possible environmental outcomes:

- increased tourist pressure resulting in closer proximity of urban development, increased disturbance and noise affecting wildlife and trampling impacts affecting sapling regeneration from increased visitors;

- increased transport emissions and air pollution from construction works affecting species and plant communities sensitive to air quality, such as beech trees and epiphytes, on the south eastern tip (Frithsden area) of the Chilterns Beechwoods SAC.

However, westward expansion of Hemel Hempstead at Pouchen End would be limited by Pouchen End Lane, which leads down to the Grand Union Canal.

c) Strategic policies

The draft East of England Plan (discussed in 5.3.1) provides the strategic guidance for Dacorum Borough Council's preparation of local planning policies up to 2021. In June 2006 a Panel of Inspectors of the East of England Plan produced a report which contained a number of key recommendations that have major implications for the level of housing growth and other development needs in the Borough, particularly Hemel Hempstead. In summary these are:

- Hemel Hempstead is to be a "Key Centre for Development and Change".

- Dacorum is expected to provide for 12,000 new dwellings between 2001 and 2021; a significant proportion of this will be through a Green Belt review of Hemel Hempstead. Such a review should aim to provide for growth in new dwellings, jobs and other associated needs beyond the Plan period to 2031.

- Dacorum will need to increase current levels of housing completions to 530 units per year for 2001-2006, rising to 620 per year over the remaining Plan period. Currently about 345 dwellings a year are being built.

Much of the development outlined in the draft East of England Plan for Dacorum (and Watford) is likely to occur in brownfield sites, as identified in both Councils' Urban Capacity Studies, thus reducing impacts on the countryside. It should be noted, however, that brownfield sites can also often have high nature conservation value; this would need to be considered at an early stage of any development proposals.

The possible environmental impacts of these strategic policies for St Albans and Dacorum on the SAC are:

- increased tourist pressure resulting in closer proximity of urban development, increased disturbance and noise affecting wildlife and trampling impacts affecting sapling regeneration from increased visitors;

- increased transport emissions and air pollution from construction works affecting species and plant communities sensitive to air quality, such as beech trees and epiphytes, on the south eastern tip (Frithsden area) of the Chilterns Beechwoods SAC.

Recommendations for Growth and Other Developments

If the Hemel Hempstead Northern Bypass were to be built then this would have an impact on air quality in the local area. Bearing in mind that only an indicative route of the bypass exists, approximate measurements suggest that the bypass would pass within 2.5km of the SAC. Coupled with development to the west of Hemel Hempstead at Pouchen End and Gadebridge North, this may increase tourist pressure and/or air pollution effects on the south eastern tip (Frithsden area) of the Chilterns Beechwoods SAC. If greenfield development to the west of Hemel Hempstead is of sufficient size and closeness to the SAC, adversely affecting the integrity of the SAC, i.e. degrading the extensive tract of *Asperulo-Fagetum* beech forests, the primary reason for SAC site selection. It was recommended in Dacorum's parallel AA Screening Report that a separate Appropriate Assessment may need to be carried out on development of this kind.

5.2.2 *Analysis of Watford Borough Council's CSIOP*

Analysis of the Watford Borough Council Core Strategy Issues and Options DPD does not reveal any potentially significant impacts on the Chilterns Beechwoods SAC as it is a considerable distance (greater than 13km) from the Watford Borough. Proposed development sites and land options for transport network improvements are consequently not in close proximity to the SAC.

5.2.3 *Analysis of the Three Rivers District Council's CSIOP*

Analysis of the Three Rivers District Council Core Strategy Issues and Options DPD 'Planning your Future' does not reveal any potentially significant impacts on Chilterns Beechwoods SAC as the site is a considerable distance (greater than 16km) from the Three Rivers District. Proposed development sites and land options for transport network improvements are consequently not in close proximity to the SAC.

5.2.4 *Analysis of the Hertsmere Borough Council's CSIOP*

Analysis of this DPD reveals that the M25 will be widened to four lanes in Hertsmere Borough. This may at some point increase overall eastward traffic flow into the St Albans District but will not necessarily increase traffic in the vicinity of the Chilterns Beechwoods SAC. It is therefore not considered to have a significant impact on the SAC. Transport policies for the Hertsmere Borough are derived from the Hertfordshire Local Transport Plan, which is described in section 5.3.

5.2.5 *Analysis of the Welwyn Hatfield District Plan, Written Statement*

Analysis of the Welwyn Hatfield Council Local Development Scheme shows that the Core Strategy Issues and Options DPD is currently scheduled to go out to consultation in 2008, making the Welwyn Hatfield District Plan (part of the Development Plan) the most up-to-date and relevant document that needs to be examined. There are no policies contained in the plan that are likely to have any impacts on the Chilterns Beechwoods SAC. Transport policies for the Welwyn Hatfield region are derived from the Hertfordshire Local Transport Plan, which is described in section 5.3.

5.3 Analysis of Regional Plans

The following regional plans were considered to be of key importance to the St Albans CSIOPs:

- Draft East of England Plan / Appropriate Assessment of the Draft East of England Plan
- Draft South East Plan/ Appropriate Assessment of the Draft South East Plan

- South Bucks Core Strategy Preferred Options Development Plan Document/ Appropriate Assessment of the South Bucks Core Strategy Preferred Options Development Plan Document
- Hertfordshire Local Transport Plan
- North Hertfordshire DC Policies Options DPD
- Luton and South Bedfordshire Issues and Options DPD
- Milton Keynes & South Midlands Sub-Regional Strategy (MKSMSRS)
- Hertfordshire Minerals Local Plan Review, Appropriate Assessment Draft Screening Report
- Hertfordshire Waste Development Plan Documents/ Appropriate Assessment Screening for the Hertfordshire Waste Developments
- Report on the Likely Significant Effects of Proposed Waste Sites on SACs/ SPAa in Buckinghamshire and Surrounding Area (Stage 1 Appropriate Assessment Screening)

5.3.1 *Draft East of England Plan*

a) Housing Provision

The draft East of England Plan[14] shows the following housing provision statistics for Hertfordshire, as presented in Table 7:

[14] The Secretary of State's Proposed Changes to the Draft Revision to the Regional Spatial Strategy for the East of England and Statement of Reasons, December 2006.

Table 7: Housing provision in Hertfordshire

District Council	Minimum Dwelling Provision, 2001 to 2021 (net increase, with annual average rates in brackets)		
	Total to build, April 2001 to March 2021	Of which already built, April 2001-March 2006	Minimum still to build, April 2006 to March 2021
Dacorum	12,000	1,860 (370)	10,140 (680)
St Albans	7,200	1,830 (370)	5,370 (360)
Three Rivers	4,000	1,010 (200)	2,990 (200)
Watford	5,200	1,410 (280)	3,790 (250)
Total 4 councils	28,400	23,590 (1220)	22,290 (1490)
Total Herts (incl. other districts)	**83,200**	**17,480 (3,500)**	**65,720 (4,380)**

Development in South Bedfordshire and South Buckinghamshire

The housing requirement for South Bedfordshire (Luton, Dunstable, Houghton Regis and Leighton Linslade) as given in the Milton Keynes and South Midlands Sub-Regional Strategy, is 26,300 homes up to 2021, and an additional 1000 dwellings outside of these four sub-regions, as described in the draft East of England Plan. However, the South Bedfordshire Core Strategy, by adhering to the Milton Keynes and South Midlands Sub-Regional Strategy, proposes that development should "focus on two areas of search which would exclude the Chilterns Area of Outstanding Natural Beauty." The overall house-building target for South Buckinghamshire, as set out in the Draft South East Plan is set at 1350 dwellings between 2006 and 2021 and is also unlikely to affect the Chilterns Beechwoods SAC due to the distance between the counties and the SAC.

b) Employment Provision

Although the draft East of England Plan shows housing growth statistics for the area covered by the four councils, there will be no major expansion of employment sites in the region. Instead, Ipswich, Colchester, Harwich, Felixstowe and Clacton are to be the strategic centres of employment in the East of England, meaning development pressure for employment sites is significantly far away from the Chilterns Beechwoods SAC to not cause any negative impacts. However, Policy E1 (Job Growth 2001-2021) of the East of England Plan shows an indicative target in net growth of employment in the Hertfordshire London Arc (Three Rivers/ Watford/ Hertsmere/ Broxbourne/ Dacorum/ St Albans/ Welwyn Hatfield) as 50,000 jobs. This

job growth poses no anticipated significant adverse impacts on Chilterns Beechwoods SAC. Similarly, although 22,290 houses are to be built in the area of the four councils, the development sites are not sufficiently close to cause significant impacts on Chilterns Beechwoods and SAC.

c) East of England Regional Transport Strategy

This strategy is part of the East of England Plan. As a whole the strategy is aimed at reducing the need to travel. A selection of relevant strategy objectives are listed in the fuller description of the strategy in Appendix 1. Objectives that are likely to have (indirect) impacts on the Chilterns Beechwoods SAC are:

Policy T1: regional transport strategy objectives	
Objective 2: 'enable infrastructure programmes and transport service provision to support both existing development (addressing problems of congestion) and that proposed in the spatial strategy (economic regeneration needs and further housing growth)'	
Schemes that may cause indirect impacts on Chilterns Beechwoods SAC	• M25 widening to dual 4 junctions 16-31 • M1 dual junctions 10-13

Both of the proposed schemes listed above may cause an increase in accessibility to the roads that pass near to the Chilterns Beechwoods SAC, such as the A41 and A4146. However, the impacts are likely to be indirect and insignificant due to the small volume of traffic in this direction. There may be a small rise in visitor numbers to the SAC, yet there is no reason to believe that tourism to the site will increase to such an extent as to cause adverse impacts on the SAC.

5.3.2 *Appropriate Assessment of Draft East of England Plan: 'Draft Revision to Regional Spatial Strategy for the East of England: Secretary of State's Proposed Changes and Further Proposed Changes. Report of the Habitats Directive Assessment (under the Habitats Regulations)' (October 2007)*

Analysis of this document showed that the only Natura 2000 site in Hertfordshire which is likely to undergo a significant impact as a result of the East of England Plan is the Lee Valley SPA and Ramsar Site. Chilterns Beechwoods SAC which spans four counties (as shown in section 3.2.1) is not discussed in the document. The site is outside of the scope of the East of England Appropriate Assessment but is discussed in the following section, 5.3.3, as it is within the scope of the South East Plan.

The Appropriate Assessment concluded that the East of England Plan would have no effects (acting alone) that would affect the integrity of Natura 2000 sites. However, it was considered that there might be in-combination effects with the South East Plan and the South Midlands Sub-Regional Strategy with

respect to some Natura 2000 sites outside of Hertfordshire. As the focus of this AA Screening Report is on Chilterns Beechwoods SAC, no in-combination effects could be identified. The Appropriate Assessment concludes that there would be no significant likely impact from the growth of Hemel Hempstead, but that local Appropriate Assessment screening is required.

5.3.3 *Draft South East Plan/ Appropriate Assessment of the Draft South East Plan Policies:*

Three policies that may impact on the SAC are:

- Policy H1, Housing allocations

Plans include the development of 5,620 new houses in Windsor & Maidenhead (coupled with 10,200 in South Oxfordshire and 6,600 in Wycombe).

As described in the analysis of the draft East of England Plan, the house-building target for South Bucks is unlikely to affect the Chilterns Beechwoods SAC. In terms of the wider region, Milton Keynes is expected to accommodate an additional 48,850 dwellings and Aylesbury Vale, 16,800 dwellings over the period 2006-2026[15].

- Section E6: Western Corridor and Blackwater Valley Sub-region

Development planned in and around regional transport hubs such as Slough and Wycombe[16] are also unlikely to cause significant impacts on the Chilterns Beechwoods SAC due to the distance between the hubs and the SAC.

- Policy WCBV2:

'Development and Environmental Protection' specifies that 'urban extensions should not involve incursions into areas protected (or proposed for protection in LDFs) by Green Belt, Areas of Outstanding Natural Beauty or by any other environmental or planning policies of regional, national or international importance.

The possible environmental impacts on the SAC are:

- The development of 5,620 new houses in Windsor & Maidenhead (coupled with 10,200 in South Oxfordshire and 6,600 in Wycombe) (Policy H1) and consequent increased traffic may cause reduced air quality. Potential pollutants identified in the Appropriate Assessment of the draft South East Plan are ammonia, Nitrous oxides, Sulphur

[15] Figures taken from Policies MKAV 1 and MKAV 2, draft South East Plan.

[16] Referring to Policy WCBV3, South East Plan.

Dioxide and Ozone. These could affect sensitive species such as beech and epiphytes.

- The South East Plan Implementation Plan demonstrates the need to provide alternative recreational space to SACs such as Chilterns Beechwoods. Areas of woodland enhancement near the SAC are proposed in order to provide recreational land for the increased population of the Milton-Keynes – Aylesbury Vale sub-region. The Spatial Framework for Aylesbury Vale (within the South East Plan) also specifies that proposals will '*need to provide properly resourced protection from any increased environmental impact on green infrastructure resources of significance such as the Chilterns AONB…*'

Mitigation measures, such as the areas of woodland enhancement described above, coupled with policies that provide protection for land with environmental designations should reduce any adverse impacts on the integrity of the Chilterns Beechwoods SAC from the above three policies. Although housing development may indirectly lead to a deterioration of air quality in the wider region, there are no developments contained in the draft South East Plan sufficiently close to the SAC to cause a significant adverse impact. Chilterns Beechwoods was not identified in the AA of the draft South East Plan as one of the 'European Sites at particular risk of adverse effects due to reduced air quality associated with developments under the South East Plan.'

5.3.4 *South Bucks Core Strategy Preferred Options Development Plan Document*

Principal development sites listed in the DPD in section 5.4, 'Areas of Potential Change' are in Beaconsfield, Taplow and Iver. The sites are on previously developed land and are approximately 17.5km, 27.5 and 29km away from the SAC respectively.

The nature of the sites and the distance from Chilterns Beechwoods SAC, showed that there were unlikely to be any potentially significant impacts (or in-combination effects) on the integrity of the SAC.

5.3.5 *Hertfordshire Local Transport Plan (LTP) 2006/07 - 2010/11*

The South West Hertfordshire Area Plan (part of the Herts LTP) and the remainder of the LTP, including the Five Year Implementation Programme which lists major schemes, contain no policies that are likely to cause harmful impacts on Chilterns Beechwoods SAC.

5.3.6 *North Hertfordshire DC Policies Options DPD*

AA screening of this document shows that there are unlikely to be any potentially significant impacts on the Chilterns Beechwoods SAC from the development plans contained therein.

5.3.7 *Luton and South Bedfordshire Issues and Options DPD*

Two of the issues were investigated further to determine if they could affect the Chilterns Beechwoods SAC.

- Issue 1: Where will the development go?

Several of the options for new development focus on an area that will affect Hertfordshire but this will be to the north of Luton airport and is therefore a considerable distance away (greater than 21km) from the Chilterns Beechwoods SAC and consequently unlikely to cause a significant impact. Village expansion proposed for Eaton Bray, Caddington and Slip End is also a considerable distance away (greater than 8km) from the SAC and consequently unlikely to cause a significant impact.

- Issue 3: How will people travel?

It is expected that new road schemes, such as the potential Luton East Circular road are unlikely to have an impact on the Chilterns Beechwoods SAC. Improvements to the M1 may encourage further transport into the SACs region. However, improvements to the M1 are unlikely to cause any significant effects on the site as the M1 is not directly connected to major roads that pass near to the SAC, such as the A4146 and the A41.

5.3.8 *Milton Keynes & South Midlands Sub-Regional Strategy (MKSMSRS), March 2005*

Key locations for growth in the sub-region are:

- Aylesbury
- Bedford/ Kempston/ Northern Marston Vale
- Corby, Kettering and Wellingborough
- Luton/ Dunstable/ Houghton Regis
- Milton Keynes
- Northampton

Although growth will be concentrated in the above towns, continued growth is also planned for other towns such as Daventry and Towcester. The closest of the above settlements to Chilterns Beechwoods SAC is Aylesbury, which lies approximately 12km west of the main body of the SAC and approximately 9km west of Tring Woods. Aylesbury is expected to accommodate 15,000 new homes and the Aylesbury Vale District has an employment growth target of 12,690 new jobs. Additional growth at Aylesbury (over and above that already allocated in local plans) is expected to be 'focused entirely on Aylesbury urban area'. Aylesbury town is expected to accommodate the 15,000 new homes (up to 2021) mentioned above whereas

the remainder of the district will accommodate 3,000 dwellings up to 2016. Some of this growth will likely be in the form of 'sustainable urban extensions to the north of the town'. According to the MKSMSRS, development proposals will need to prevent any increased environmental impact on green infrastructure, such as the Chilterns AONB.

Overall it was considered that the MKSMSRS contained no policies that were likely to cause significant adverse impacts on Chilterns Beechwoods SAC.

5.3.9 *Hertfordshire Minerals Local Plan (MLP) Review, Appropriate Assessment Draft Screening Report*

Overall, the impacts of the Minerals Local Plan on the Chilterns Beechwoods SAC were considered to be:

- Increased mineral extraction and recycling/reuse of aggregates
- Associated infrastructure requirements/traffic generation.
- After-use and changes in type and intensity of land use.

The possible environmental outcome of these policies is:

- increased transport emissions and air pollution from mineral extraction works affecting species and plant communities sensitive to air quality such as beech trees and epiphytes

- disturbance (direct and indirect) (dependent on location) from light, activity and noise from increased traffic and mineral extraction works affecting wildlife;

Potential impacts of air pollution on woodland regeneration at Epping Forest SAC and Wormley Hoddesdonpark Woods SAC were recognised in the MLP Screening Report. Increased air pollution may impact upon characteristic features of SACS, such as species assemblages (e.g. lichen) and mature trees (e.g. increased sensitivity to re-pollarding). The environmental impacts of the MLP on Chilterns Beechwoods SAC were, however, considered in the draft screening report to be minimal as they are addressed by existing Aims and Policies within the MLP. Most policies of the MLP were assessed as having 'no impact likely' or 'very low potential for habitat degradation.'

5.3.10 *Hertfordshire Waste Development Plan Documents/ Appropriate Assessment Screening for the Hertfordshire Waste Developments*

Two waste sites were identified in the Herts Waste DPDs Appropriate Assessment screening as having a risk of causing possible impacts on Chilterns Beechwoods SAC site integrity, Bovingdon Airfield and Bourne End Mills, located 4km and 7km away from the SAC respectively. Impacts expected were from additional eutrophication and acidification at the site, causing stress to veteran trees. Mitigation measures suggested in the Herts Waste DPDs Appropriate Assessment screening included:

- Provide enough waste management sites in Hertfordshire so that the county is self-sufficient in terms of waste management, and ensure that these sites are developed for waste management. This will reduce the need to use of the A41 and A4251 heading west past the Chiltern Beechwoods SAC for waste lorries and other site traffic.
- If monitoring shows that significant quantities of waste are still being exported westward, put in place conditions that restrict the use of the A41 and A4251 heading west past the Chiltern Beechwoods SAC by waste lorries and other site traffic.
- Avoid siting waste management facilities at Bovingdon Airfield (PS199) and Bourne End Mills (PS233) that would increase local air pollution by emitting NOx and other acidifying compounds, i.e. incinerator, landfill, compost windrow management, gasification/pyrolysis, anaerobic digestion.

Source: Appropriate Assessment Screening for the Hertfordshire Waste Development Plan Documents: Draft report for consultation (Levett Therivel, Treweek, 2007)

In agreement with Natural England it was concluded that the impacts identified in the Herts Waste DPDs Appropriate Assessment, if mitigated as suggested above, would not cause any in-combination effects with St Albans' CSIOP.

5.3.11 *Report on the Likely Significant Effects of Proposed Waste Sites on SACs/ SPAa in Buckinghamshire and Surrounding Area (Stage 1 Appropriate Assessment Screening)*
The Bucks Waste Sites AA screening examined seven separate waste sites and their potential impacts on Chilterns Beechwoods SAC. However, none of the sites were considered likely to cause a significant effect on the integrity of the SAC. It was therefore concluded (in this report) that there were unlikely to be any in-combination effects with St Albans' CSIOP.

5.4 Possible Combined Impacts of the Plans

It is possible that the measures proposed in some of the above plans, particularly the Dacorum/ St Albans Supplementary Issues and Options Paper (Growth at Hemel Hempstead), the draft South East Plan and the draft East of England Plan will have a combined impact on the Chilterns Beechwoods SAC in terms of bringing either people and cars (road schemes) or development closer to the SAC. Other SACs in the region, such as Burnham Beeches SAC, could also be impacted upon by the plans acting in combination with each other. The combined environmental impacts on Chilterns Beechwoods SAC, and to a lesser extent (because of geographical proximity) other SACs, could be:

- increased tourist pressure resulting in increased disturbance and noise affecting wildlife and trampling impacts affecting sapling regeneration from increased visitors;

- increased transport emissions and air pollution from increased private transport, mineral extraction works and traffic associated with waste facilities affecting species and plant communities sensitive to air quality, such as beech trees and epiphytes.

However, these are not considered to cause a significant adverse impact on the environmental conditions required to maintain the integrity of the SAC because SAC visitor numbers are not likely to increase significantly, and any proposed development sites are not sufficiently close to the SAC to cause localised air pollution impacts. Further, restrictions on development in the Chilterns AONB should help to ensure large-scale development is not in close proximity to the SAC.

5.4.1 *Regional Water Resources*

South East England is a densely populated region with low rainfall. Climate change may also cause water availability to decline in this relatively dry region[17]. It has been recognised by the Environment Agency[18] that development in Hertfordshire area would have a negative impact on already stressed water resources. Groundwater around Maidenhead and all of the Colne is closed to abstraction and is already over-abstracted. All other areas in the south east have resource availability statuses that are either over-licensed or no water available. Any large abstractions in this region would be detrimental to the water resources. Unconfined Chalk aquifers (in the Thame and South Chilterns CAMS) would be in hydraulic continuity with surface water features (i.e. SSSI's & SAC's). Any large surface water and groundwater abstractions in this area that would be granted (in less stressed catchments) would probably only be given in times of high flows. Therefore, large storage reservoirs would need to be considered.

In terms of water resource impacts on Chilterns Beechwoods SAC, as stated in section 3.3.4, 'Vulnerability', the SAC is not vulnerable to water abstraction in the region. This is reiterated in the Thame and South Chilterns Catchment Abstraction Management Strategy,[19] where the SAC is described as being 'not considered sensitive to water abstraction'. Nevertheless, mitigation measures to counter water shortages are required on a regional basis and this subject

[17] Environment Agency: Southern Region: Water and Development in the South East. Available on http://www.environment-agency.gov.uk/regions/southern/1458706/?lang=_e Accessed on 2/12/07

[18] Environment Agency, *pers. comm.*, 2/12/07, 3/12/07.

[19] Water Abstraction: getting the balance right. Thame and South Chilterns Catchment Abstraction Management Strategy, March 2007.

will also be addressed in the Sustainability Appraisal/ Strategic Environmental Assessment of the St Albans CSIOPs. Mitigation measures are described in section 6.2.

6 Final Screening Assessment

6.1 *Summary of the Assessment*

Table 1 in the Non-technical Summary summarises the results of the analysis of the potential impacts of the St Albans CSIOPs on the integrity of the Chilterns Beechwoods SAC, including 'in combination' with other plans.

6.2 *Possible mitigation measures*

Increased development in South Herts and the surrounding counties and increased accessibility to Chilterns Beechwoods and other SACs were not considered to lead to significant adverse impacts on Chilterns Beechwoods.

It was recommended in Table 1 that Option 21(c*): Seeking to increase net out-commuting, by meeting the need for new employment land outside the district* should only be pursued under certain circumstances, described in section 4.2. If this recommendation is adhered to then further mitigation measures to prevent adverse impacts on Chilterns Beechwoods SAC would not be necessary. However, two mitigation measures are suggested below as a precautionary measure to prevent any adverse affects from the St Albans CSIOPs in the future:

6.2.1 *Recreation impacts: mitigation*

St Albans City and District Council and other councils in the region could consider providing new or improving on existing 'Suitable Accessible Natural Green Spaces' (SANGS)[20]. This would need to be suited to local circumstances and the reasons why the site (i.e. Chilterns Beechwoods SAC) was designated under the Habitats Directive. Table 8, below, shows a SANGS example that was created to provide protection for breeding birds. SANGS for Chilterns Beechwoods SAC would need to consider mitigating recreational impacts that are specific to Chilterns Beechwoods SAC.

[20] Guidelines for the creation of Suitable Accessible Natural Green Space. Natural England, 03.07.07.

Table 8: SANGS Case Study – Thames Basin Heaths SPA

Role of Suitable Accessible Natural Green Space (SANGS): to divert visitors from visiting the Thames Basin Heath Special Protection Area (SPA).

Background

- SPA consists of 13 SSSIs comprising varied habitats. SPA was designated in 2005 under the Habitats Regulations (1994) to protect populations of three internationally threatened bird species that use the heathlands: woodlark, nightjar and Dartford warbler.
- Threats to SPA: e.g. disturbance during breeding period (February to August) by visitors, including freely roaming dogs.
- Recent survey showed that 83% of visitors to the SPA arrived by car
- Planning Policy Guidance (PPG) Note 17 requires local authorities to set green space standards locally but these should 'include aspects of quantity, quality and accessibility'[9].

Mitigation

The Thames Basin Heath draft delivery plan was created to provide advice on how open space provision can ensure that any potential effect on the SPA is fully mitigated.

SANGS guidelines were created, primarily based on visitor surveys carried out at heathland sites within the Thames Basin Heaths area or within the Dorset Heathlands. Guidelines follow a checklist for ensuring the quality of the SANGs, e.g. ensuring car parking, paths, habitats, safety and circular walks are adequately catered for.

Source: based on 'Guidelines for the creation of Suitable Accessible Natural Green Space. Natural England, 03.07.07'

6.2.2 *Water resource impacts: mitigation*

The following mitigation measure has been adapted from the Environment Agency's water resource planning that the Agency prepared in response to development proposed in the South East Plan[21]:

Improved water efficiency/changing behaviour and attitude - new dwellings will need to be more water efficient in their design. Water must also be used more wisely in existing homes. Water meters can be used in existing properties and appliances can be replaced with more water efficient ones over time. The London Plan[22] has imposed a water use target for residential development (arrived at following extensive research for the Mayor's Water Action Framework and the Sustainable Design and Construction Supplementary Planning Guidance). The target is 110 litres per person per day and is to be achieved through using water efficient fixtures and fittings, including white goods.

All counties and districts in the South East will need to consider how best to cause minimal impact on available water resources. This may include decisions on where new development should be located. Such decisions could be made in consultation with the Environment Agency and Natural England as ultimately the Environment Agency would need to issue water abstraction licenses. The mitigation measure described above is considered to be a best practice measure to be considered by St Albans City and District Council to reduce water abstraction impacts in the wider region but is not specifically recommended to protect the integrity of the Chilterns Beechwoods SAC.

6.3 *The Requirements for further AA*

This screening assessment (summarised in Table 1 in the Non-technical Summary), developed in consultation with Natural England, considers that the combined impacts of the St Albans Issues and Options, together with other relevant plans and programmes are not considered to compromise the Chilterns Beechwoods SAC conservation objectives.

The findings of Task AA1-5 are that impacts are not considered to be significant if St Alban's CSIOP Option 21(c): *Seeking to increase net out-commuting, by meeting the need for new employment land outside the district'* is only pursued under certain circumstances (described in section 4.2) in order to

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[21] Environment Agency: Southern Region: Water and Development in the South East. Available on http://www.environment-agency.gov.uk/regions/southern/1458706/?lang=_e Accessed on 2/12/07

[22] Draft Further Alterations to the London Plan (Spatial Development Strategy for Greater London) September 2006

reduce the need for construction works being built relatively close to the SAC and new road building. If these recommendations are followed, this should help to mitigate localised traffic and air pollution effects on the SAC.

It is therefore considered unnecessary to undertake a full Appropriate Assessment on the St Albans CSIOPs. It is also considered that this AA screening report will suffice for any future Site Allocations produced by St Albans City and District Council, providing the Allocations are within the spatial boundaries set by the St Albans Core Strategy. This AA screening report should suffice for all future policies and site allocations produced by St Albans City and District Council provided they are in the boundaries set by the Core Strategies (including Dacorum's Core Strategy). Any future plans that are likely to cause an increase in key impacts (i.e. recreation, air pollution) or other impacts that might adversely affect the conservation objectives of the SAC (for example, significant impacts within 5km of the SAC) may need to be examined as either an addendum to this screening report or as part of a full Appropriate Assessment.

Glossary

Core Strategy Issues and Options Development Plan (CSIOP).	The Core Strategy is a key part of each council's Local Development Framework (LDF). Issues and Options Development Plans set out possible development options (e.g. location options for new employment or residential development sites) for the council's administrative region.
Development Plan Document (DPD)	A DPD sets out development options for the region and mirrors the key development goals of the LDF. Examples of DPDs include the Core Strategy (as used in this report), Site Allocations and Area Action Plans.
Appropriate Assessment (AA)	An assessment of the potential impacts of a proposed plan on a Natura 2000 site, either alone or in combination with other plans
Natura 2000	A network of European-wide sites designated under the Habitats Directive (92/43/EEC), comprising Special Areas of Conservation, Special Protection Areas and Ramsar sites. Only Special Areas of Conservation are relevant to this report.
Special Area of Conservation (SAC)	SACs are designated to protect the 220 habitats and approximately 1000 species listed in Annex I and II of the Habitats Directive which are considered to be of European interest following criteria given in the directive. Each SAC has various conservation objectives.
Site of Special Scientific Interest (SSSI)	SSSIs are designated by Natural England. They underpin other nature conservation designations, such as Special Protection Areas and Special Areas of Conservation. For example, Chilterns Beechwoods SAC comprises several SSSIs. SSSIs can be of biological interest (Biological SSSIs), or geological interest, (Geological SSSIs). A minority of sites are notified for both biological and geological interest.

Appendix 1 – Plans, Programmes and Policies examined in relation to St Albans' CSIOP

Appendix 1: Plans, Programmes and Policies examined in relation to St Albans' CSIOP

The following plans, programmes and policies were examined as part of the AA screening process. Plans that were considered to have an in-combination effect with the Issues and Options are repeated and described in the main body of this screening report.

International

Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979)	
The convention aims: To conserve wild flora, fauna and natural habitats To promote co-operation between states To give particular attention to endangered and vulnerable species, including endangered and vulnerable migratory species Appendices provide detailed information on species and habitats protected under the convention.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Obligations for contracting parties: conservation of wild flora and fauna and all natural habitats in general, by Promoting national conservation policies Taking conservation into account in regional planning policies and pollution abatement Promoting education and information	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.
The Convention on Biological Diversity, Rio de Janeiro (1992)	
The convention is designed to conserve biological diversity, ensure the sustainable use of this diversity and share the benefits generated by the use of genetic resources.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Each contracting party should (article 6a) Develop national strategies for the conservation and sustainable use of biological diversity Integrate the conservation and sustainable use of biological diversity into relevant sectoral and cross-sectoral plans, programmes and policies	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.

Kyoto Protocol on Climate Change (UN, 1997)	
The Kyoto Protocol supports the United Nations Framework Convention on Climate Change which sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Under the Kyoto Protocol, the 15 core EU member countries have agreed to set emission reduction targets. The targets cover emissions of the six main greenhouse gases, namely: • Carbon dioxide (CO2); • Methane (CH4); • Nitrous oxide (N2O); • Hydrofluorocarbons (HFCs); • Perfluorocarbons (PFCs); and • Sulphur hexafluoride (SF6) The EU countries have committed themselves to reducing their collective emissions of six key greenhouse gases by at least 5% (from 1990 levels) by the period 2008-2012.	No significant in-combination effects with Issues and Options or other plans. Core Strategy need to contain measures that will reduce emissions of these gases, to reflect with (and exceed) the targets of the Kyoto Protocol, e.g. maximising public transport and minimising private transport.
The UN Millennium Declaration and Millennium Development Goals (2002)	
All 191 UN member states set out eight millennium development goals which should be met by 2015.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
'We must tackle, issues of climate change, preserving biodiversity, managing our forests and water resources, and reducing the impacts of natural and man-made disasters.'	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.
World Summit on Sustainable Development - Earth Summit (2002)	
The Johannesburg Summit 2002 – the World Summit on Sustainable Development – aimed to address difficult challenges, including improving people's lives and conserving our natural resources in a world that is growing in population, with ever-increasing demands for food, water, shelter, sanitation, energy, health services and economic security.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Greater resource efficiency Waste reduction Promotion of renewable energy Significantly reduce loss of biodiversity by 2010	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.

European

EU Habitats Directive (1992- amended 1997)	
The aim of this Directive is to contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora in the European territory of the Member States to which the Treaty applies. Measures taken pursuant to this Directive are designed to maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of Community interest.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Article 3.1: Maintain or restore in a favourable condition designated natural habitat types, and habitats of designated species listed in Annexes I and II respectively of the Directive. Article 6.2: Take appropriate steps to avoid degrading or destroying natural habitats within SACs, and avoid disturbance of designated species insofar as this would result in further decline in numbers or the loss of habitat that maintains the species. Article 6.3: Any plan or project not directly concerned with the management of a designated site (SAC/SPA), but which is likely to have a significant impact on it (individually or in combination with other projects), should undergo assessment of its implications for the conservation objectives of the site. Article 6.4: If the project must proceed in the public interest and in spite of negative conservation impacts, including social or economic reasons, compensatory measures must be provided for. The Article provides limited scope for development in designated areas. It is only acceptable on grounds of human health and safety (but not economic development) if it affects habitats supporting protected species. Article 10: Linear structures such as rivers/streams, hedgerows, field boundaries, ponds, etc., that enable movement and migration of species should be preserved.	As the key piece of legislation that requires the Appropriate Assessment process to take place, the Habitats Directive is a fundamental part in ensuring that the Issues and Options will have no negative impacts on the integrity of the SACs.
EU Directive on Ambient Air Quality and Management (1996/62/EC)	
Introduces new air quality standards for previously unregulated pollutants, setting the timetable for the development of daughter directives on a range of pollutants. The list of atmospheric pollutants to be considered includes sulphur dioxide, nitrogen dioxide, particulate matter, lead and ozone – pollutants governed by already existing ambient air quality objectives- and benzene, carbon monoxide, poly-aromatic hydrocarbons, cadmium, arsenic, nickel and mercury.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SACs
Establishes mandatory standards for air quality and sets limits and guides values for sulphur and nitrogen dioxide, suspended particulates and lead in air.	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.
EU Directive Establishing a Framework for the Community Action in the Field of Water Policy (2000/60/EC) – The Water Framework Directive	
Requires all Member States to achieve 'good ecological status' of inland water bodies by 2015, and limits the quantity of groundwater abstraction to that portion of overall recharge not needed by ecology.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC

To achieve 'good ecological status' of inland water bodies by 2015	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.
EU Sustainable Development Strategy (2001)	
In June 2001, the European Council at Göteborg discussed a strategy for Sustainable Development proposed by the European Commission ("A sustainable Europe for a better world: A European strategy for Sustainable Development") This strategy proposed measures to deal with important threats to our well being, such as climate change, poverty, and emerging health risks, which had been identified in a consultation paper in March 2001.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Combating poverty and social exclusion Dealing with the economic and social implications of an ageing society Limit climate change and increase the use of clean energy Address threats to public health Manage natural resources responsibly Improve the transport system and land use management	Provides European context for the promotion of sustainable development.
Environment 2010: Our Future, Our Choice - EU Sixth Environment Action Programme (2002)	
The latest Environment Action Programme gives a strategic direction to the Commission's environmental policy over the next decade, as the Community prepares to expand its boundaries. The new programme identifies four environmental areas to be tackled for improvements: Climate Change Nature and Biodiversity Environment and Health and Quality of Life Natural Resources and Waste	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Recognises that land use planning and management decisions in the Member States can have a major influence on the environment, leading to fragmentation of the countryside and pressures in urban areas and the coast. Also includes objectives on stabilising greenhouse gases, halting biodiversity loss, reducing pollution and resource use. Under the EAP framework, Thematic Strategies are being developed on: Air quality Soil Protection Sustainable use of Pesticides Marine Environment Waste Prevention and Recycling Sustainable Use of Natural Resources Urban Environment	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.

National

PPS1: Delivering Sustainable Development	
The document sets out the key policies and principles and the Government' vision for planning. It includes high level objectives and sets out the framework for specific policies further developed in the thematic Planning Policy Statements which will substitute the current PPG documents.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Sustainable development is the purpose of planning. Communities need to be actively involved in the planning process, which is not simply regulations and control but must become a proactive management of development. These overarching objectives inform specific objectives such as promotion of urban and rural regeneration, of local economies, of inclusive, healthy and safe communities.	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.
PPG 2 – Green Belts	
The Guidance indicates the underpinning aims of the Green Belt policy and its contribution to sustainable development objectives.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
There should be a general presumption against inappropriate development in the Green Belt. When any large scale development or redevelopment occurs within the Green Belt, it should contribute towards the objectives provided in para. 1.6 of the guidance note.	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SA from this plan.
PPS 7 – Sustainable Development in Rural Areas	
Quality of life and the environment in rural areas need to be enhanced through the sustainable development of communities and their environment.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Requires that development within and outside existing villages should be permitted where it meets local economic and community needs, where it maintains or enhances the environment and does not conflict with other policies.	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.
PPS 9 – Biodiversity and Geological Conservation	
This guidance note replaced PPG9 and sets out a series of key principles which need to be taken into consideration when preparing local development documents and regional spatial strategies: Decisions should be based upon up-to-date information about the environmental characteristics of the area. Decisions should seek to maintain, or enhance, or add to biodiversity and geological conservation interests. A strategic approach to the conservation and enhancement of biodiversity and geology should be taken. Developments seeking to conserve or enhance the biodiversity and geological conservation interests of the area should be encouraged. LPAs should consider whether proposed developments can be accommodated without causing harm to biodiversity and geological conservation interests. Where development will result in unavoidable and significant adverse impacts, planning permission for it should only be granted where adequate mitigation measures are put in place.	

Development policies should promote opportunities for the incorporation of beneficial biodiversity and geological features within the design of development.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Points specific to LDDs are: When identifying designated sites of importance for biodiversity and geodiversity on the proposals map, clear distinctions should be made between the hierarchy of international, national, regional, and locally designated sites. Biodiversity objectives that reflect both national and local priorities, including those which have been agreed by local biodiversity partnerships, should be reflected in policies in local development documents and proposals. Local planning authorities should ensure that all policies in local development documents and proposals are consistent with those biodiversity objectives. Other areas covered by the guidance are: Biodiversity interest of: International sites, SSSIs, regional and local sites Ancient woodlands Networks of natural habitats Previously developed sites Biodiversity within developments Species protection PPS 9 includes no targets or indicators.	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.
PPG 13 – Transport	
The objectives of this guidance are to integrate planning and transport at the national, regional, strategic and local level to promote more sustainable transport choices for both people and for moving freight, so to enhance accessibility by public transport and reduce the need to travel, especially by car.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Actively manage the pattern of urban growth and the location of major travel generating development to make the fullest use of public transport, and to encourage walking and cycling. Land use planning should facilitate a shift in transport of freight from road to rail and water. Attention should be paid to the value of disused transport sites and effort made to prevent their loss to different land uses. Traffic management measures to should be designed to reduce environmental/social impacts, whilst fiscal measures should be used for tackling congestion.	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.
PPG 21 – Tourism	
This PPG outlines the economic significance of tourism and its environmental impact, and therefore its importance in land-use planning. It explains how the needs of tourism should be dealt with in development plans and in development control.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Ensure land use is distributed and managed in such a way that it supports the qualities that underpin the	No significant in-combination effects with Issues and

tourism industry.	Options or other plans.
Good Practice Guide on Planning for Tourism	
The guide is designed to: • ensure that planners understand the importance of tourism and take this fully into account when preparing development plans and taking planning decisions; • ensure that those involved in the tourism industry understand the principles of national planning policy as they apply to tourism and how these can be applied when preparing individual planning applications; • ensure that planners and the tourism industry work together effectively to facilitate, promote and deliver new tourism developments in a sustainable way.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Guidance to developers includes advice to: • protect and improve biodiversity. New development should not only protect nature conservation interests (whether it is a statutory requirement or not), but can provide an opportunity to improve biodiversity in an area, for example through the creation of new features of wildlife interest. Such initiatives can complement the wider objectives of tourism developments by increasing the attractiveness of the development to visitors;	No significant in-combination effects with Issues and Options or other plans.
Wildlife and Countryside Act 1981 (as amended)	
The act implements the Convention on the Conservation of European Wildlife and Natural Habitats (the 'Bern Convention') and the European Union Directives on the Conservation of Wild Birds and Natural Habitats. The Act is concerned with the protection of wildlife and their habitat (countryside, national parks and designated protected areas).	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Addresses the problem of species protection and habitat loss by setting out the protection that is afforded to wild animals and plants in Britain.	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.
UK Biodiversity Action Plan - UK BAP (Defra, 1994)	
The UK BAP is the UK Government's response to the Convention on Biological Diversity (CBD) signed in 1992, describes the UK's biological resources, and commits a detailed plan for the protection of these resources. It contains of 391 Species Action Plans, 45 Habitat Action Plans and 162 Local Biodiversity Action Plans with targeted actions.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
To maintain, promote and enhance biodiversity	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.

England Forestry Strategy: A strategy for England's Trees, Woods and Forests (2007)	
The Strategy sets out the Government's vision for England's tree and woodland resource, in both rural and urban areas, over the next fifty years. Our priorities are to make sure that trees and woodlands play their part in meeting Government's goals for natural resources, climate change, improved urban environments and a better quality of life for all.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The EFS has five aims for government intervention in trees, woods and forests: • to secure trees and woodlands for future generations; • to ensure resilience to climate change; • to protect and enhance natural resources; • to increase the contribution that trees, woods and forests make to our quality of life; and; • to improve the competitiveness of woodland businesses and products.	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.
UK Air Quality Strategy (ODPM, 2000)	
This Strategy describes the plans drawn up by the Government and the devolved administrations to improve and protect ambient air quality in the UK in the medium-term. The plan sets a number of air quality objectives for pollutants including sulphur dioxide, nitrogen dioxide, particulate matter, lead and ozone.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Some of the aims of the air quality strategy are to: To provide the best practicable protection to human health by setting health based objectives for eight main air pollutants (objectives are maximum recommended exposure levels) To contribute to the protection of the natural environment by setting objectives for two pollutants (nitrogen and sulphur dioxide) for the protection of vegetation and ecosystems	No significant in-combination effects with Issues and Options or other plans. Issues and Options should aim to comply with the UK Air Quality Strategy.
Countryside and Rights of Way Act – CRoW (ODPM, 2000)	
CRoW extends the public's ability to enjoy the countryside whilst also providing safeguards for landowners and occupiers. It creates a new statutory right of access to open country and registered common land, modernise the rights of way system, give greater protection to Sites of Special Scientific Interest (SSSIs), provide better management for Areas of Outstanding Natural Beauty (AONBs), and strengthen wildlife enforcement legislation. Emphasises the public's right of access to open country and common land.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Part I of the Act creates a new right of access to open country and registered common land Part II of the Act modernises the law on public rights of way Part III of the Act gives greater protection to sites of special scientific interest (SSSIs), and strengthens wildlife protection Part IV of the Act provides new powers to set up Conservation Boards for the better management of areas of outstanding natural beauty (AONBs), and requires certain bodies to have regard for AONBs when doing anything which would affect the land in those areas	No significant in-combination effects with Issues and Options or other plans.

Government Rural White Paper: Our Countryside, the future – A deal for rural England (DETR, 2000)	
To maintain and protect a living and vibrant countryside, the government has identified a number of key actions, all informed by the principles of sustainable development.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
There are five objectives, which will be transposed into the Service Delivery Agreements: Facilitate sustainable economies Maintain and stimulate communities ensuring fair access to services Conserve rural landscape and wildlife Increase opportunities to enjoy the countryside Promote collaboration amongst all Government tiers to ensure responsiveness to local communities' requests.	No significant in-combination effects with Issues and Options or other plans.
'Working with the Grain of Nature': A Biodiversity Strategy for England (2002)	
The Strategy seeks to ensure biodiversity considerations become embedded in all main sectors of public policy and sets out a programme for the next five years to make the changes necessary to conserve, enhance and work with the grain of nature and ecosystems rather than against them.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Ensures biodiversity considerations are embedded in all main sectors of economic activity. (It is the principal means by which the government will comply with duties under section 74 of the CRoW Act).	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.
The Future of Transport – UK white paper on transport (2004)	
Sets out a long term strategy for a modern, efficient and sustainable transport system over the next 8 years (to 2015) and provides a vision for UK transport in 2030.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Environmental objectives: • the road network providing a more reliable and freer-flowing service for both personal travel and freight, with people able to make informed choices about how and when they travel; • the rail network providing a fast, reliable and efficient service, particularly for interurban journeys and commuting into large urban areas; • bus services that are reliable, flexible, convenient and tailored to local needs; • making walking and cycling a real alternative for local trips; and • ports and airports providing improved international and domestic links.	No significant in-combination effects with Issues and Options or other plans although the White Paper does allow for new road capacity 'where it is needed, assuming that any environmental and social costs are justified.' Chilterns Beechwoods SAC may be affected by future increases in road capacity but at this stage impacts are not considered to be significant.
England Rural Strategy (2004)	
The Rural Strategy 2004 sets out the Government's new approach to policy and delivery of the rural white paper.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC

It identifies three key priorities for rural policy. Economic and Social Regeneration – supporting enterprise across rural England, but targeting greater resources at areas of greatest need Social Justice for All – tackling rural social exclusion wherever it occurs and providing fair access to services and opportunities for all rural people Enhancing the Value of our countryside - protecting the natural environment for this and future generations	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.
Securing the Future – UK Government Sustainable Development Strategy (2005)	
This strategy aims to promote sustainable development. It contains Five principles (with a more explicit focus on environmental limits) Four agreed priorities (sustainable consumption and production, climate change, natural resource production and sustainable communities) A new indicator set with new indicators such as on well being	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The new objectives included within the strategy are: Living within environmental limits Promoting good governance Using sound science responsibly	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.
UK Biodiversity Action Plan: Habitat Action Plan: Lowland Beech and Yew Woodland	
Sets out a series of objectives to conserve these habitats, as listed below.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
• Maintain the total current extent (c. 30,000 ha) of lowland beech and yew woodland. • Establish by colonisation or planting a further 1,500ha of lowland beech and yew woodland on unwooded sites or by conversion of non-native plantations by 2015 • Maintain the existing area of ancient semi-natural lowland beech and yew woodland (estimated to be between 15000 and 20000ha). • Initiate by 2004 measures intended to achieve favourable condition in 100% of lowland beech and yew woodland within the SSSI/ASSIs and Special Areas of Conservation • Initiate by 2004 measures intended to achieve favourable condition in 80% of the total resource of lowland beech and yew woodland • Achieve favourable condition over 70% of the designated sites by 2010. • Achieve favourable condition over 50% of the total resource by 2010. • Restore to site-native species at least 750 ha of former lowland beech woodland which has been converted to non-native plantations on ancient woodland sites, by 2010. • Restore to site-native species at least a further 750 ha of former lowland beech woodland which	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.

has been converted to non-native plantations on ancient woodland sites, by 2015. • Establish by colonisation or planting 1,500 ha of lowland beech and yew woodland on unwooded sites or by conversion of non-native plantations by 2010.	

Regional

The Integrated Regional Framework (IRF) (SE)	
The IRF replaces a previous Sustainable Development Framework. The IRF includes separate sections on the range of strategies in the region, on data and trends for each objective. A Sustainability Appraisal Guide was published as a supplement to the IRF in 2005. The Guide aims to encourage organisations, businesses and community groups to review their own plans and strategies against the region's 25 key objectives to see how each organisation can contribute to improving quality of life and sustainability in the region.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The IRF comprises a set of 25 objectives for the region. These are split into four categories: Social progress that recognises the needs of everyone – 9 objectives Effective protection of the environment – 6 objectives Prudent use of natural resources – 4 objectives Maintenance of high and stable levels of economic growth – 6 objectives	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.
Our Environment, Our Future – The Regional Environmental Strategy for the East of England (2003)	
The document sets out the Environment Strategy for the East of England and provides a description of the current state of the following topics: landscape and natural environment, biodiversity, historic environment, built environment.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
It identifies 5 key environmental challenges for the region and suggests strategic aims for each of those: Delivering sustainable patterns and forms of development Meeting the challenges and opportunities of climate change Ensuring environmental sustainability in the economy Enhancing environmental capital Achieving sustainable lifestyles The strategy does not contain quantified targets, but does suggest an indicator for each key action within each strategic aim.	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.

Sustainable Development Framework for the East of England (2001)	
The Sustainable Development Framework sets out a vision for sustainable development in the region, and identifies the region's contribution to sustainable development at the national level. As a high level document, the Framework is not an action plan, but should inform and guide regional and local strategies and action plans. Accordingly, the SDF should influence the way in which decisions are taken, so that they reflect the principles of sustainable development. Decision-makers in regional and local government, business, and all walks of life should use the Framework as a reference point to consider the contribution they can make to a more sustainable region. The Framework will be regularly updated to reflect changing circumstances, new information, and progress towards sustainable development.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The SDF aims to: • Promulgate a high-level vision for sustainable development in the East of England to which key partners can subscribe, distinctive to the region although linked to the UK strategy for sustainable development. • Set out agreed sustainable development objectives for the region, and set priorities with the help of regional indicators. • Provide a basis for monitoring whether progress is being made towards greater sustainability, and a benchmark for appraisal of regional strategies and plans. • Influence and direct other regional and local strategies and contribute to the development of an integrated SDF Natural Environment Objectives: • To ensure appropriate planning policies are in place and implemented to minimise adverse environmental impacts, recognise and support environmental limits, and provide the highest level of protection for irreplaceable natural features (e.g. traditional species rich grassland, ancient woodlands, tranquil areas), aiming for no net environmental loss. • To support standards, regulations, and economic instruments to safeguard and enhance environmental quality. • To ensure the region is covered by local BAPs that are actively being implemented. • To restore the full range of characteristic habitats and species to achieve BAP targets, and maintain or enhance other natural assets (e.g. reedbeds) to secure the regional stock above viable levels.	The SDF aims to support BAPs and restore habitats and species to help achieve BAP targets. Other elements of the SDF are unlikely to negatively impact on the SAC as they describe best practice sustainability measures. For example, the transport section aims to increase use of public transport and walking and cycling.

Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
• To create or re-create habitats to ensure sustainable and linked species populations (e.g. Breckland and Suffolk Sandlings heaths). • To encourage people to come into contact with, understand, and enjoy nature. • To raise awareness of the link between use of natural resources and environmental impacts. • To support farming and countryside practices that enhance biodiversity and landscape quality by economically and socially valuable activity (e.g. grazing, coppicing, nature reserves). • To encourage coastal management in accordance with natural processes. • To manage water quality and water resources to maximise value to people and wildlife.	
Draft East of England Plan (2004)	
The plan provides the statutory framework for local development plans for at least the next 20 years. Its overall aims are ensuring economic growth while promoting sustainable development and renewable energy. Its examination in public will take place this year.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Increase prosperity and employment growth Improve social inclusion and access to employment and services Maintain and enhance cultural diversity Increase the regeneration and renewal of disadvantaged areas Deliver more integrated patterns of land use Sustain and enhance the vitality of town centres Make more use of previously developed land meet the region's identified housing needs, and in particular provide sufficient affordable housing Protect and enhance the built and historic environment and encourage good quality design and use of sustainable construction methods for all new development Protect and enhance the natural environment, including its biodiversity and landscape character Minimise the demand for use of resources, particularly water, energy supplies, minerals, aggregates, and other natural resources, whether finite or renewable, by encouraging efficient use, re-use, or use of recycled alternatives, and trying to meet needs with minimum impact Minimise the environmental impact of travel, by reducing the need to travel, encouraging the use of more environmentally friendly modes of transport, and widening choice of modes Minimise the risk of flooding The plan sets targets for most of its key objectives (e.g. renewable energy target of 17% by 2020). The plan proposes 61 indicators relating to both specific targets and regional context.	Discussed in main body of report

Draft Revision to Regional Spatial Strategy for the East of England: Secretary of State's Proposed Changes and Further Proposed Changes. Report of the Habitats Directive Assessment (under the Habitats Regulations) (October 2007)	
To determine likely effects of the Plan on Natura 2000 sites within the region. The AA report focuses on avoiding and mitigating for impacts associated with the East of England Plan, whilst recommending that AAs are carried out separately for more local-level plans and projects.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
To determine likely effects of the Plan on Natura 2000 sites within the region.	No significant effects were predicted for Chilterns Beechwoods SAC.
A Shared Vision: The Regional Economic Strategy for the East of England (2004)	
The RES is the framework within which many different organisations can work with businesses, communities and individuals to improve the region's economic performance and the quality of life of those who live and work here.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The RES has the following goals: • a skills base that can support a world-class economy • growing competitiveness, productivity and entrepreneurship • global leadership in developing and realising innovation in science, technology and research • high quality places to live, work and visit • social inclusion and broad participation in the regional economy • making the most from the development of international gateways and national and regional transport corridors • a leading information society • an exemplar for the efficient use of resources.	No direct relevance to the SAC.
Sustainable Communities in the East of England – Building for the Future (2004)	
This regional programme of action sets out proposals for maintaining and creating sustainable communities in the East of England. The programme of action does not attempt to cover all the issues of importance to communities. It highlights actions to address housing, planning and neighbourhood renewal issues.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Key issues for the region highlighted in the report are: • Addressing problems of high and rapidly rising house prices and their impact on the recruitment and retention of staff, particularly close to London and around Cambridge but spreading deeper into the region. • Improving transport infrastructure – railways, roads, airports and ports to meet the needs of economic growth. • Ensuring that the benefits of economic growth are spread across the region, particularly to those urban and rural communities facing problems of deprivation and peripherality.	Policies in 'Sustainable Communities in the East of England' which promote housing, employment and infrastructure development have the potential for a range of effects on the Natura 2000 sites in and around South Hertfordshire in a similar way to the (Draft) East of England Plan. These potential effects could be mitigated against by other policies which seek to protect and enhance nature conservation sites in the region.

• Addressing the development consequences of scarce water resources throughout the region and an increasing sea level	
Regional Transport Strategy for the East of England (Chapter 8, Draft East of England Plan)	
The Regional Transport Strategy investigates the current state of the transport network in the East of England and sets out a strategy up to and beyond 2016. The strategy acknowledges that biodiversity (designated areas), landscape, flood risk, air quality and natural heritage can impose environmental constraints on the transport system.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
These include: • Reduce the need to travel • Reduce the transport intensity of economic activity, including freight • Minimise the environmental impact of transport provision and travel, protecting and enhancing the natural, built and historic environment The RTP also seeks to increase and promote non-private car transport and the carriage of freight by rail and water as well as stimulating the 'efficient use of the existing transport infrastructure'	No significant in-combination effects with the Issues and Options or other plans.
Milton Keynes & South Midlands Sub-Regional Strategy, March 2005	
Comprises an overarching strategy and key spatial diagram for the whole of the sub-region and a set of separate statements providing more specific guidance for all of the growth towns.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The Strategy aims to: • Provide strategic guidance on the scale, location and timing of development and associated employment, transport, and other infrastructure to 2021 and the necessary delivery mechanisms; and • Provide a longer-term perspective for the sub-region to 2031 in the form of uncommitted planning assumptions subject to later review	No significant in-combination effects with Issues and Options or other plans
Woodland for Life Regional Woodland Strategy for East of England (2004)	
The Regional Woodland Strategy for the East of England provides a number of strategies for the enhancement, over the next 20 years, of the benefits that trees and woodlands bring to the people who live and work in the region. Six broad themes are identified that have a bearing on the woodland and trees of the region: quality of life, spatial planning, economic development, renewable energy, education and learning and natural environment.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The strategy is comprised of various key strategic initiatives: 1. Education and Learning: Opportunities for lifelong learning 2. Natural Environment: climate change adaptation, soil and water safeguards, integrated biodiversity,	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.

protecting ancient assets 3. Spatial Planning: 'green' planning, woodland protection, greener road corridors 4. Quality of life: access provision, promoting health benefits, landscape enhancement, community engagement 5. Economic development: woodland tourism, sustainable timber, business competitiveness, improved timber quality 6. Renewable energy: wood for heat.	
The London Plan (2004)	
Although Hertfordshire is located in the East of England region, parts of it adjoin both the South East and the London Regions. The London Plan forms the spatial development strategy for Greater London.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Amongst others the London Plan aims to accommodate London's growth within its boundaries.	No significant in-combination effects with Issues and Options or other plans.
Draft South East Plan (2006)	
Although Hertfordshire is located in the East of England region, parts of it adjoin both the South East and the London Regions. The South East Regional Plan provides the statutory framework for local development frameworks in the South East and addresses issues such as housing, transport, economy and the environment.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
• Regional Transport Strategy • Renewable Energy • Tourism • Minerals and Waste • Milton Keynes Growth Area • Ashford Growth Area	The proposed housing and economic growth, as well as infrastructure projects (e.g. expansion of Heathrow airport and widening of M25) could have direct and indirect impacts on Hertfordshire, although no significant effects are anticipated for the SAC.
Appropriate Assessment of the Draft South East Plan, October 2006	
To determine likely effects of the Plan on Natura 2000 sites within the region. The AA report focuses on avoiding and mitigating for impacts associated with the South East Plan, whilst recommending that AAs are carried out separately for more local-level plans and projects.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
To determine likely effects of the Plan on Natura 2000 sites within the region.	No significant in-combination effects with Issues and Options or other plans.
Sustainable Futures: The Integrated Regional Strategy for the East of England (2005)	
The Integrated Regional Strategy (IRS) is an EERA led strategic initiative, the vision for which is: 'to improve the quality of life for everyone who lives or works	

in the East of England'. It aims to promote greater regional integration.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Amongst others the strategy states the following outcomes: Strong, inclusive, healthy and culturally rich communities A high quality and diverse natural and built environment A more resource-efficient region Some priorities are identified for the region: Achieve high quality and sustainable solutions in growth and other areas Address the causes and implications of persistent deprivation and social exclusion Increase efficiency of resource use and the management of the region's distinctive natural and built environmental assets The IRS includes no specific targets.	No significant in-combination effects with Issues and Options or other plans.
Chilterns AONB Management Strategy: The Framework for Action 2002-2007	
Management and policy framework for protecting and enhancing the Chilterns AONB. Contains policies and actions which need to be reflected in LDFs.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Measures to safeguard, protect and enhance the Chilterns.	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.
Chilterns Landscape Forest Design Plan	
Sets out the medium to long term management objectives for the Forestry Commission woodlands that are situated between Dunstable, in Bedfordshire, Beaconsfield in South Buckinghamshire and Henley in Berkshire. All except three of these woodlands are situated within the Chilterns Area of Outstanding Natural Beauty (AONB).	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
To deliver the vision set out in the Chilterns AONB Management Plan. Key aspects of this vision include the provision of a special place for local people and visitors, a beautiful and rich landscape of national importance, a place of living, vibrant communities and a place that is valued and understood by the people who live in, work in or visit the Chilterns.	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SAC from this plan.
A Housing Strategy for the London Commuter Belt Sub-Region 2005-2008	
The London Commuter Belt Sub- Region (LCBSR) is the largest of the nine sub-regions in the East region, and includes parts of Hertfordshire.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
This sub regional housing strategy sets out the following vision To enable growth, to provide for the needs of homeless people and those who require affordable housing, whilst protecting the environment To create and maintain sustainable communities and achieve social inclusion	No direct impacts on Chilterns Beechwoods SAC.

Local (County)

Hertfordshire Structure Plan 1991-2011	
The Hertfordshire Structure Plan sets out the broad directions in which Hertfordshire should change and develop in the future. It covers the period to 2011 and the Council has undertaken technical work to decide what changes (termed 'alterations') may be needed to roll the plan forward another five years to 2016.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Some of the general aims of the plan are: • Encourage economic growth consistent with environmental constraints • Make provision for the housing and social needs of people in ways which minimise the need to travel • Improve people's quality of life • Avoid pollution in all its forms, in particular pollution of ground and surface water resources • Contain road traffic growth and encourage walking, cycling and greater use of passenger transport • Conserve the County's critical capital and other important environmental assets, including its landscape, ecological, built and archaeological heritage, and safeguard the County's area of Green Belt • Conserve natural resources, in particular the County's best and most versatile agricultural land • Minimise resource depletion and make the most efficient use of land, minerals, buildings, energy, water and waste	No significant in-combination effects with Issues and Options or other plans.
Hertfordshire Minerals Local Plan Review, 2002-2016 (adopted march 2007)	
The Hertfordshire Minerals Local Plan interprets national and regional policy and carries forward and develops in detail the broad mineral policies in the Hertfordshire Structure Plan. The Plan sets out the development planning framework for future minerals extraction and associated development whilst providing for environmental protection. It will eventually be replaced by the Hertfordshire Minerals and Waste Development Framework.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Guided by national aims and objectives for minerals, together with those of the Hertfordshire Structure Plan, the following aims are identified in the Minerals Local Plan Review: • Aim 1: to encourage the efficient use of materials, particularly maximising the use of recycled and secondary aggregates and reducing the use of primary aggregates, thereby reducing reliance on land won sources of material. • Aim 2: to identify and safeguard mineral resources to ensure that there are sufficient environmentally acceptable sources to maintain an appropriate level of current and future supply in accordance with Government guidance and to prevent the unnecessary sterilisation of mineral resources.	Discussed in main body of AA screening report in conjunction with the Appropriate Assessment screening report on the Minerals Local Plan.

• Aim 3: to ensure that the adverse impacts on the environment and people caused by mineral operations and the transport of minerals are kept, as far as possible, to an acceptable minimum. • Aim 4: to ensure sensitive working, reclamation and aftercare practices so as to preserve or enhance the overall quality of the environment and promote biodiversity where appropriate. • Aim 5: to enable stakeholders to contribute to planning for minerals supply in Hertfordshire	
Hertfordshire Minerals Local Plan Review Appropriate Assessment Draft Screening Report, July 2006	
Aims to identify relevant Natura 2000 sites and determine likely effects of the Minerals Local Plan upon them, either alone or in combination with other plans and programmes.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
n/a	Impacts on Chilterns Beechwoods SAC include 'possible increased mineral extraction and recycling/ re-use of aggregates' and air pollution: discussed in main body of AA screening report.
Hertfordshire Waste Local Plan, 1995-2005 (adopted January 1999, currently under revision)	
Plan contains detailed policies in respect of development which involves the depositing of refuse or waste materials other than mineral waste, i.e. policies concerned with development required for waste minimisation, re-use, recycling, composting, processing and transfer, recovery of energy from waste, and disposal on land. In this context, waste includes household or domestic waste, industrial and commercial waste, demolition and construction waste, agricultural and forestry wastes, clinical, difficult and special wastes, waste water (sewage) and scrap vehicles or other scrap metal.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The aims and objectives of this Waste Local Plan are:- **"To reduce the amount of waste and its environmental impact"** • To facilitate the provision of sufficient waste management facilities in Hertfordshire to accommodate the equivalent of the County's own arisings; • To recognise that waste management generates employment and is part of the infrastructure which supports business in general; • To locate waste recycling, handling and reduction facilities as close as practicable to the origin of waste; • To promote the development of waste management facilities which increase the proportion of waste managed further up the waste hierarchy; • To minimise the traffic generating effects of waste management development; • To mitigate against the possible effects of greenhouse gases;	No significant effects on the SAC

• To reduce the overall demand for resources (including land); • To involve the wider community in the waste management debate; • To facilitate the increased use of recycled waste materials as aggregate in Hertfordshire; • To facilitate a shift away from road transport as the principal means of transporting waste; • To minimise the impact of waste management development on the natural and built environment; • To maximise the recovery of value (including energy) from waste, where this represents the Best Practicable Environmental Option; • To adopt the Best Practicable Environmental Option when considering alternative forms of waste management development. (Best Practicable Environmental Option is defined as the option, for a given set of objectives, that provides the most benefits or least damage to the environment as a whole at acceptable cost, in the long term as well as the short term).	
Appropriate Assessment Screening for the Hertfordshire Waste Development Plan Documents: Draft report for consultation	
The Appropriate Assessment was undertaken in order to determine whether the Hertfordshire Waste Development options were likely to cause significant adverse effects on any of the Natura 2000 sites in the region.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
To determine likely significant effects on various Natura 2000 sites	Discussed in main body of AA screening report
Natura 2000 sites, Stage 1 Appropriate Assessment Screening: Report on the likely significant effects of proposed waste sites on SACs/SPAs in Buckinghamshire and surrounding area	
The Appropriate Assessment was undertaken in order to determine whether Buckinghamshire's proposed waste sites were likely to cause significant adverse effects on any of the Natura 2000 sites in the vicinity.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
To determine likely significant effects on various Natura 2000 sites	Discussed in main body of AA screening report
A 50- year Vision for the Wildlife and Natural Habitats of Hertfordshire (1998, as revised 2006)	
The Hertfordshire BAP was drawn up in response to the UK Biodiversity Action Plan which sets out detailed action plans for threatened habitats and species nationwide. It evaluates the status of habitats and species in the county and identifies key habitats and species of national and local significance and High Biodiversity Areas.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Amongst others the following objectives are set out: To produce an overview of the present knowledge of the biodiversity resource in the county To prepare a series of prioritised habitat action plans To prepare a series of prioritised species action plans	Gives extra justification for adherence to the conservation objectives of the SAC.
The Hertfordshire Environmental Strategy (2001)	
This document demonstrates what the principles are that underpin the term sustainability development in Hertfordshire and the process through which these principles are arrived at. It also demonstrates how these principles relate to the everyday actions, practices, and management of public sector organisations within the County.	

Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The strategy sets out six generic sustainability principles which a supplemented with more specific objectives A better quality of life Social progress which recognises the needs of everyone Effective protection of the environment Prudent use of natural resources Maintenance of high levels of economic growth and employment so that everyone can share in high living standards and greater job opportunities Effective communication of ideas and information	By advocating the effective protection of the environment and the prudent use of natural resources, the strategy gives extra justification for adherence to the conservation objectives of the Chilterns Beechwoods SAC. However, the aim of maintaining high levels of economic growth may eventually lead to increased pressure on natural resources, for example, via increased road building or improvements or increased recreational pressure.

North Hertfordshire DC Policies Options Paper	
The paper provides options on both guiding principles and detailed requirements for planning in North Hertfordshire.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The six strategic objectives are: **1. Sustainable Communities** Promoting sustainable development of the District to ensure we deliver adequate affordable housing, protect the environment and conserve the heritage of our historic towns and rural settlements. **2. Safer Communities** Encouraging responsible citizenship and creating safe communities with less crime and less fear of crime. **3. Healthier Communities** Promoting first class leisure and cultural facilities to contribute to healthy living for all of our citizens. **4. Equal Communities** Targeting resources at areas of disadvantage in the District to reduce social exclusion and improve the quality of life for everyone. **5. Prosperous Communities** Creating opportunity for all by promoting sustainable local economic development. **6. Satisfied Communities** Ensuring that we listen to our citizens and deliver high quality, value for money, customer focused services.	No significant combined impacts with St Albans Issues and Options.

Hertfordshire LTP 2006/07 – 2010/11	
The LTP sets out a transport strategy for Hertfordshire for the next 5 years. It is currently undergoing public consultation.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The key objectives of the LTP are: To improve safety for all To obtain the best use of the existing network To manage the growth of transport To develop an efficient, safe, affordable and enhanced transport system which is attractive, reliable, integrated and makes best use of resources To develop a transport system that provides access to employment, shopping, education, leisure and health facilities for all, including those without a car and those with impaired mobility To ensure that the transport system contributes towards sustainable economic development To mitigate the effect of the transport system on the built and natural environment and on personal health To raise awareness and encourage use of more sustainable modes of transport To reduce the need for the movement of people and goods through integrated land use planning	By encouraging the use of sustainable modes of transport there may be an improvement in air quality, thus reducing the effects of atmospheric pollution on the SACs.
Hertfordshire Minerals Local Plan Review, Appropriate Assessment Draft Screening Report	
Appropriate Assessment screening for impacts of the Minerals Plan on Natura 2000 sites within Hertfordshire.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
To ascertain what likely impacts on Hertfordshire SACs will be and to determine whether a full Appropriate Assessment is needed.	Discussed in main body of AA screening report.

Buckinghamshire Habitat Action Plan (Woodland)	
This Habitat Action Plan is one of many National Key Habitat Action Plans in the UK.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
• To ensure all ancient semi-natural woodland is in agreed management schemes, with management plans in place by 2010. • To increase the area of native woodland by 10% by 2010. • To ensure that future management of woodland takes into account the need to maintain levels of dead wood, veteran trees, and other habitats such as ponds, rides and glades. • To ensure that new woodland planting respects the character of archaeological sites and those sites with competing biodiversity interest. • To increase the knowledge and understanding of woodland management and ecology and promote the involvement of communities in the management of their local woodlands, where appropriate. • To ensure that all woodlands are in sustainable management by 2015.	No significant in-combination effects with Issues and Options or other plans and only positive impacts on the SACs from this plan.
South Bucks District Council Core Strategy Preferred Options Document (DPD), May 2007	
The Preferred Options DPD is part of the Local Development Framework which will guide future development in the District to at least 2021.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The spatial vision for the district comprises 17 Objectives: **A** To improve accessibility for all to essential services and facilities by providing opportunities to obtain good access to high quality health, education, recreation, shopping , employment and other community services and facilities. **B** To strive, through the Statement of Community Involvement, to achieve an appropriate balance of community involvement and engagement in the planning process, especially with 'hard to reach' groups. **C** To provide everyone living in South Bucks with the opportunity to live in a decent home. **D** To improve the efficiency of land use, for example through the re-use of existing buildings and previously developed land, where this is the most sustainable option. **E** To protect and enhance important open spaces within urban areas, and provide linkages to important open spaces beyond the urban fringe. **F** To increase the level of affordable, elderly persons' and key worker housing in South Bucks District within the overall level of planned housing development for the District. **G** To ensure that housing development is of an appropriate size and type to meet local needs. **H** To preserve and enhance the Green Belt, including improving damaged land. **I** To promote a sustainable and balanced local economy that provides encouragement to existing businesses and small start up businesses, including those working from home.	Discussed in main body of AA screening report.

J To conserve and enhance both the landscape and townscape character of the District, including a 'sense of place', especially in those areas of designated importance, and promote good design. **K** To reduce anti-social activity, crime and accidents through the creation of safer places to live and work. **L** To reduce the risk of fluvial, tidal and surface water flooding to people and property. **M** To reduce pollution of the air, soil and water. **N** To reduce energy consumption and waste and encourage the use of recycled, renewable and locally available resources. **O** To encourage the use of sustainable methods of transport, cycling and walking to reduce negative effects on the environment, congestion and the need to travel. **P** To protect scarce surface and groundwater through promotion of water conservation and recycling in both new and existing development, and the use of sustainable drainage systems. **Q** To maintain and enhance biodiversity.	
Appropriate Assessment South Bucks Core Strategy Preferred Options Document, April 2007	
The Preferred Options Document is subject to the AA process under EC Directive (92/43/EEC)	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
n/a	Informed this AA screening report
Luton and South Bedfordshire Core Strategy Issues and Options Paper	
The document forms part of the first stage of consultation in preparing an adopted Core Strategy to cover Luton and South Bedfordshire.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The DPD provides the following issues and options for consultation: Issue 1 - Where will the development go? Issue 2 - Where will people work? And in what sorts of jobs? Issue 3 - How will people travel? Issue 4 - What role will our town centres have? Issue 5 - How can our communities and neighbourhoods be more inclusive, sustainable and healthy? Development Options: • Development focused within the bypasses • Development focused within and beyond the bypasses • Development focused on maximising proximity to town centres and main employment areas • Development focused on achieving wide distributional spread	Discussed in main body of AA screening report
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
• Development focused on Luton	

Maps can be viewed on the Issues and Options paper available at: http://www.southbeds.gov.uk/Images/Core%20Strategy%20Issues%20and%20Options%20Paper%20part%206%20questionnaire_tcm6-11974.pdf	
South Oxfordshire Local Development Framework Site Allocation Development Plan Document	
The main purpose of this DPD is to allocate sufficient land for housing to meet the needs of South Oxfordshire to 2026, but the Council will also consider allocating land for other uses such as employment. The final plan is likely to include maps showing specific locations for development to 2019 and indicate broad locations for further development to 2026.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
To determine preferred options for site allocations	AA screening of the South Oxfordshire Site Allocations DPD included examining the effects of the DPD on Chilterns Beechwoods SAC. It was concluded that there would be 'no significant effects arising out of the population growth at Didcot.'

Local (District level)

Dacorum Borough Nature Conservation Strategy (1999)	
The Local Biodiversity Action Plan for Dacorum, organised through UKBAP.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Comprising of 29 Species Action Plans and 7 Habitat Action Plans.	Gives extra justification for adherence to the conservation objectives of the SAC, particularly the 'Broadleaved, mixed and yew woodland' Habitat Action Plan.
Dacorum Borough Local Agenda 21 Strategy (2002 – but update online regularly)	
This strategy is run of the Council's website and also details of current relevant projects and initiatives within the Borough. The LA21 Strategy aims to help the community work together to protect the environment for future generations and produce a record of the projects and initiatives carried out by local people in pursuit of environmental wellbeing.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The Strategy is based on 12 priority areas: State of the Environment Report and Indicators Air Quality and Noise Energy Sustainable Transport Nature Conservation Water Land Use and Building Waste and Recycling Environmental Management Sustainable Economic Development Sharing Ideas and Expertise Community Awareness and Participation	Gives extra justification for adherence to the conservation objectives of the SAC.

Dacorum Borough Council Issues and Options DPD	
Provides a vision for development in Dacorum Borough Council's administrative area including a list of issues to consider and options for development.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SACs
Various issues and options are provided. These come under the following broad categories: • Settlement Strategy • Housing • Employment • Retailing • Transport Infrastructure • Community Development • Leisure and Recreation • Landscape, Biodiversity and Historic Heritage • Design	Some minor impacts expected on the SAC (described in main screening report) but not expected to be significant.
Watford Borough Council Issues and Options DPD	
The aim of the Core Strategy is to set out the vision for Watford in 2021 and the broad principles and proposals for development to achieve that vision.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The following are the issues identified by Watford Borough Council as being key issues for the borough • Addressing traffic, to ease congestion • Meeting housing (and other) development needs without over-developing • Delivering affordable housing • Enhancing the attractiveness of Watford as a retail centre • Improving the quality of development	No impacts expected on Chilterns Beechwoods SAC

Three Rivers Issues and Options DPD	
The DPD gives the following vision: *'In essence, future development in Three Rivers must secure balanced development for homes and jobs which safeguards the environment, maintains the green belt, secures good services, and facilities for all and achieves a sustainable transport system'.* The Issues and Options fall under the following principal topics: • Broad locations for new housing, employment and retail development (Spatial Options) • Policies to control development (Generic Development Control Policies) • Delivery of development (Implementation and Monitoring Framework	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
Various options are provided that fall under the three main categories listed above.	No impacts expected on Chilterns Beechwoods SAC
Watford Borough Council Issues and Options , December 2005	
The aim of the Core Strategy is to set out the vision for Watford in 2021 and the broad principles and proposals for development to achieve that vision.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The following are the issues identified by Watford Borough Council as being key issues for the borough • Addressing traffic, to ease congestion • Meeting housing (and other) development needs without over-developing • Delivering affordable housing • Enhancing the attractiveness of Watford as a retail centre • Improving the quality of development	No impacts expected on Chilterns Beechwoods SAC
Hertsmere Issues and Options DPD	
The Hertsmere Issues and Options DPD follows the guiding vision for the Hertsmere LDF: *'The delivery of a high quality, inclusive and viable environment to be achieved through a commitment to the principles of sustainable development.'*	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The broad objectives identified in the LDF are as follows: 1. To protect the Green Belt whilst promoting rural diversification and sustainable access to the wider countryside wherever possible. 2. To maintain an adequate supply of suitable land, concentrated on brownfield sites within towns, to accommodate expected development needs and supporting community infrastructure. 3. To provide the spatial policies necessary to deliver the Community Strategy. 4. To secure efficient land use through well-designed development reflecting the size, pattern and character of settlements in Hertsmere. 5. To protect and enhance the built heritage of Hertsmere. 6. To raise levels of access by seeking development in locations not dependent on access by car and by requiring the provision of accessible buildings. 7. To assist where possible the community's need for affordable housing. 8. To promote safe, healthy and inclusive communities, respecting the diverse needs of the whole	Some minor impacts expected on the SAC (described in main screening report) but not expected to be significant.

Borough. 9. To provide a planning framework which promotes sustainable and competitive economic performance, supporting businesses of all sizes and reflecting local skills. 10. To safeguard and enhance the role of town and district centres in Hertsmere, steering commercial developments which attract a large number of people towards the most widely accessible centres. 11. To protect and enhance local biodiversity within both developed and undeveloped areas. 12. To protect and promote the environment in Hertsmere by addressing local causes and impacts of pollution. 13. To address issues arising from climate change and flooding and to take advantage of water and other natural resources responsibly.	
Welwyn Hatfield District Plan, Written Statement	
This document is described as the new local plan for the district of Welwyn Hatfield for the period up to 2011. The LDF is currently running behind that of other Councils examined in this AA screening process and therefore there is no Issues and Options paper yet available.	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC

The Written Statement includes the following key objectives. 1. Preserve and enhance the district's wildlife and biodiversity, landscape, urban open land and historic environment, and minimise the use of natural resources. 2. Provide for development to meet the recognised needs of local people in terms of housing, jobs, shopping, leisure, services, health and community facilities, education and training. 3. Maintain the Green Belt and concentrate development within the main towns and villages of Welwyn Garden City, Hatfield, Welwyn, Oaklands and Mardley Heath, Digswell, Woolmer Green, Welham Green, Brookmans Park, Cuffley and Little Heath, in particular on previously developed land. 4. Seek to sustain the countryside and rural communities, allowing development in rural areas where this helps to sustain the rural economy and community life, preserves the quality of the countryside and supports the purposes of the Green Belt. 5. Minimise the overall need to travel by encouraging more balanced and self-contained settlements, promoting mixed-use development and locating development where it is accessible. 6. Reduce dependence on the car by requiring development to be located and designed so it is accessible by and gives priority to pedestrians, cyclists and public transport. 7. Maintain and enhance the quality of the urban environment by protecting open space and requiring good quality, sustainable design in all new development. 8. Foster a 'sense of community' through the protection and provision of services and facilities and through careful design of new development. 9. Maintain and improve the vitality and viability of Welwyn Garden City and Hatfield town centres and the district's village and local centres, by protecting their primary shopping functions and encouraging a greater diversity of uses. 10. Increase economic prosperity through the regeneration of key areas of the district, in particular Hatfield Town Centre and the former Hatfield Aerodrome site.	No impacts expected on Chilterns Beechwoods SAC
Tree strategy and Policy for St Albans	
The aim of the strategy is to "Ensure that the trees and woodlands within the District are adequately protected, cared for and supported by new planting so that their extent, quality, biological diversity and contribution to the character and appearance of the District can be sustained and enriched for the benefit and enjoyment of the residents and visitors to St Albans."	
Objectives, Targets, Indicators	Implications for Issues and Options/ SAC
The following reasons were given as the purpose for the strategy: • To act as a source of information about issues affecting trees within the District. • To provide a policy framework for decisions made by the Council that affect trees.	No adverse impacts expected on Chilterns Beechwoods SAC

• To provide an action plan that will carry the strategy forwards. • To be subject to a review process to enable performance monitoring and be flexible to change. • To support the main vision of the Council.	

Appendix 2 – Natural England citations for SSSIs in Chilterns Beechwoods

Appendix 2 – Natural England citations for SSSIs in Chilterns Beechwoods

All citations in this Appendix have been reproduced with kind permission from Natural England, with only minor changes to formatting.

Conservation Objectives and Condition Assessments

Conservation objectives of SSSIs

SSSIs are notified because of specific biological or geological features. Conservation Objectives define the desired state for each site in terms of the features for which they have been designated. When these features are being managed in a way which maintains their nature conservation value, then they are said to be in 'favourable condition'. It is a Government target that 95% of the total area of SSSIs should be in favourable condition by 2010.

Definitions of Favourable Condition

The Conservation Objectives are accompanied by one or more habitat extent and quality definitions for the special interest features at this site. These are subject to periodic reassessment and may be updated to reflect new information or knowledge; they will be used by English Nature and other relevant authorities to determine if a site is in favourable condition. The standards for favourable condition have been developed and are applied throughout the UK.

Use under the Habitats Regulations

The Conservation Objectives and definitions of favourable condition for features on the SSSI may inform the scope and nature of any 'appropriate assessment' under the Habitats Regulations. An appropriate assessment will also require consideration of issues specific to the individual plan or project. The habitat quality definitions do not by themselves provide a comprehensive basis on which to assess plans and projects as required under Regulations 20-21, 24, 48-50 and 54 - 85. The scope and content of an appropriate assessment will depend upon the location, size and significance of the proposed project. English Nature will advise on a case by case basis.

Following an appropriate assessment, competent authorities are required to ascertain the effect on the integrity of the site. The integrity of the site is defined in para C10 of PPG9 as the coherence of its ecological structure and function, across its whole area that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified. The determination of favourable condition is separate from the judgement of effect upon integrity. For example, there may be a time-lag between a plan or project being initiated and a consequent adverse effect upon integrity becoming manifest in the condition assessment. In such cases, a plan or project may have an adverse effect upon integrity even though the site remains in favourable condition.

The formal Conservation Objectives for European Sites under the Habitats Regulations are in accordance with para. C10 of PPG 9, the reasons for which the European Site was classified or designated. The entry on the Register of European Sites gives the reasons for which a European Site was classified or designated.

Explanatory text for Tables 2 and 3

Tables 2 and 3 set out the measures of condition which we will use to provide evidence to support our assessment of whether features are in favourable condition. They are derived from a set of generic guidance on favourable condition prepared by EN (English Nature) specialists, and have been tailored by local staff to reflect the particular characteristics and site-specific circumstances of individual sites. Quality Assurance has ensured that such site-specific tailoring remains within a nationally consistent set of standards. The tables include an audit trail to provide a summary of the reasoning behind any site-specific targets etc. In some cases the requirements of features or designations may conflict; the detailed basis for any reconciliation of conflicts on this site may be recorded elsewhere.

The SSSIs within the Chilterns Beechwoods SAC have a series of conservation objectives, as detailed below. The SSSIs are as follows:

- Ashridge Commons and Woods
- Aston Rowant Woods
- Bisham Woods
- Bradenham Woods, Park Wood and The Coppice SSSI
- Ellesborough and Kimble Warrens
- Tring Woods
- Windsor Hill
- Naphill Common
- Hollowhill and Pullingswood Woods

- ***Ashridge Commons and Woods SSSI***

Conservation Objectives

The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, cSAC[1], SPA, Ramsar) as individually listed in Table 1.

Habitat Types represented (Biodiversity Action Plan categories)
Broadleaved mixed and yew woodland

Geological features (Geological Site Types)
Not applicable to this site

(*) or restored to favourable condition if features are judged to be unfavourable.

Standards for favourable condition are defined with particular reference to the specific designated features listed in Table 1, and are based on a selected set of attributes for features which most economically define favourable condition as set out in Table 2 and Table 3.

[1] cSAC : Candidate Special Area of Conservation

Table 1 Individual designated Special Interest Features

BAP Broad Habitat type / Geological Site Type	Specific designated features	Explanatory description of the feature for clarification	SSSI designated interest features	cSAC designated interest features	SPA bird populations dependency on specific habitats			Ramsar criteria applicable to specific habitats			
					Annex 1 species	Migratory species	Waterfowl assemblage	1a Wetland characteristics	2a Hosting rare species &c	3a 20000 waterfowl	3c 1% of population
Broadleaved mixed and yew woodland	W12 *Fagus sylvatica –Mercuralis perennis*	Beech and dogs mercury woodland	*	*							
	W14 *Fagus sylvatica – Rubus fruticosus*	Beech and bramble woodland	*	*							

NB. 1). Features where asterisks are in brackets (*) indicate habitats which are not notified for specific habitat interest (under the relevant designation) but because they support notified species. 2) The requirements of species (including SPA bird species) are reflected in the Conservation Objectives for habitat features on which they depend. In some specific situations, direct population measures for species may also be used to provide supporting information to confirm habitat quality measures.

Table 2 Habitat Features - Extent Objectives

Conservation Objective for habitat extent	To maintain the designated habitats in favourable condition, which is defined in part in relation to a balance of habitat extent (extent attribute). Favourable condition is defined at this site in terms of the following site-specific standards:
Extent - Dynamic balance	On this site favourable condition requires the maintenance of the extent of each designated habitat type. Maintenance implies restoration if evidence from condition assessment suggests a reduction in extent.

Habitat Feature (BAP Broad Habitat level, or more detailed level if applicable)	Estimated extent (ha) and date of data source/estimate	Site Specific Target range and Measures	Comments
Beech and dogs mercury woodland		Aim for 90% NVC type, no loss of extent	
Beech and bramble woodland		Aim for 90% NVC type, no loss of extent	

Audit Trail
Rationale for habitat extent attribute (Include methods of estimation (measures) and the approximate degree of change which these are capable of detecting).
Rationale for site-specific targets (including any variations from generic guidance)
Other Notes
NO CRITERIA SHEET

Table 3 Site-Specific definitions of Favourable Condition

CONSERVATION OBJECTIVE FOR THIS HABITAT / GEOLOGICAL SITE-TYPE	To maintain the **broadleaved semi natural woodland** habitat at this site in favourable condition, with particular reference to relevant specific designated interest features. Favourable condition is defined at this site in terms of the following site-specific standards:
Site-specific details of any geographical variation or limitations (where the favourable condition standards apply)	
Site-specific standards defining favourable condition	

TABLE COPIED FROM THE cSAC OBJECTIVE

Operational feature	Criterion feature	Attributes	Measures	Targets	Comments
Semi-natural woodland	Asperulo-Fagetum beechwoods (W12, W14)	1. Area	Extent/location of stands	* No loss of ancient semi-natural stands At least current area of recent semi-natural stands maintained, although their location may alter. Need to find out whether the >50year-old plantations constitute semi-natural beech woodland. *No reduction in area of ancient woodland	* Stand loss due to natural processes may be acceptable. * Stand destruction may occur if understorey and ground flora are irretrievably damaged, even if canopy remains intact. * Loss = 0.5 ha or 0.5% of the stand area, whichever is smaller – repeated smaller losses are unacceptable. * 20% canopy cover is conventionally taken as the lower limit for an area to be considered as woodland. * Beech may not be abundant throughout the stand, particularly in regeneration patches; this does not count as stand loss. . Glade creation and thinning to assist natural regeneration and maintain the traditional habitat mosaic does not compromise this target Need to map areas of beech woodland.
Semi-natural	Asperulo-	2. Natural	Age/size class	* At least current level of	* Any changes leading to exceedance of these limits due

Operational feature	Criterion feature	Attributes	Measures	Targets	Comments
woodland	Fagetum beechwoods (W12, W14)	processes and structural development	variation within and between stands; presence of open space and old trees; dead wood lying on the ground; standing dead trees	structural diversity maintained. * Understorey (2-5m) present over 10- 80% of total stand area. * Ground flora present over at least 10% of area or current extent in mature stands, whichever is greater. * Canopy cover present over 30-90 % of stand area. * Age class structure appropriate to site, its history and management. * A minimum of 3 fallen lying trees >20 cm diameter per ha and 10 trees per ha allowed to die standing. *no loss of veteran trees except through natural events	to natural processes are likely to be acceptable. * The understorey may range from virtually non-existent to impenetrable holly or yew. If understorey is very dense it may be affecting the ground flora. *The site is predominantly beech high forest with natural regen. in storm damaged areas. *The location of open, scrub and high canopy within the mosaic will change over time with woodland dynamics *Assess this attribute between mid April and early June.
Semi-natural woodland	Asperulo-Fagetum beechwoods (W12, W14)	3.Regeneration potential	Successful establishment of young stems in gaps or on the edge of a stand.	* Signs of seedlings growing through to saplings to young trees at sufficient density to maintain canopy density over a 10 yr period (or equivalent regrowth from coppice). * No more than 20% of re-stocked areas regenerated by planting.	* A proportion of gaps at any one time may develop into permanent open space; equally some current permanent open space/glades may in time regenerate to closed canopy. * Regeneration may often occur on the edge of woods rather than in gaps within it. * See JNCC Guidance note on likely desirable levels of regeneration. * The minimum level of regeneration to be acceptable from a nature conservation viewpoint is likely to be much

Operational feature	Criterion feature	Attributes	Measures	Targets	Comments
				* All planting material of locally native stock * No planting in sites where it has not occurred in the last 15 years.	less than that needed where wood production is also an objective. * Assess this attribute in spring/summer.
Semi-natural woodland	Asperulo-Fagetum beechwoods (W12, W14)	4. Composition	Cover of native versus non-native species (all layers) Death, destruction or replacement of native woodland species through effects of non-native fauna or external unnatural factors	* At least 90% cover in any one layer of site-native or acceptable naturalised spp. * Beech present in mature canopy at at least 30% cover for feature on site as a whole. * Death, destruction or replacement of native woodland species through effects of introduced fauna or other external unnatural factors not more than 10% by number or area in a five year period. *No evidence of rapid dieback of native species in last 5 years	* Sycamore is a widespread component in parts of the Chilterns Beechwoods at present but should not be permitted to take a dominant role in the canopy and should be excluded from units where it is currently absent or rare. there should be no expansion of the area where sycamore is favoured over beech. *Parts of wood planted with larch, pine, Nothofagus, etc, mostly underplanted with beech. * Where cover in any one layer is less than 100% then the 90% target applies to the area actually covered by that layer. *some units may have more than 10% non native species but the proportion of non native across the whole site should not exceed 10%. It is anticipated that this will decrease over time as woodland management selectively favours native species. * Factors leading to the death or replacement of woodland species could include pollution, including eutrophication from adjacent farmland, new diseases. * Damage to trees by squirrels that does not lead to their death or replacement by non-woodland species is not necessarily unacceptable in nature conservation terms. * Excessive browsing/grazing by even native ungulates may be considered an unnatural external factor where it leads to undesirable shifts in the composition/structure of the stand, although this may be picked up by attributes 2

Operational feature	Criterion feature	Attributes	Measures	Targets	Comments
					or 5 anyway.
Semi-natural woodland	Asperulo-Fagetum beechwoods (W12, W14)	5. Species, habitats, structures characteristic of the site.	Ground flora type Distinctive and desirable elements. Patches of associated habitats and transitions	* 85% of ground flora cover referable to relevant NVC community (W12, W14) Veteran beeches should be maintained throughout the site outside area of beech woodland habitat. * Patches and transitions maintained in extent and location.	* Changes leading to these targets not being met may be acceptable where this is due to natural processes. * Distinctive elements and patches should be marked on maps for ease of checking in the field wherever possible. *Maintain small chalk grassland banks on woodland boundary as open grasslsand *Maintain ancient boundary features.

- ***Aston Rowant Woods SSSI***

Conservation Objectives

The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, SAC, SPA, Ramsar) as individually listed in Table 1.

Habitat Types represented (Biodiversity Action Plan categories)
Lowland mixed broadleaf woodland

Geological features (Geological SiteTypes)
[n/a]

(*) or restored to favourable condition if features are judged to be unfavourable.

Standards for favourable condition are defined with particular reference to the specific designated features listed in Table 1, and are based on a selected set of attributes for features which most economically define favourable condition as set out in Table 2 and Table 3.

Table 1 Individual designated Special Interest Features

BAP Broad Habitat type / Geological Site Type	Specific designated features	Explanatory description of the feature for clarification	SSSI designated interest features	SAC designated interest features	SPA bird populations dependency on specific habitats			Ramsar criteria applicable to specific habitats			
					Annex 1 species	Migratory species	Waterfowl assemblage	1a Wetland characteristics	2a Hosting rare species &c	3a 20000 waterfowl	3c 1% of population
Lowland mixed broadleaf woodland	W12, W14 Beech woodland	Beech/oak/ash woodland									

NB. 1). Features where asterisks are in brackets (*) indicate habitats which are not notified for specific habitat interest (under the relevant designation) but because they support notified species. 2) The requirements of species (including SPA bird species) are reflected in the Conservation Objectives for habitat features on which they depend. In some specific situations, direct population measures for species may also be used to provide supporting information to confirm habitat quality measures.

Table 2 Habitat Features - Extent Objectives

Conservation Objective for habitat extent	To maintain the designated habitats in favourable condition, which is defined in part in relation to a balance of habitat extent (extent attribute). Favourable condition is defined at this site in terms of the following site-specific standards:
Extent - Dynamic balance	On this site favourable condition requires the maintenance of the extent of the designated habitat type. Maintenance implies restoration if evidence from condition assessment suggests a reduction in extent.

Habitat Feature (BAP Broad Habitat level, or more detailed level if applicable)	Estimated extent (ha) and date of data source/estimate	Site Specific Target range and Measures	Comments
Lowland mixed broadleaf woodland	209	At least 90% of site area occupied by woodland of types W12 and W14.	

Audit Trail
Rationale for habitat extent attribute (Include methods of estimation (measures) and the approximate degree of change which these are capable of detecting).
The site includes small areas of relict chalk grassland which is gradually diminishing in extent as scrub and woodland takes over.
Rationale for site-specific targets (including any variations from generic guidance)
Other Notes

Table 3 Site-Specific definitions of Favourable Condition

CONSERVATION OBJECTIVE FOR THIS HABITAT / GEOLOGICAL SITE-TYPE	To maintain the **broadleaved mixed woodland habitat** at this site in favourable condition, with particular reference to relevant specific designated interest features. Favourable condition is defined at this site in terms of the following site-specific standards:

Site-specific details of any geographical variation or limitations (where the favourable condition standards apply)

The attributes below apply to the **whole site**.

Site-specific standards defining favourable condition

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for Condition Assessment (CA)?
Beech woodland (W12, W14))	1. Habitat Extent	Area	Extent/location of stands	No loss of ancient semi-natural stands (Refer to Barneveld 1997) At least current area of recent semi-natural stands maintained, although their location may alter. At least the area of ancient woodland retained	Temporary stand loss due to natural processes would be acceptable. Stand destruction may occur if the understorey and ground flora are irretrievably damaged even if the canopy remains intact. Loss = 0.5 ha or 0.5% of the stand area, whichever is the smaller. 20% canopy cover is conventionally taken as the lower limit for an area to be considered as woodland. Beech may not be abundant throughout the stand, particularly in regeneration patches, but this does not count as stand loss. Note that not all the area likely to be ancient woodland on site is mapped as such in the Ancient Woodland Inventory.	yes

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
Beech woodland (W12, W14)	Natural processes and structural development		Age/size class variation within and between stands; presence of open space and old trees; dead wood lying on the ground; standing dead trees	At least the current level of structural diversity maintained but where possible should be increased. Understorey (2-5m) present over 10-80% of total stand area. Ground flora present over at least 10% of area or current extent in mature stands, whichever is greater. Canopy cover present over 30-90 % of stand area. A minimum of 3 fallen lying trees per ha and 10 standing dead trees per ha.	Any changes leading to these limits being exceeded due to natural processes are likely to be acceptable. Structural variation in parts of the wood dominated by beech plantation is currently low. The understorey is close to the lower limit of 10% in some units. A poorly developed shrub layer is a feature of some W12 woodlands especially in mature stands. There is not a great deal of standing dead wood as is typical of beech woods but there is a fair amount of dead wood in the canopy and as fallen trees.	yes

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
Beech woodland (W12, W14)	3. Composition:	Composition	Cover of native versus non-native species (all layers) Death, destruction or replacement of native woodland species through effects of non-native fauna or external unnatural factors	At least the current level of site-native species maintained. At least 90% of cover in any one layer of site-native or acceptable naturalised species. Beech present in mature canopy at at least 30% cover for the feature on the site as a whole. Death, destruction or replacement of native woodland species through effects of introduced fauna or other external unnatural factors not more than 10% by number or area in a five year period.	Sycamore is locally abundant if not dominant but does not appear to be having detrimental impacts on flora. Nevertheless any significant increase in distribution is undesirable and should be controlled. There are no indications of any external factors currently affecting beech or the ground flora. Damage to trees by squirrels that does not lead to their death or replacement by non woodland species is not necessarily unacceptable in nature conservation terms. Excessive browsing/grazing by deer does not currently appear to be at a level which is causing damage to ground flora or regeneration.	yes
Beech woodland (W12, W14)	Positive quality indicators: Characteristic species	Species, habitats, structures characteristic of the site.	Ground flora type Distinctive and desirable elements	80% of ground flora cover referable to W12 and W14 Patches and transitions maintained in extent and where appropriate location.	Targets not being met are acceptable where due to natural processes. The ground flora is very sparse in many parts of the site. The presence of and transition to grassland is a feature of interest and conservation value but it is accepted that this will change and diminish	yes

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
					over time due to natural succession.	
Beech woodland (W12, W14)	Natural processes/regeneration	Regeneration potential	Successful establishment of young stems in gaps or on the edge of a stand	Signs of seedlings growing through to saplings to young trees at sufficient density to maintain canopy density over a 10 yr period. No regeneration by planting.	The minimum level of regeneration acceptable from a nature conservation viewpoint is likely to be much less than that needed where wood production is also an objective. Natural regeneration is variable throughout the wood, being quite poor in some areas and very successful in others, including areas damaged by 1987 storms.	yes

Audit Trail
Rationale for limiting standards to specified parts of the site
Rationale for site-specific targets (including any variations from generic guidance)
Rationale for selection of measures of condition (features and attributes for use in condition assessment) **(The selected vegetation attributes are those considered to most economically define favourable condition at this site for the broad habitat type and any dependent designated species).**
Other Notes
Although game management is currently no problem, it has been an issue in the past both in terms of the effect of feeding, strawing etc and also the removal of some scrub layer components. The site lacks structure, particularly an over mature component to the canopy and has a sparse shrub layer in many parts. The Nationally Scarce plants *Hordelymus europaeus* and *Epipactis leptochila* are listed erroneously on the criteria sheet; the presence of these species is not sufficient grounds for SSSI selection.

- ***Bisham Woods SSSI***

Conservation Objectives

The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, SAC, SPA, Ramsar) as individually listed in Table 1.

Habitat Types represented (Biodiversity Action Plan categories)
Broadleaved mixed and yew woodland

Geological features (Geological Site Types)
Not applicable

(*) or restored to favourable condition if features are judged to be unfavourable.

Standards for favourable condition are defined with particular reference to the specific designated features listed in Table 1, and are based on a selected set of attributes for features which most economically define favourable condition as set out in Table 2 and Table 3:

Table 1 Individual designated Special Interest Features

BAP Broad Habitat type / Geological Site Type	Specific designated features	Explanatory description of the feature for clarification	SSSI designated interest features	SAC designated interest features	SPA bird populations dependency on specific habitats			Ramsar criteria applicable to specific habitats			
					Annex 1 species	Migratory species	Waterfowl assemblage	1a Wetland characteristics	2a Hosting rare species &c	3a 20000 waterfowl	3c 1% of population
Broadleaved mixed and yew woodland	W12 *Fagus sylvatica – Mercuralis perennis* woodland & W14 *Fagus sylvatica – Rubus fruticosus* woodland	Beech and dog's mercury woodland and beech/bramble woodland	*	*							
Broadleaved mixed and yew woodland	*Lucanus cervus*	Stag beetle		*							

NB. 1). Features where asterisks are in brackets (*) indicate habitats which are not notified for specific habitat interest (under the relevant designation) but because they support notified species. 2) The requirements of species (including SPA bird species) are reflected in the Conservation Objectives for habitat features on which they depend. In some specific situations, direct population measures for species may also be used to provide supporting information to confirm habitat quality measures.

Table 2 Habitat Features - Extent Objectives

Conservation Objective for habitat extent	To maintain the designated habitats in favourable condition, which is defined in part in relation to a balance of habitat extent (extent attribute). Favourable condition is defined at this site in terms of the following site-specific standards:
Extent - Dynamic balance	On this site favourable condition requires the maintenance of the extent of each designated habitat type. Maintenance implies restoration if evidence from condition assessment suggests a reduction in extent.

Habitat Feature (BAP Broad Habitat level, or more detailed level if applicable)	**Estimated extent and date of data source/estimate**	**Site Specific Target range and Measures**	**Comments**
Beech/ash woodland	83 ha (total site area)	No loss of woodland extent. At least 90% of the site should support woodland of types W12 and W14.	

Audit Trail
Rationale for habitat extent attribute **(Include methods of estimation (measures) and the approximate degree of change which these are capable of detecting).**
Rationale for site-specific targets (including any variations from generic guidance)
The area figures for W12 and W14 have been combined to give the figure for total extent as the two communities form a complex mosaic and it would be difficult to detect a change in the relative proportion of the two types.
Other Notes

Table 2a Species population objectives

Conservation Objective for species populations	To maintain the designated species in favourable condition, which is defined in part in relation to their population attributes. Favourable condition is defined at this site in terms of the following site-specific standards:
Population balance	On this site favourable condition requires the maintenance of the population of each designated species or assemblage. Maintenance implies restoration if evidence from condition assessment suggests a reduction in size of population or assemblage.

Species Feature (species or assemblage)	**List supporting BAP Broad Habitats**	**Population Attribute (e.g. presence/absence, population size or assemblage score)**	**Site Specific Target range and Measures (specify geographical range over which target applies ie site, BAP broad habitat or more specific)**	**Comments**
Stag Beetle *Lucanus cervus*	Lowland broadleaved woodland	Presence/absence	Species present Identification of the species	If species not seen within a five year period specialist advice should be sought

Audit Trail
Rationale for species population attributes *(Include methods of estimation (measures) and the approximate degree of change which these are capable of detecting).*
Evidence of presence in the form of dead specimens or carapaces may be considered confirmation of presence.
Rationale for site-specific targets (including any variations from generic guidance)
Other Notes

Table 3 Site-Specific definitions of Favourable Condition

CONSERVATION OBJECTIVE FOR THIS HABITAT	To maintain the **broadleaved semi -natural woodland** habitat at this site in favourable condition, with particular reference to relevant specific designated interest features. Favourable condition is defined at this site in terms of the following site-specific standards:

Site-specific details of any geographical variation or limitations (where the favourable condition standards apply)

The attributes below apply to the whole site.

Site-specific standards defining favourable condition

Criteria feature	Attribute	Measure	Site-specific Targets	Comments	Use for CA?
W12 and W14 broadleaved woodland	Area	Field survey and/or aerial photography, in relation to baseline map.	No loss of ancient semi-natural stands. At least current area of recent semi-natural stands maintained, although their location may alter.	Stand loss due to natural processes e.g. in minimum intervention stands may be acceptable. Stand destruction may occur if the understorey and ground flora are irretrievably damaged even if the canopy remains intact. As a guideline, loss can be defined as at least 0.5 ha or 0.5% of the stand area, whichever is the smaller. 20% canopy cover is conventionally taken as the lower limit for an area to be considered as woodland.	**Yes**
W12 and W14 broadleaved woodland	Structure and Natural processes	Assess by field survey using structured walk and/or transects.	Understorey (2-5m) present over at least 20% of total stand area. Canopy cover present over 30-90 % of stand area. At least three age classes spread across the average life expectancy of the commonest trees, ie beech, ash, oak. Some areas of relatively undisturbed mature/old growth stands or a scatter of large trees allowed to grow to over-maturity/death on site (e.g. a minimum of 10% of the woodland or 5-10 trees per ha).A minimum of 3 fallen lying trees or large stumps >80 cm diameter per ha.	The wood is predominantly beech high forest but with extensive areas of ash re-growth in storm damaged patches. Stag beetle is dependent upon the presence of large diameter, permanently moist, rotting timber, in the form of fallen logs or large tree stumps. As a rough guide, to be suitable as larval habitat, timber should have a diameter greater than 80cm. To be valuable as larval habitat for stag beetle standing trees should have decay cavities low down in the trunk. Decaying tree roots *in situ* are also important for this species.	**Yes**

Criteria feature	Attribute	Measure	Site-specific Targets	Comments	Use for CA?
			At least 3 large diameter trees allowed to die standing per ha.		
			Majority of lying timber and rotting logs left undisturbed, ie not moved, climbed upon, burnt or collected for firewood.	Given the long life cycle of stag beetle, it is vulnerable to disturbance and removal of timber. There should be no indications of regular or large scale removal of rotting timber.	
W12 and W14 broadleaved woodland	Composition	Assess by field survey using structured walk and/or transects.	At least 95% of cover in any one layer of site-native or acceptable naturalised species. Death, destruction or replacement of native woodland species through effects of introduced fauna or other external unnatural factors not more than 10% by number or area in a five year period.	Sycamore is abundant in parts of the wood where it appears to be taking the place of ash. It is not yet clear whether it is having damaging impacts on the ground flora. Until it is ascertained whether it is having damaging effects, sycamore should be considered an acceptable component of the woodland up to 10% canopy cover. Turkey oak and horse chestnut are present, including large mature specimens; these should be eradicated over time. Box, laurel, buddleja and rhododendron are also present; these should be eradicated if possible. Factors leading to the death or replacement of woodland species could include pollution or new diseases. Damage by non-native species that does not lead to tree death is not necessarily unacceptable. Excessive browsing/grazing, even by native ungulates, may be undesirable if it causes shifts in the composition/ structure of the stand.	**Yes**
W12 and W14 broadleaved woodland	Quality indicators	Assess by field survey using structured walk and/or transects, or as appropriate to feature.	80% of ground flora cover referable to NVC types W12 and W14 Populations of notable plants at least maintained, esp. *Hordelymus europaeus*.	A small area along the base of the slope supports alder woodland (NVC type W6). For notable species it is not intended to set a target for detailed species monitoring, rather to provide a rapid indication of presence/ absence and/or approximate extent, allowing for natural fluctuations in population size.	**Yes**

Criteria feature	Attribute	Measure	Site-specific Targets	Comments	Use for CA?
W12 and W14 broadleaved woodland	Regeneration potential	Assess by field survey using structured walk and/or transects.	Signs of seedlings growing through to saplings to young trees at sufficient density to maintain canopy density over a 10 yr period. No more than 10% of area regenerated by planting. All planting material of locally native stock.	A proportion of gaps at any one time may develop into permanent open space; equally some current open space/glades may in time regenerate to closed canopy. Regeneration may often occur on the edges of woods rather than in gaps within it.	**Yes**
Stag beetle *Lucanus cervus*	Population size of species	Number of individuals.	Confirmation of the continuing presence of the species on the site within a 5 year period.	No meaningful method has yet been found to assess population size for stag beetle. Do not attempt anything other than presence/absence recording unless a meaningful and cost-effective method is developed. The site should not necessarily be considered to be in unfavourable condition if confirmation is not possible, as long as suitable larval habitat is present.	**no**

Audit Trail
Rationale for limiting standards to specified parts of the site
Rationale for site-specific targets (including any variations from generic guidance)
Rationale for selection of measures of condition (features and attributes for use in condition assessment) **(**The selected vegetation attributes are those considered to most economically define favourable condition at this site for the broad habitat type and any dependent designated species).
General notes regarding stag beetle This beetle develops in decaying timber, largely in the roots and stumps of dead deciduous trees, but also in other types of damp decaying wood in contact with soil such as fallen logs, roots of smaller bushy species, bases of fence posts, old timber piles etc. It may be dependent upon a mosaic of habitats in an area for different requirements at larval and adult stages. The main requirement during the larval stage is the availability of large diameter decaying timber, usually in contact with the soil which is not subject to disturbance or fluctuating conditions. Suitable timber is usually in warm places but not subject to high temperatures in full sunlight. **Currently, the only attributes that are well understood are related to the abundance and condition of decaying timber.**
Other Notes
Note that stag beetle was not known to be present at time of SSSI designation and is not a SSSI selection criterion. However, it has been regularly recorded in recent years and the species was added as a qualifying interest feature for this component part of the Chilterns Beechwoods SAC.

- ***Bradenham Woods, Park Wood and The Coppice SSSI***

Conservation Objectives

The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, SAC, SPA, Ramsar) as individually listed in Table 1.

Habitat Types represented (Biodiversity Action Plan categories)

Beech woodland
Lowland calcareous grassland

Geological features (Geological Site Types)

Not applicable

(*) or restored to favourable condition if features are judged to be unfavourable.

Standards for favourable condition are defined with particular reference to the specific designated features listed in Table 1, and are based on a selected set of attributes for features which most economically define favourable condition as set out in Table 2 and Table 3:

Table 1 Individual designated Special Interest Features

BAP Broad Habitat type / Geological Site Type	Specific designated features	Explanatory description of the feature for clarification	SSSI designated interest features	SAC designated interest features	SPA bird populations dependency on specific habitats			Ramsar criteria applicable to specific habitats			
					Annex 1 species	Migratory species	Waterfowl assemblage	1a Wetland characteristics	2a Hosting rare species &c	3a 20000 waterfowl	3c 1% of population
Beech woodland	Beech woodland of NVC types W12 & W14	Semi-natural beech woodland on chalk and clay	*								
Lowland calcareous grassland	Chalk grassland NVC type CG3	Chalk grassland	*								

NB. 1). Features where asterisks are in brackets (*) indicate habitats which are not notified for specific habitat interest (under the relevant designation) but because they support notified species. 2) The requirements of species (including SPA bird species) are reflected in the Conservation Objectives for habitat features on which they depend. In some specific situations, direct population measures for species may also be used to provide supporting information to confirm habitat quality measures.

Table 2 Habitat Features - Extent Objectives

Conservation Objective for habitat extent	To maintain the designated habitats in favourable condition, which is defined in part in relation to a balance of habitat extent (extent attribute). Favourable condition is defined at this site in terms of the following site-specific standards:
Extent - Dynamic balance	On this site favourable condition requires the maintenance of the extent of each designated habitat type. Maintenance implies restoration if evidence from condition assessment suggests a reduction in extent.

Habitat Feature (BAP Broad Habitat level, or more detailed level if applicable)	**Estimated extent (ha) and date of data source/estimate**	**Site Specific Target range and Measures**	**Comments**
Beech woodland	120ha	No loss of extent of woodland; at least 90% of woodland referable to W12 & W14	Parts of the woods are occupied by conifer plantations which are gradually being felled and restored to wood pasture or woodland.
Chalk grassland	4.0 based upon 2000 aerial photo measured using MapInfo.	No loss of extent of species-rich grassland	There are 3 main areas of open grassland; one is best described as a large glade, another is on clay at the base of the slope so is not typical chalk grassland.

Audit Trail
Rationale for habitat extent attribute (Include methods of estimation (measures) and the approximate degree of change which these are capable of detecting).
Rationale for site-specific targets (including any variations from generic guidance)
Other Notes
The current balance between the two main habitats should be maintained at roughly the current level. There should be no expansion of the area of grassland at the expense of W12 or W14 woodland.

Table 3 Site-Specific definitions of Favourable Condition

CONSERVATION OBJECTIVE FOR THIS HABITAT / GEOLOGICAL SITE-TYPE	To maintain the **beech woodland and calcareous grassland** habitats at this site in favourable condition, with particular reference to relevant specific designated interest features. Favourable condition is defined at this site in terms of the following site-specific standards:
Site-specific details of any geographical variation or limitations (where the favourable condition standards apply)	
The attributes below apply to the whole site.	
Site-specific standards defining favourable condition	

Criteria feature	Attribute	Attribute term in guidance	Measure	Target	Comments	Use for CA?
Asperulo-Fagetum beechwoods (W12, W14)	Area		Field survey and/or aerial photography, in relation to baseline map.	No loss of ancient semi-natural stands At least current area of recent semi-natural stands maintained, although their location may alter. No reduction in area of ancient woodland	Stand loss due to natural processes may be acceptable. Stand destruction may occur if understorey and ground flora are irretrievably damaged, even if canopy remains intact. Loss = 0.5 ha or 0.5% of the stand area, whichever is smaller. 20% canopy cover is conventionally taken as the lower limit for an area to be considered as woodland. Beech may not be abundant throughout the stand, particularly in regeneration patches; this does not count as stand loss. Area/location of stands was mapped	yes

Criteria feature	Attribute	Attribute term in guidance	Measure	Target	Comments	Use for CA?
					by Jane Barneveld in 1997.	
Asperulo-Fagetum beechwoods (W12, W14)	Natural processes and structural development		Assess by field survey using structured walk and/or transects.	Understorey (2-5m) present over at least 10% of total stand area. Canopy cover present over 30-90 % of stand area. At least 30% cover of beech present in mature canopy on site as a whole. At least three age classes spread across the average life expectancy of the commonest trees, ie beech, ash. Some areas of relatively undisturbed mature/old growth stands or a scatter of large trees allowed to grow to over-maturity/death on site.	Changes leading to exceedance of these limits due to natural processes are likely to be acceptable. The understorey may range from virtually non-existent to impenetrable holly or yew. If understorey is very dense it may be affecting the ground flora but it is not clear whether this should be considered damaging. The site is predominantly beech high forest with natural regeneration in storm damaged areas. No very ancient trees currently present on site though beech are largely in a mature to senescing phase.	yes
Asperulo-Fagetum beechwoods (W12, W14)	Composition		Assess by field survey using structured walk and/or transects.	At least 95% of cover in any one layer of site-native or acceptable naturalised species. Death, destruction or replacement of native woodland species through effects of introduced fauna or other external unnatural factors not more than 10% by number or area in a five year period.	Sycamore is a widespread component in parts of the Chilterns Beechwoods at present but should not be permitted to take a dominant role in the canopy and should be excluded from areas where it is currently absent or rare. Parts of wood planted with larch, pine, Nothofagus, etc, mostly underplanted with beech. Damage to species by non-native species that does not lead to their death is not necessarily unacceptable. Damage to trees by squirrels that does not lead to their death or replacement	yes

Criteria feature	Attribute	Attribute term in guidance	Measure	Target	Comments	Use for CA?
					by non-woodland species is not necessarily unacceptable in nature conservation terms. Excessive browsing/grazing, even by native ungulates, may be undesirable if it causes shifts in the composition/ structure of the stand.	
Asperulo-Fagetum beechwoods (W12, W14)	Quality indicators		Assess by field survey using structured walk and/or transects, or as appropriate to feature	At least 80% of ground flora cover referable to NVC types W12 and W14. Distinctive elements maintained.	Changes leading to these targets not being met may be acceptable where this is due to natural processes. Ancient boundary features retained.	yes
Asperulo-Fagetum beechwoods (W12, W14)	Regeneration potential		Assess by field survey using structured walk and/or transects.	Signs of seedlings growing through to saplings to young trees at sufficient density to maintain canopy density over a 10 yr period No tree regeneration by planting.	A proportion of gaps at any one time may develop into permanent open space; equally some current permanent open space/glades may in time regenerate to closed canopy. Regeneration may often occur on the edge of woods rather than in gaps within it.	yes
CG3 grassland	Habitat Extent	Extent	Total area (ha), mapped in relation to baselinee.	No reduction in area and any consequent fragmentation without prior consent	Recoverable reduction = unfavourable; non-recoverable reduction = partially destroyed. Excludes bare ground associated with rabbit warrens (see below).	yes
CG3 grassland	Structure: Bare ground/mud/peat/rock	Sward structure: bare ground	Extent of bare ground (not rock) distributed through the sward, noticeable without disturbing the	No more than 10%.	Outside target indicates management problems eg over-grazing.	yes

Criteria feature	Attribute	Attribute term in guidance	Measure	Target	Comments	Use for CA?
			vegetation, in May-July.			
CG3 grassland	Structure: Bare ground/mud/peat/rock	Sward structure: localised bare ground	Extent of bare ground around rabbit warrens.	No more than 0.05 ha ie approx 20x20 metres	Outside target indicates rabbit grazing and disturbance levels are too high.	yes
CG3 grassland	Structure: Litter	Sward structure: litter	Cover of litter where in a more or less continuous layer, distributed either in patches or in one larger area.	Total extent no more than 25% of the sward	Outside target indicates biomass removal is insufficient eg under-grazed.	yes
CG3 grassland	Structure: Vegetation height	Sward structure: average height	Sward height in May-July.	2-15 cm	Outside target indicates insufficient grazing or over-grazing.	yes
CG3 grassland	Composition: Grass/herb ratio	Sward composition: grass/herb ratio	Proportion of herbs, in May -July.	40-90%	Low proportion outside target indicates eutrophication, usually from fertilisers, or insufficient removal of biomass, leading to dominance by grasses.	yes
CG3 grassland	Positive quality indicators: Characteristic species	Sward composition: positive indicator species	Frequency of positive indicator species in May-July: *Bromopsis erecta, Arrhenatherum elatius, Origanum vulgare, Galium verum, Helianthemum nummularium, Anthyllis vulneraria,*	*Bromopsis erecta* frequent plus at least two species/taxa frequent and four occasional throughout the sward		yes

Criteria feature	Attribute	Attribute term in guidance	Measure	Target	Comments	Use for CA?
			Gentianella spp *Scabiosa columbaria, Sanguisorba minor, Primula veris, Cirsium acaulon, Lotus corniculatus, Leontodon hispidus, Linum catharticum, Pilosella officinarum, Plantago media, Polygala* spp, *Thymus* spp,			
CG3 grassland	Negative quality indicators: Ruderals/coarse grasses	Sward composition: negative indicator species	Frequency and cover of negative indicator species in May-July: thistles (except dwarf thistle), nettles, docks and ragwort	No species/taxa more than occasional throughout the sward or singly or together more than 5% cover	Invasive species chosen to indicate problems of eutrophication and disturbance from various sources when outside target eg poaching, stock feeding.	yes
CG3 grassland	Negative quality indicators: Ruderals/coarse grasses	Sward composition:negative indicator species	Cover of *Brachypodium pinnatum*, in May-July.	No more than 10% cover	Outside target indicates insufficient removal of biomass eg under-grazing.	yes
CG3 grassland	Negative quality indicators: Trees/scrub	Sward composition: negative indicator species	Cover of all tree and scrub species considered together.	< 5% scrub cover.	Invasive species outside target shows that habitat is not being managed sufficiently eg under-grazed.	yes

Audit Trail
Rationale for limiting standards to specified parts of the site

Rationale for site-specific targets (including any variations from generic guidance)
Rationale for selection of measures of condition (features and attributes for use in condition assessment) (The selected vegetation attributes are those considered to most economically define favourable condition at this site for the broad habitat type and any dependent designated species).
Other Notes

- ***Ellesborough and Kimble Warrens SSSI***

Conservation Objectives

The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, cSAC, SPA, Ramsar) as individually listed in Table 1.

Habitat Types represented (Biodiversity Action Plan categories)

Lowland calcareous grassland
Beech/ash woodland
Box dominated scrub

(*) or restored to favourable condition if features are judged to be unfavourable

Standards for favourable condition are defined with particular reference to the specific designated features listed in Table 1, and are based on a selected set of attributes for features which most economically define favourable condition as set out in Table 2 and Table 3:

Table 1 Individual designated Special Interest Features

BAP Broad Habitat type / Geological Site Type	Specific designated features	Explanatory description of the feature for clarification	SSSI designated interest features	cSAC designated interest features	SPA bird populations dependency on specific habitats			Ramsar criteria applicable to specific habitats			
					Annex 1 species	Migratory species	Waterfowl assemblage	1a Wetland characteristics	2a Hosting rare species &c	3a 20000 waterfowl	3c 1% of population
Calcareous grassland	Calcareous grassland of NVC types CG2a and CG3a	Herb rich unimproved grassland on chalk substrate, supporting characteristic Chilterns plants									
Broadleaved woodland	Beech/ash woodland	Beech and ash woodland									
Mixed scrub	Box dominated scrub										

NB. 1). Features where asterisks are in brackets (*) indicate habitats which are not notified for specific habitat interest (under the relevant designation) but because they support notified species. 2) The requirements of species (including SPA bird species) are reflected in the Conservation Objectives for habitat features on which they depend. In some specific situations, direct population measures for species may also be used to provide supporting information to confirm habitat quality measures.

Table 2 Habitat Features - Extent Objectives

Conservation Objective for habitat extent	To maintain the designated habitats in favourable condition, which is defined in part in relation to a balance of habitat extent (extent attribute). Favourable condition is defined at this site in terms of the following site-specific standards:
Extent - Dynamic balance	On this site favourable condition requires the maintenance of the extent of each designated habitat type. Maintenance implies restoration if evidence from condition assessment suggests a reduction in extent.

Habitat Feature (BAP Broad Habitat level, or more detailed level if applicable)	**Estimated extent (ha) and date of data source/estimate**	**Site Specific Target range and Measures**	**Comments**
Lowland calcareous grassland	17 ha (estimated)	There should be no loss of grassland to woodland or encroachment of scrub.	Parts of the grassland have suffered encroachment by scrub and this is gradually being reversed.
Beech – ash woodland		There should be no loss of woodland except where this will result in the restoration of species-rich grassland or box scrub of greater conservation value.	Some of the woodland is of relatively recent origin and clearance to extend areas of grassland or to improve the quality of areas of box scrub is acceptable.
Box scrub	5 ha (estimated)	There should be no loss of box dominated scrub.	Box is dominant on steep slopes where it suppresses the growth of other tree species. This is a very rare feature in the UK. This box dominated community should be retained and if practical extended.

Audit Trail
Rationale for habitat extent attribute (*Include methods of estimation (measures), and the approximate degree of change which these are capable of detecting).*
Rationale for site-specific targets (including any variations from generic guidance)
There should be no further loss of calcareous grassland to scrub or woodland, including box-dominated scrub.
Other Notes

Table 3 Site-Specific definitions of Favourable Condition

CONSERVATION OBJECTIVE FOR THIS HABITAT / GEOLOGICAL SITE-TYPE	To maintain the calcareous grassland, broadleaved woodland and box scrub in favourable condition, with particular reference to relevant specific designated interest features. Favourable condition is defined at this site in terms of the following site-specific standards:
Site-specific details of any geographical variation or limitations (where the favourable condition standards apply)	
Site-specific standards defining favourable condition	

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
Semi-natural woodland	Asperulo-Fagetum beechwoods (W12, including areas of pure box, W14)	1. Area	Extent/location of stands	* No loss of mature stands * At least current area of recent semi-natural stands maintained, although their location may alter. *No reduction in area of mature woodland	* Stand loss due to natural processes or where it is being undertaken intentionally to create or extend habitat of greater conservation value may be acceptable. * Stand destruction may occur if understorey and ground flora are irretrievably damaged, even if canopy remains intact. * Loss = 0.5 ha or 0.5% of the stand area, whichever is smaller. * 20% canopy cover is conventionally taken as the lower limit for an area to be considered as woodland. * Beech may not be abundant throughout stand, particularly in regeneration patches; this does not count as stand loss. * Area/location of stands was mapped in 1997 by Jane Barneveld.	
Semi-natural woodland	Asperulo-Fagetum beechwoods	2. Natural processes and structural	Age/size class variation within and between stands;	* At least the current level of structural diversity	* Any changes leading to exceedance of these limits due to natural processes are likely to be acceptable. * The understorey ranges from virtually non-existent to	

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
	(W12, including areas of pure box, W14)	development	presence of open space and old trees; dead wood lying on the ground; standing dead trees	maintained. * Understorey (2-5m) present over 10-80% of total stand area. * Ground flora present over at least 10% of area or current extent in mature stands, whichever is greater. * Canopy cover present over 30-90 % of stand area. * Age class structure appropriate to the site, its history and management. * A minimum of 3 fallen lying trees >20 cm diameter per ha and 10 trees per ha allowed to die standing.	impenetrable box. *There is virtually no ground flora in box dominated areas. *The wood is predominantly even-aged high forest. Parts have been heavily influenced by planting of beech, other areas are of relatively recent origin as a result of successional development. The objective is to have predominantly high forest with mixed age structure, ie c.80% mature stands, 10% >150yrs, 10% open stands <30 yrs. * Assess this attribute between mid April and early June.	
		3.Regeneration potential	Successful establishment of young stems in gaps or on the edge of a	* Signs of seedlings growing through to saplings to young trees at sufficient	* A proportion of gaps at any one time may develop into permanent open space; equally some current permanent open space/glades may in time regenerate to closed canopy.	

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
			stand.	density to maintain canopy density over a 10 yr period (or equivalent regrowth from coppice). * No re-stocking by planting.	* The minimum level of regeneration to be acceptable from a nature conservation viewpoint is likely to be much less than that needed where wood production is also an objective. * Areas of pure box do not appear to require management for maintenance of favourable condition, although small scale coppicing may be beneficial for *Metzgeria fruticulosa* in suitably humid locations.	
		4. Composition	Cover of native versus non-native species (all layers) Death, destruction or replacement of native woodland species through effects of non-native fauna or external unnatural factors	* At least 90% cover in any one layer of site-native or acceptable naturalised spp. * Beech present in mature canopy at at least 30% cover for feature on site as a whole. * Death, destruction or replacement of native woodland species through effects of introduced fauna or other external unnatural factors not more than 10% by number or area in a five year period.	* Sycamore is common in places and there are also a number of planted and naturalised tree species such as walnut. Sycamore should be controlled where it is adversely affecting the ground flora and/or assuming a dominant role in the canopy. * In several places box forms virtually 100% of stand area. * Where cover in any one layer is less than 100% then the 90% target applies to the area actually covered by that layer. * Factors leading to the death or replacement of woodland species could include pollution, eutrophication from adjacent farmland, new diseases. * Damage to trees by squirrels that does not lead to their death or replacement by non-woodland species is not necessarily unacceptable in nature conservation terms. * Excessive browsing/grazing by even	

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
					native ungulates may be considered an unnatural external factor where it leads to undesirable shifts in the composition/structure of the stand, although this may be picked up by attributes 2 or 5 anyway.	
		5. Species, habitats, structures characteristic of the site.	Ground flora type Distinctive and desirable elements Patches of associated habitats and transitions	* 80% of ground flora cover referable to W12. *Some areas of transitional box scrub through to grassland should be maintained as this is an important dynamic feature. *At least current extent of box dominated scrub maintained, although location may change. * At least some areas of box scrub should be maintained in suitable condition to support *Metzgeria fruticulosa*. *At least current	* Changes leading to these targets not being met may be acceptable where this is due to natural processes.	

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
				extent of box understorey maintained. * At least current extent of open glades maintained, and where possible, extended.		
Unimproved calcareous grassland CG2, CG3		*Extent	Total area (27ha). Area mapped in 1994 by G. Steven	No reduction in area and any consequent fragmentation without prior consent	Recoverable reduction = unfavourable; non-recoverable reduction = partially destroyed. Excludes bare ground associated with rabbit warrens (see below).	
CG2, CG3, Calcicolous grassland	2. Structure: Bare ground/rock	Sward structure: bare ground	Extent of bare ground (not rock) distributed through the sward, noticeable without disturbing the vegetation, in May-July.	No more than 10%.	Outside target indicates management problems eg over-grazing.	
CG2, CG3, Calcicolous grassland	2. Structure: Bare ground/mud/rock	Sward structure: localised bare ground	Extent of localised bare ground around rabbit warrens.	No more than 0.05 ha ie approx 20x20 metres	Outside target indicates rabbit grazing and disturbance levels are too high.	
CG2, CG3, Calcicolous grassland	2. Structure: Litter	Sward structure: litter	Cover of litter where in a more or less continuous layer, distributed either in patches or in one larger area.	Total extent no more than 20% of the sward	Outside target indicates biomass removal is insufficient eg under-grazed.	

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
CG2, CG3, Calcicolous grassland	2. Structure: Vegetation height	Sward structure: average height	Sward height in May-July.	Sward 2-10 cm where CG2, 5-15 cm where CG3	Outside target indicates insufficient grazing or over-grazing.	
CG2, CG3, Calcicolous grassland	3. Composition: Grass/herb ratio	*Sward composition: grass/herb ratio	Proportion of herbs, in May -July.	40-90% herbs	Low proportion outside target may indicate eutrophication, usually from fertilisers, or insufficient removal of biomass, leading to dominance by grasses.	
Unimproved calcareous grassland CG2, CG3		*Sward composition: positive indicator species	Frequency of positive indicator species in May- July. *Anthyllis vulneraria, Asperula cynanchica, Campanula glomerata, Cirsium acaule, Filipendula vulgaris, Gentianella spp., Helianthemum nummularium, Hippocrepis comosa, Leontodon hispidus, Leucanthemum vulgare, Linum catharticum, Lotus corniculatus, Hieracium pilosella, Plantago media, Polygala* spp., *Primula veris, Sanguisorba minor, Scabiosa columbaria, Succisa pratensis, Thymus* spp.	At least four species/taxa **frequent** plus at least three species/taxa **occasional** throughout the sward.	It should be noted that not all of the grassland is species-rich; parts have been impoverished through past agricultural treatment or the effects of scrub encroachment but are gradually increasing in representation of characteristic species.	

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
CG2, CG3, Calcicolous grassland	5. Negative quality indicators: Ruderals/coarse grasses	*Sward composition: negative indicators	Frequency and % cover of negative indicators, in May-July: thistles (excluding dwarf thistle), nettles, docks and ragwort.	No species/taxa more than occasional throughout the sward or singly or together more than 5% cover	Invasive species may indicate problems of eutrophication and disturbance from various sources when outside target eg poaching, stock feeding.	
CG2, CG3, Calcicolous grassland	5. Negative quality indicators: coarse grasses	*Sward composition: negative indicators	% cover of Brachypodium pinnatum, and false brome in May-July.	No more than 10% cover	Outside target indicates insufficient removal of biomass eg under-grazing.	
CG2, CG3, Calcicolous grassland	5. Negative quality indicators: Trees/scrub	*Sward composition: negative indicators	Frequency and % cover of all tree and scrub species, considered together. The grassland is vulnerable to encroachment by bramble, hawthorn and box at this site.	No more than 10% cover in the open grassland areas.	Invasive species outside target shows that habitat is not being managed sufficiently eg under-grazed. The box scrub/grass interface is an important element of this site; management should aim to maintain a dynamic edge habitat which provides structural variation with humid, dappled shade conditions required by epipyhtes.	

Audit Trail
Rationale for limiting standards to specified parts of the site
Rationale for site-specific targets (including any variations from generic guidance)

The box scrub is a particularly important feature of this site. It is important that this habitat is maintained in a suitable condition to support the rare associated lower plant communities. Some progress has been made in reversing the loss of species-rich grassland to scrub and woodland; this should be continued where there is a realistic prospect of rapid recovery of grassland. The presence of sycamore and walnut can be tolerated and some trees can be allowed to mature, though it should be maintained at a low level through preferential removal during thinning operations.
Rationale for selection of measures of condition (features and attributes for use in condition assessment) **(**The selected vegetation attributes are those considered to most economically define favourable condition at this site for the broad habitat type and any dependent designated species).
Other Notes

- ***Tring Woodlands SSSI***

Conservation Objectives
SSSIs are notified because of specific biological or geological features. Conservation Objectives define the desired state for each site in terms of the features for which they have been designated. When these features are being managed in a way which maintains their nature conservation value, then they are said to be in 'favourable condition'. It is a Government target that 95% of the total area of SSSIs should be in favourable condition by 2010.

Definitions of Favourable Condition
The Conservation Objectives are accompanied by one or more habitat extent and quality definitions for the special interest features at this site. These are subject to periodic reassessment and may be updated to reflect new information or knowledge; they will be used by Natural England and other relevant authorities to determine if a site is in favourable condition. The standards for favourable condition have been developed and are applied throughout the UK.

Conservation Objectives

The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, SAC, SPA, Ramsar) as individually listed in Table 1.

Habitat Types represented (Biodiversity Action Plan categories)
Broadleaved, Mixed and Yew Woodland - Lowland

Geological features (Geological Site Types)
Not Applicable

(*) or restored to favourable condition if features are judged to be unfavourable.

Standards for favourable condition are defined with particular reference to the specific designated features listed in Table 1, and are based on a selected set of attributes for features which most economically define favourable condition as set out in Table 2 and Table 3:

Table 1 Individual designated Special Interest Features

BAP Broad Habitat type / Geological Site Type	Specific designated features	Explanatory description of the feature for clarification	SSSI designated interest features	SAC designated interest features	SPA bird populations dependency on specific habitats			Ramsar criteria applicable to specific habitats			
					Annex 1 species	Migratory species	Waterfowl assemblage	1a Wetland characteristics	2a Hosting rare species &c	3a 20000 waterfowl	3c 1% of population
Broadleaved, Mixed and Yew Woodland – Lowland	W12 *Fagus sylvatica - Mercurialis perennis* Woodland	Broadleaved woodland dominated by beech with dog's mercury.	*	*							
	W14 – *Fagus sylvatica- Rubus fructicosus* woodland	Broadleaved woodland dominated by beech with bramble.	*	*							

NB. 1). Features where asterisks are in brackets (*) indicate habitats which are not notified for specific habitat interest (under the relevant designation) but because they support notified species. 2) The requirements of species (including SPA bird species) are reflected in the Conservation Objectives for habitat features on which they depend. In some specific situations, direct population measures for species may also be used to provide supporting information to confirm habitat quality measures.

Table 2 Habitat Features - Extent Objectives

Conservation Objective for habitat extent	To maintain the designated habitats in favourable condition, which is defined in part in relation to a balance of habitat extent (extent attribute). Favourable condition is defined at this site in terms of the following site-specific standards:
Extent - Dynamic balance	On this site favourable condition requires the maintenance of the extent of each designated habitat type. Maintenance implies restoration if evidence from condition assessment suggests a reduction in extent.

Habitat Feature (BAP Broad Habitat level, or more detailed level if applicable)	**Estimated extent (ha) and date of data source/estimate**	**Site Specific Target range and Measures**	**Comments**
W12 *Fagus sylvatica - Mercurialis perennis* Woodland W14 – Fagus sylvatica-Rubus fructicosus	58.8 ha, entire site extent at notification, 1985	No loss of ancient semi-natural stands. At least current area of recent semi-natural stands maintained. No loss of ancient woodland. No loss of veteran trees.	Stand loss due to natural processes e.g. in minimum intervention stands may be acceptable. Stand destruction may occur if the understorey and ground flora are irretrievably damaged even if the canopy remains intact. Loss = 0.5 ha or 0.5% of the stand area, whichever is the smaller.

Audit Trail
Rationale for habitat extent attribute ***(Include methods of estimation (measures), and the approximate degree of change which these are capable of detecting).***
Rationale for site-specific targets (including any variations from generic guidance)
Within generic guidance

Other Notes
This site is one of the best examples in Hertfordshire of ancient semi-natural beech *Fagus sylvatica* woodland, a habitat which is in decline nationally. The wood lies at the eastern end of the Chilterns on the steep north-west facing Middle Chalk escarpment, and extends onto the plateau area capped by clay-with –flints. There is a rich flora present, indicating that the woodland has been long established. Associated with the beech high forest are areas of standard ash *Fraxinus excelsior* and pendunculate oak *Quercus robur*. Holly *Ilex aquifolium* and yew *Taxus baccata* comprise the sparse shrub layer on the upper slopes. Lower down there is more variety with dogwood *Cornus sanguinea*, field maple *Acer campestre*, wayfaring tree *Viburnum lantana* and coppiced hazel *Corylus avellana*. A small mixed plantation of larch *Larix deciduas* and species native to the site is situated on the plateau and retains important elements of the established plant community. The diverse flora is dominated by woodruff *Galium odoratum*, wood anemone *Anemone nemorosa*, dog's mercury *Mercurialis perennis* and brambles *Rubus fruticosus* with frequent sanicle *Sanicula europaea* and wood spurge *Euphorbia amygdaloides*. Notable amongst twenty species of grass present are wood melick *Melica uniflora* and two local species, wood barley *Hordelymus europaeus* and lesser hairy brome *Bromus enekenii*. In the central part of the wood floral diversity is enhanced by the presence of more restricted species such as yellow birds nest *Monotropa hypopitys*, common wintergreen *Pyrola minor* and narrow-lipped helleborine *Epipactis leptochila* at one of its few county localities. Two other typical beech wood orchids present are fly orchid *Ophyrs insectifera* and white helleborine *Cephalanthera damasonium*. A good range of woodland bird species have been recorded including breeding tawny owl *Strix aluco* and great spotted woodpecker *Dendrocopus major*. The site was previously known as Grove and Stubbing Woods SSSI, and consist of 3 wood areas Stubbings Wood (Northern section), Grove Wood (south east corner) and Dog Wood (west and south west corner) (see Map 1) The site is within the Chilterns Area of Outstanding Natural Beauty.

Table 3 Site-Specific definitions of Favourable Condition

CONSERVATION OBJECTIVE FOR THIS HABITAT / GEOLOGICAL SITE-TYPE	To maintain the **Lowland Broadleaved, Mixed and Yew Woodland** habitat at this site in favourable condition, with particular reference to relevant specific designated interest features. Favourable condition is defined at this site in terms of the following site-specific standards:

Site-specific details of any geographical variation or limitations (where the favourable condition standards apply)

Site-specific standards defining favourable condition

Criteria feature	Attribute	Measure	Site-specific Targets	Comments	Use for CA?
W12 *Fagus sylvatica - Mercurialis perennis* Woodland W14 – Fagus sylvatica- Rubus fructicosus woodland	Structure and Natural processes	Assess by field survey using structured walk and/or transects.	Understorey (2-5m) present over at least 20% of total stand area. Shrub layer should should account for 5-50% cover in places Canopy cover present should account for 70-80% cover. At least three age classes spread across the average life expectancy of the commonest trees. A scatter of large trees allowed to grow to over-maturity/death on site (e.g. 2-8 mature or standing dead trees /ha)	The wood supports both high forest and coppiced stands. Shrub layer is sparse in some areas, which is typical of beech or oak woods. In coppiced stands a lower canopy cover (of standards) can be accepted. The wood was severely impacted by storms in the late 1980's and 1990's. Northern area is dominated by ash (10-20cm dbh) with yew dominated understorey (10% cover) and beech and the occasional horse chestnut (5-10% cover).	Yes

Criteria feature	Attribute	Measure	Site-specific Targets	Comments	Use for CA?
			There should be between 10-20% permanent and temporary open space (wide rides, paths, glades, open space) to ensure suitable conditions for additional floral habitat associated with calcareous soils (see Quality indicators)		
W12 *Fagus sylvatica - Mercurialis perennis* Woodland W14 – Fagus sylvatica- Rubus fructicosus	Composition	Assess by field survey using structured walk and/or transects.	At least 95% of cover in any one layer of site-native or acceptable naturalised species. Minimum of 30% cover Beech in mature canopy. <5% cover represented by non-native tree species (notably horse chestnut, sycamore and larch) to minimise competition with native species and allow ash, beech and other broad leaved natives to spread across the site No evidence of rapid die-back (>10% of tree/shrub layer) in any 5 year period.	Where cover in any one layer is less than 100% then the 95% target applies to the area actually covered by that layer. Composition should favour Beech (predominantly) and Ash (with other species associated with ancient chalk woodland) Areas affected by the 87/90 storms have been rapidly colonised by fast growing ash at the expense of Beech, particularly in the northern section. Yew, holly spindle are present in the understorey. These species should be favoured over non-natives such as laurel i.e. Portugal Laurel Prunus lusitanica, Cherry Laurel P. laurocerasus (**excluding native species Spurge Laurel *Daphne laureola***). Western side of the wood has the highest percentage of Beech. Beech on the lower slope of Stubbings wood has suffered disease.	Yes

Criteria feature	Attribute	Measure	Site-specific Targets	Comments	Use for CA?
				Removal of non-native species (notably horse chestnut, sycamore and larch) to favour beech & ash is a priority. Within Grove Wood, larch and sycamore are present. Within Dog Wood sycamore needs to be controlled Factors leading to the death or replacement of woodland species could include pollution or new diseases. Damage to species by non-native species that does not lead to their death is not necessarily unacceptable. Excessive browsing/grazing, even by native ungulates, may be undesirable if it causes shifts in the composition/ structure of the stand. Success of young beech is impeded by squirrel damage and browsing by deer (muntjac and Roe deer). Deer damage is also associated with the loss of rare helleborines. There is a potential issue with climate change. Very dry summers (2003) are poorly tolerated by beech, and if such conditions become more common beech regeneration may be impaired. (Species list 2003 is attached for reference.) Glades and rides are important for a variety of species notably sanicle, bluebell, wood	

Criteria feature	Attribute	Measure	Site-specific Targets	Comments	Use for CA?
				anemone, wood sorrel, bugle, yellow archangel, dogs mercury (and *Cephalanthera*, wood melick and wood millet (refer to quality indicators) Ideally the wood edges should be wide and graded to enhance species diversity.	
W12 *Fagus sylvatica* - *Mercurialis perennis* Woodland W14 – Fagus sylvatica- Rubus fructicosus	Quality indicators	Assess by field survey using structured walk and/or transects, or as appropriate to feature.	Minimum of 80% of ground flora cover referable to W12 and W14 (plateau). Occurrence of notable species identified in maps from 2003 survey. Several species (see comments) are dependent on the mature beech component of the wood and their occurrence can be used as a quality indicator.	A number of scarce plants and interesting flora of the woods are associated with open space (rides, ride edge, glades) within the wood (See Map 3 – Notable Species) Narrow-lipped Heleborine *Epipactis leptochila* was last recorded in 1980. If the mature beech component of the wood is increased, it is possible that this species may reoccur, since orchid seed have long dormancy. Fly Orchid *Ophrys insectifera* was last recorded in 1978.	Yes

Criteria feature	Attribute	Measure	Site-specific Targets	Comments	Use for CA?
				Common Spotted Orchid *Dactylorhiza fuschii* has established small ephemeral populations at the wood margins, spreading from neighbouring calcareous grassland. The wider grassy rides provide suitable conditions for potential future colonising of this species.Similarly, Common Twayblade *Listera ovata* last recorded in 1979 may recolonise by natural dispersal. White Helleborine *Cephalanthera damasonium* was recorded in 2003. Yellow Bird's-nest *Monotropa hypopitis* has not been recorded since Dony in 1976. Wood barley Hordelymus europaeus and Lesser Hairy Brome Bromus benekinii were still found to be well distributed in 2003, mostly along path and ride margins	Yes
				A colony of Common Wintergreen *Pyrola minor* was recorded in 1989 but as with several notable species described, they require a mature beech component within the woodland, much of which appears to have been devastated by the 1987/90 storms and is now smothered by *Fraxinus* growth. Maps produced by LandMAS, HMWT in 2003 identify the areas where these species have been	

Criteria feature	Attribute	Measure	Site-specific Targets	Comments	Use for CA?
				previously recorded. Monitoring should seek to target these areas in order to provide a rapid indication of presence/ absence and/or approximate extent. No evidence of *Monotropa, Epipactus leptochila*, Common Wintergreen and fly orchid in 2002	
W12 *Fagus sylvatica* - *Mercurialis perennis* Woodland W14 – Fagus sylvatica- Rubus fructicosus	Regeneration potential	Assess by field survey using structured walk and/or transects.	Signs of seedlings growing through to saplings to young trees at sufficient density to maintain canopy density over a 10 yr period (or equivalent re-growth from coppice stumps).	The wood supports areas of non-intervention, high forest and rotational coppice. A proportion of gaps at any one time may develop into permanent open space; equally some current permanent open space/glades may in time regenerate to closed canopy. Regeneration may often occur on the edges of woods rather than in gaps within it. The minimum level of regeneration to be acceptable from a nature conservation viewpoint is likely to be much less than that needed where wood production is also an objective. There is sufficient mature beech, but mostly confined to the outskirts of the woodland. The western side of Stubbings Wood – Dying Beech and competing larch reducing natural regeneration. Probably best not to encourage clearance to facilitate sapling growth because beech will germinate in dense shade. Areas	Yes

Criteria feature	Attribute	Measure	Site-specific Targets	Comments	Use for CA?
				along the middle slope may require planting up with beech/ ash. Regeneration of hazel is associated with coppice stumps. Sycamore stumps may need herbicide treatment in places to prevent regrowth.	

Audit Trail
Rationale for limiting standards to specified parts of the site
Rationale for site-specific targets (including any variations from generic guidance)
No variations from generic guidance
Rationale for selection of measures of condition (features and attributes for use in condition assessment) **(**The selected vegetation attributes are those considered to most economically define favourable condition at this site for the broad habitat type and any dependent designated species).
Other Notes
Botanical Survey of Tring Woodlands SSSI, 2003 – prepared on behalf of Dacorum District Council by Dr Paul Clack, Jan 2004. LandMAS HMWT. The composition of the woodland has changed considerably in recent years following storms in the late 1980's and 1990's, with some areas of Beech Woodland now dominated by regenerating Ash trees. Where possible beech should be selected and protected from squirrel and deer browsing throughout the wood by appropriately sized guards or fencing larger areas (e.g.plateau). Priority should be in areas where notable scarce plants typical to beech woodland community had been previously reported (see map) Regular monitoring will assist with the protection of key species such as orchids and the impact of deer browsing. Removal of non-native species notably horse chestnut, sycamore and larch) is a priority with focus on large seed producing specimens. Recommend herbicide treatment of stumps to prevent re-growth.

- ***Windsor Hill SSSI***

Conservation Objectives

The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, SAC, SPA, Ramsar) as individually listed in Table 1.

Habitat Types represented (Biodiversity Action Plan categories)

Lowland mixed broadleaf woodland
Lowland calcareous grassland

Geological features (Geological SiteTypes)

[n/a]

(*) or restored to favourable condition if features are judged to be unfavourable.

Standards for favourable condition are defined with particular reference to the specific designated features listed in Table 1, and are based on a selected set of attributes for features which most economically define favourable condition as set out in Table 2 and Table 3:

Table 1 Individual designated Special Interest Features

BAP Broad Habitat type / Geological Site Type	Specific designated features	Explanatory description of the feature for clarification	SSSI designated interest features	cSAC designated interest features	SPA bird populations dependency on specific habitats			Ramsar criteria applicable to specific habitats			
					Annex 1 species	Migratory species	Waterfowl assemblage	1a Wetland characteristics	2a Hosting rare species &c	3a 20000 waterfowl	3c 1% of population
Lowland mixed broadleaf woodland	W12, W14 Beech woodland	Beech/oak/ash woodland	X	X							
Lowland mixed broadleaf woodland	Red helleborine (i) Cephalanthera rubra		X								
Lowland calcareous grassland with juniper scrub	juniper		X								

NB. 1). Features where asterisks are in brackets (*) indicate habitats which are not notified for specific habitat interest (under the relevant designation) but because they support notified species. 2) The requirements of species (including SPA bird species) are reflected in the Conservation Objectives for habitat features on which they depend. In some specific situations, direct population measures for species may also be used to provide supporting information to confirm habitat quality measures.

Table 2 Habitat Features - Extent Objectives

Conservation Objective for habitat extent	To maintain the designated habitats in favourable condition, which is defined in part in relation to a balance of habitat extent (extent attribute). Favourable condition is defined at this site in terms of the following site-specific standards:
Extent - Dynamic balance	On this site favourable condition requires the maintenance of the extent of the designated habitat type. Maintenance implies restoration if evidence from condition assessment suggests a reduction in extent.

Habitat Feature (BAP Broad Habitat level, or more detailed level if applicable)	Estimated extent (ha) and date of data source/estimate	Site Specific Target range and Measures	Comments
Lowland mixed broadleaf woodland	40 (estimated)	No reduction in area except where clearance is required to create habitat of higher conservation value.	Limited clearance of recent or plantation woodland is acceptable where it will result in benefits for juniper scrub or *Cephalanthera rubra*.
Juniper scrub	2 (estimated)	No reduction in area	The number of juniper bushes has declined significantly in recent years
Lowland Calcareous grassland			

Audit Trail
Rationale for habitat extent attribute ***(Include methods of estimation (measures) and the approximate degree of change which these are capable of detecting).***
Rationale for site-specific targets (including any variations from generic guidance)
Other Notes

Table 3 Site-Specific definitions of Favourable Condition

CONSERVATION OBJECTIVE FOR THIS HABITAT / GEOLOGICAL SITE-TYPE	To maintain the broadleaved mixed woodland and juniper scrub habitat at this site in favourable condition, with particular reference to relevant specific designated interest features. Favourable condition is defined at this site in terms of the following site-specific standards:

Site-specific details of any geographical variation or limitations (where the favourable condition standards apply)

Site-specific standards defining favourable condition

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
Beech woodland (W12, W14)	1. Habitat Extent	Area	Extent/location of stands	No loss of ancient semi-natural stands (Refer to Barneveld 1997) At least current area of recent semi-natural stands maintained, although their location may alter. At least the area of ancient woodland retained	Temporary stand loss due to natural processes would be acceptable. Stand destruction may occur if the understorey and ground flora are irretrievably damaged even if the canopy remains intact. Loss = 0.5 ha or 0.5% of the stand area, whichever is the smaller. 20% canopy cover is conventionally taken as the lower limit for an area to be considered as woodland. Beech may not be abundant throughout the stand, particularly in regeneration patches, but this does not count as stand loss.	

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
Beech woodland (W12, W14)	2. Natural processes and structural development		Age/size class variation within and between stands; presence of open space and old trees; dead wood lying on the ground; standing dead trees	At least the current level of structural diversity maintained but where possible should be increased. Understorey (2-5m) present over 10-80% of total stand area. Ground flora present over at least 10% of area or current extent in mature stands, whichever is greater. Canopy cover present over 30-90 % of stand area. Age class structure appropriate to the site, its history and management. A minimum of 3 fallen lying trees per ha and 10 standing dead trees per ha.	Any changes leading to exceedance of these limits due to natural processes are likely to be acceptable. Structural variation in parts of the wood dominated by beech plantation is currently low. The understorey is mostly sparse-infrequent holly, elder & cherry on plateau -elsewhere non existent through grazing or loss of canopy/understorey in storms and clearup operation. There is not a great deal of standing dead wood as is typical of beech woods but there is a fair amount of dead wood in the canopy and as fallen trees.	

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
Beech woodland (W12, W14)	4. Positive quality indicators: Characteristic species	Species, habitats, structures characteristic of the site.	Ground flora type Distinctive and desirable elements for a given site Patches of associated habitats and transitions Presence of rare/notable species: Cephalanthera rubra	80% of ground flora cover referable to relevant NVC community Distinctive elements maintained at current levels and in current locations (where appropriate) Patches and transitions maintained in extent and where appropriate location. Suitable conditions. Maintained to support self-sustaining population of *Cephalanthera rubra*.- It is believed to require partially shaded grassland with low competition from other species and no heavy deposits of leaf litter	Targets not being met are acceptable where due to natural processes. The ground flora is very sparse in many parts of the site; parts appear to have suffered significant ground disturbance which has affected the ground flora. The site includes some mature, specimen beech; these should be allowed to mature and die in situ. The presence of and transition to grassland and scrub is a feature of interest and conservation value but it is accepted that its location may change over time due to natural succession. *Cephalanthera rubra* is restricted to a small area of the site. Number of stems varies from year to year but location remains constant within small area. It is not clear whether seed production is successful at the site. The location of the plant is accurately mapped and held in the Bucks rare plant file.	

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
Beech woodland (W12, W14)	6. Natural processes/regeneration	Regeneration potential	Successful establishment of young stems in gaps or on the edge of a stand	Signs of seedlings growing through to saplings to young trees at sufficient density to maintain canopy density over a 10 yr period. No regeneration by planting.	The minimum level of regeneration acceptable from a nature conservation viewpoint is likely to be much less than that needed where wood production is also an objective. Much planting has been carried out, especially after the 1987 storm. Natural regeneration esp ash is successful in parts of the wood.	
Juniper scrub	Habitat Extent	Area and distribution	Area and location of habitat supporting juniper	No reduction in area and any consequent fragmentation without prior consent, subject to natural change		
Juniper scrub	Reproductive potential		Measures in place to promote self-sustaining population.	Suitable conditions in place to encourage/promote regeneration and survival of seedlings.	Natural reproduction may not be feasible under current conditions. Intervention to create suitable ground conditions for seedling establishment and protection of seedlings may be required.	
Juniper scrub	Community composition	Associated species	Frequency of: privet, dogwood, bramble, hawthorn, false brome	at least occasional		

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
Juniper scrub	Health of bushes	Browsing effects	Evidence of browsing/ grazing impacts	<50% showing no or low to moderate impact		

TABLE FROM BEAR OVERYS = WOODLAND INCLUDING ATTRIBUTES FOR GHOST ORCHID SHOULD BE ACCEPTIBLE FOR RED HELLEBORINE ASWELL, COULD TAKE OUT WOODLAND TABLES ABOVE. TAKE OUT DIFFERENT SOIL TYPES EG ACID AS NOT RELEVANT AS WINDSOR HILL.

Table 3 Site-Specific definitions of Favourable Condition

CONSERVATION OBJECTIVE FOR THIS HABITAT	To maintain the **broadleaved semi natural woodland** habitat at this site in favourable condition, with particular reference to relevant specific designated interest features. Favourable condition is defined at this site in terms of the following site-specific standards:

Site-specific details of any geographical variation or limitations (where the favourable condition standards apply)

The attributes below apply to the whole site.

Site-specific standards defining favourable condition

Criteria feature	Attribute	Measure	Site-specific Targets	Comments	Use for CA?
Broadleaved, mixed and yew woodland	Area	Field survey and/or aerial photography, in relation to baseline map.	No loss of ancient semi-natural stands. No loss of ancient woodland.	Stand loss due to natural processes may be acceptable. Stand destruction may occur if the understorey and ground flora are irretrievably damaged even if the canopy remains intact. As a guideline, loss can be defined as at least 0.25 ha or 0.5% of the stand area, whichever is the smaller.	**Yes**
Broadleaved, mixed and yew woodland	Structure and Natural processes	Assess by field survey using structured walk and/or transects.	Understorey (2-5m) present over at least 10% of total stand area. Canopy cover present over 70-100 % of stand area. At least three age classes spread across the average life expectancy of the commonest trees. Some areas of relatively undisturbed mature/old growth stands or a scatter of large trees allowed to grow to over-maturity/death on site (e.g. a minimum of 10% of the woodland or 3-10 trees per ha).	As is typical in beech plantations the ground flora and shrub layer at this site is characteristically sparse. This characteristic is thought to be very important in providing suitable conditions for *Epipogium aphyllum* which requires the presence of a deep layer of slowly decaying leaf litter, preferably of beech or oak. It is entirely saprophytic (does not require light) and may in fact be adversely affected should the canopy become too open, allowing ash to dominate and alter the character of the location, or more directly by drying out the leaf litter. This means that the maintenance of closed canopy conditions is desirable if not essential. Equally, in those areas where *Epipogium aphyllum* has occurred in the past it is undesirable to have conditions	**Yes**

Criteria feature	Attribute	Measure	Site-specific Targets	Comments	Use for CA?
				which promote the development of a dense ground layer.	
Broadleaved, mixed and yew woodland	Quality indicators	Assess by field survey using structured walk and/or transects, or as appropriate to feature.	At least 80% of ground flora referable to the relevant NVC communities.	A significant aspect of the special interest of this site is the range of NVC types present, reflecting different soil types. It is desirable that the distinctive elements are maintained. An increase in the abundance of yew and consequent change in community type to W13 is undesirable.	**Yes** **No**
			Epipogium aphyllum present. Suitable habitat conditions for *Epipogium aphyllum* maintained in those areas where it has been known to occur in the past: ie Layer of deep (>5cm) leaf litter (ideally of oak and/or beech) present; no signs of gross disturbance of the ground surface; ground flora very sparse.	It is not considered practical to monitor *Epipogium aphyllum* specifically. The plant largely survives as an underground organism flowering intermittently with gaps of many years, may actually flower underground on occasion, and the above ground parts may only be visible for 2-3 weeks. Nevertheless, it is important that efforts are made to record any sightings of the plant and to ensure that habitat conditions remain suitable. The site should not necessarily be considered to be unfavourable if the plant is not recorded for many years. The locations of sightings of the plant are recorded in the site file.	
Broadleaved, mixed and yew woodland	Regeneration potential	Assess by field survey using structured walk and/or transects.	Sufficient regeneration to maintain canopy density over a 10 yr period. No more than 20% of areas regenerated by planting. All planting material of native stock.	A proportion of gaps at any one time may develop into permanent open space; equally some current open space/glades may in time regenerate to closed canopy.	**Yes**

Criteria feature	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
CG2 Festuca ovina-Avenula pratensis lowland calcareous grassland	Extent	Total area (ha), mapped in relation to baseline (ie first available map of interest feature when/after notified), in period May-July.	No reduction in area and any consequent fragmentation without prior consent	Recoverable reduction = unfavourable; non-recoverable reduction = partially destroyed. Excludes bare ground associated with rabbit warrens (see below).	Yes
CG2 Festuca ovina-Avenula pratensis lowland calcareous grassland	Sward structure: bare ground	Record extent of bare ground (not rock) distributed through the sward, noticeable without disturbing the vegetation, in period May-July. Measure annually if possible.	No more than 10%.	Outside target indicates management problems eg over-grazing.	
CG2 Festuca ovina-Avenula pratensis lowland calcareous grassland	Sward structure: localized bare ground	Record extent of localized bare ground around rabbit warrens. Measure annually if possible.	No more than 0.05 ha ie approx 20x20 metres	Outside target indicates rabbit grazing and disturbance levels are too high.	
CG2 Festuca ovina-Avenula pratensis lowland calcareous grassland	Sward structure: litter	Record cover of litter where in a more or less continuous layer, distributed either in patches or in one larger area.	Total extent no more than 25% of the sward	Outside target indicates biomass removal is insufficient eg under-grazed.	

Criteria feature	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
CG2 Festuca ovina-Avenula pratensis lowland calcareous grassland	Sward structure: average height	Record sward height in period May-July.	Sward 2-10 cms.	Outside target indicates insufficient grazing or over-grazing.	
CG2 Festuca ovina-Avenula pratensis lowland calcareous grassland	Sward composition: grass/herb ratio	Proportion of non-Graminae ("herbs"), in period May -July.	40-90%	Low proportion outside target indicates eutrophication, usually from fertilisers, or insufficient removal of biomass, leading to dominance by grasses.	Yes
CG2 Festuca ovina-Avenula pratensis lowland calcareous grassland	Sward composition: positive indicator species	Record the frequency of positive indicator species in period May- July. Anthyllis vulneraria, Asperula cynanchica, Campanula glomerata, Cirsium acaule, Filipendula vulgaris, Genista tinctoria, Gentianella spp., Helianthemum nummularium, Hippocrepis comosa, Leontodon hispidus/L. saxatilis, Leucanthemum vulgare, Linum catharticum, Lotus corniculatus, Pilosella officinarum (Hieracium pilosella), Plantago media, Polygala spp., Primula veris, Sanguisorba minor, Scabiosa columbaria,	At least four species/taxa frequent plus at least three species occasional throughout the sward.	Choice of species related to NVC type and restriction to unimproved grassland, considered satisfactory when inside target. Among possible species that could be used, choice further restricted by ease of identification, visibility in recording period.	Yes

Criteria feature	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
		Serratula tinctoria, Succisa pratensis, Thymus spp..			
CG2 Festuca ovina-Avenula pratensis lowland calcareous grassland	Sward composition: negative indicator species	Record the frequency and % cover of negative indicator species. Record in period May-July. Cirsium arvense, Cirsium vulgare, Rumex crispus, Rumex obtusifolius, Senecio jacobaea, Urtica dioica.	No species/taxa more than occasional throughout the sward or singly or together more than 5% cover	Invasive species chosen to indicate problems of eutrophication and disturbance from various sources when outside target eg poaching, stock feeding.	Yes
CG2 Festuca ovina-Avenula pratensis lowland calcareous grassland	Sward composition: negative indicator species	Record % cover of Brachypodium pinnatum and Bromopsis erecta,in period May-July.	Neither species at more than 10% cover	Outside target indicates insufficient removal of biomass eg under-grazing.	Yes
CG2 Festuca ovina-Avenula pratensis lowland calcareous grassland	Sward composition: negative indicator species	Record the frequency and % cover of all tree and scrub species excluding Juniperus communis, considered together. NB If scrub/tree species are more than occasional throughout the sward but less than 5% cover, they are soon likely to become a problem if grazing levels are not sufficient or if scrub control is not being carried out.	No more than 5% cover.	Invasive species outside target shows that habitat is not being managed sufficiently eg under-grazed.	Yes

Audit Trail
Rationale for limiting standards to specified parts of the site
Rationale for site-specific targets (including any variations from generic guidance)
Rationale for selection of measures of condition (features and attributes for use in condition assessment) **(**The selected vegetation attributes are those considered to most economically define favourable condition at this site for the broad habitat type and any dependent designated species).
A much greater level of intervention is required to maintain the *Cephalanthera rubra* population than might otherwise be appropriate for other parts of the beech woodland on site. It is thought to require dappled shade, low levels of competition from surrounding vegetation, low levels of leaf litter, and be readily damaged by trampling and browsing. Its flowers are thought to mimic those of *Campanula* spp so as to attract the same pollinators (leaf cutter bees).
Other Notes

- ***Naphill Common SSSI***

Conservation Objectives

The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, SAC, SPA, Ramsar) as individually listed in Table 1.

Habitat Types represented (Biodiversity Action Plan categories)
Lowland mixed broadleaf woodland

Geological features (Geological SiteTypes)
[n/a]

(*) or restored to favourable condition if features are judged to be unfavourable.

Standards for favourable condition are defined with particular reference to the specific designated features listed in Table 1, and are based on a selected set of attributes for features which most economically define favourable condition as set out in Table 2 and Table 3:

Table 1 Individual designated Special Interest Features

BAP Broad Habitat type / Geological Site Type	Specific designated features	Explanatory description of the feature for clarification	SSSI designated interest features	cSAC designated interest features	SPA bird populations dependency on specific habitats			Ramsar criteria applicable to specific habitats			
					Annex 1 species	Migratory species	Waterfowl assemblage	1a Wetland characteristics	2a Hosting rare species &c	3a 20000 waterfowl	3c 1% of population
Lowland mixed broadleaf woodland	W12, W14 Beech woodland	Beech/oak/ash woodland	*	*							

NB. 1). Features where asterisks are in brackets (*) indicate habitats which are not notified for specific habitat interest (under the relevant designation) but because they support notified species. 2) The requirements of species (including SPA bird species) are reflected in the Conservation Objectives for habitat features on which they depend. In some specific situations, direct population measures for species may also be used to provide supporting information to confirm habitat quality measures.

Table 2 Habitat Features - Extent Objectives

Conservation Objective for habitat extent	To maintain the designated habitats in favourable condition, which is defined in part in relation to a balance of habitat extent (extent attribute). Favourable condition is defined at this site in terms of the following site-specific standards:
Extent - Dynamic balance	On this site favourable condition requires the maintenance of the extent of the designated habitat type. Maintenance implies restoration if evidence from condition assessment suggests a reduction in extent.

Habitat Feature (BAP Broad Habitat level, or more detailed level if applicable)	Estimated extent (ha) and date of data source/estimate	Site Specific Target range and Measures	Comments
Lowland mixed broadleaf woodland	60 as at 2004.	At least 80 % of woodland referable to W12 and W14.	Some of the woodland is of recent origin a a result of scrub development on formerly grazed common. A small reduction in woodland area may occur in the course of the restoration of glades and broadening of rides to enhance the habitat.

Audit Trail
Rationale for habitat extent attribute (Include methods of estimation (measures) and the approximate degree of change which these are capable of detecting).
The presence of a mosaic of habitats including rides, glades and clearings as well as high forest is an important aspect of the interest of the site.
Rationale for site-specific targets (including any variations from generic guidance)
Other Notes

Table 3 Site-Specific definitions of Favourable Condition

CONSERVATION OBJECTIVE FOR THIS HABITAT TYPE	To maintain **the broadleaved mixed woodland habitat** at this site in favourable condition, with particular reference to relevant specific designated interest features. Favourable condition is defined at this site in terms of the following site-specific standards:

Site-specific details of any geographical variation or limitations (where the favourable condition standards apply)

The attributes below apply to the whole site.

Site-specific standards defining favourable condition

Criteria feature	Attribute	Measure	Target	Comments	Use for CA?
Beech/oak woodland (W12, W14)	Habitat Extent	Field survey and/or aerial photography, in relation to baseline map.	No loss of ancient semi-natural stands (refer to Barneveld 1997) At least current area of recent semi-natural stands maintained, although their location may alter. At least the area of ancient woodland retained	Temporary stand loss due to natural processes would be acceptable. Some stand loss as a result of the restoration of glades, clearance around ponds or widening of rides is acceptable. Stand destruction may occur if the understorey and ground flora are irretrievably damaged even if the canopy remains intact. Loss = 0.5 ha or 0.5% of the stand area, whichever is the smaller. 20% canopy cover is conventionally taken as the lower limit for an area to be considered as woodland. Beech may not be abundant throughout the stand, particularly in regeneration patches, but this does not count as stand loss.	yes

Criteria feature	Attribute	Measure	Target	Comments	Use for CA?
Beech woodland (W12, W14)	Composition	Assess by field survey using structured walk and/or transects.	At least the current level of site-native species maintained. At least 90% of cover in any one layer of site-native or acceptable naturalised species. Beech present in mature canopy at at least 30% cover for the feature on the site as a whole. Death, destruction or replacement of native woodland species through effects of introduced fauna or other external unnatural factors not more than 10% by number or area in a five year period.	Sycamore is present but is rare and is not currently of concern. Nevertheless any significant increase in distribution is undesirable and should be controlled. There are no indications of any external factors currently affecting beech, oak or the ground flora. Damage to trees by squirrels that does not lead to their death or replacement by non woodland species is not necessarily unacceptable in nature conservation terms. Excessive browsing/grazing by deer does not currently appear to be at a level which is causing damage to ground flora or regeneration, but may be encouraging the survival of holly at the expense of other shrub species.	yes
Beech woodland (W12, W14)	quality indicators	Assess by field survey using structured walk and/or transects, or as appropriate to feature.	At least 80% of ground flora cover referable to W12 and W14. Populations of notable species maintained, esp. *Damasonium alisma, Juniperus communis*. Rides maintained in good condition.	The ground flora is very sparse in parts of the site. The presence of and transition to heathy glades is a feature of interest and conservation value but it is accepted that the location of such features may change over time as a result of natural processes. For notable species it is not intended to set a target for detailed species monitoring, rather to provide a rapid indication of presence/ absence and/or approximate extent, allowing for natural fluctuations in population size. The mosaic of rides and glades and the associated interface with the woodland is an important feature of this site.	yes

Criteria feature	Attribute	Measure	Target	Comments	Use for CA?
Beech woodland (W12, W14)	Regeneration potential	Assess by field survey using structured walk and/or transects.	Signs of seedlings growing through to saplings to young trees at sufficient density to maintain canopy density over a 10 yr period. No regeneration by planting.	The minimum level of regeneration acceptable from a nature conservation viewpoint is likely to be much less than that needed where wood production is also an objective. Natural regeneration is currently very successful in this wood.	yes

Audit Trail
Rationale for limiting standards to specified parts of the site
Rationale for site-specific targets (including any variations from generic guidance)
Rationale for selection of measures of condition (features and attributes for use in condition assessment) **(**The selected vegetation attributes are those considered to most economically define favourable condition at this site for the broad habitat type and any dependent designated species).
Other Notes

- ***Hollowhill & Pullingshill SSSI***

Conservation Objectives

The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, SAC, SPA, Ramsar) as individually listed in Table 1.

Habitat Types represented (Biodiversity Action Plan categories)
Lowland mixed broadleaf woodland

Geological features (Geological SiteTypes)
[n/a]

(*) or restored to favourable condition if features are judged to be unfavourable.

Standards for favourable condition are defined with particular reference to the specific designated features listed in Table 1, and are based on a selected set of attributes for features which most economically define favourable condition as set out in Table 2 and Table 3:

Table 1 Individual designated Special Interest Features

BAP Broad Habitat type / Geological Site Type	Specific designated features	Explanatory description of the feature for clarification	SSSI designated interest features	cSAC designated interest features	SPA bird populations dependency on specific habitats			Ramsar criteria applicable to specific habitats			
					Annex 1 species	Migratory species	Waterfowl assemblage	1a Wetland characteristics	2a Hosting rare species &c	3a 20000 waterfowl	3c 1% of population
Lowland mixed broadleaf woodland	W12, W14 Beech woodland	Beech/ash woodland									
	Ghost orchid										

NB. 1). Features where asterisks are in brackets (*) indicate habitats which are not notified for specific habitat interest (under the relevant designation) but because they support notified species. 2) The requirements of species (including SPA bird species) are reflected in the Conservation Objectives for habitat features on which they depend. In some specific situations, direct population measures for species may also be used to provide supporting information to confirm habitat quality measures.

Table 2 Habitat Features - Extent Objectives

Conservation Objective for habitat extent	To maintain the designated habitat in favourable condition, which is defined in part in relation to a balance of habitat extent (extent attribute). Favourable condition is defined at this site in terms of the following site-specific standards:
Extent - Dynamic balance	On this site favourable condition requires the maintenance of the extent of the designated habitat type. Maintenance implies restoration if evidence from condition assessment suggests a reduction in extent.

Habitat Feature (BAP Broad Habitat level, or more detailed level if applicable)	Estimated extent (ha) and date of data source/estimate	Site Specific Target range and Measures	Comments
Lowland mixed broadleaf woodland	23	No reduction in habitat area.	The whole site area is occupied by high forest.

Audit Trail
Rationale for habitat extent attribute (Include methods of estimation (measures) and the approximate degree of change which these are capable of detecting).
Rationale for site-specific targets (including any variations from generic guidance)
Other Notes

Table 3 Site-Specific definitions of Favourable Condition

CONSERVATION OBJECTIVE FOR THIS HABITAT / GEOLOGICAL SITE-TYPE	To maintain the broadleaved mixed woodland habitat at this site in favourable condition, with particular reference to relevant specific designated interest features. Favourable condition is defined at this site in terms of the following site-specific standards:

Site-specific details of any geographical variation or limitations (where the favourable condition standards apply)

Site-specific standards defining favourable condition

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
Beech woodland (W12, W14))	1. Habitat Extent	Area	Extent/location of stands	No loss of ancient semi-natural stands At least current area of recent semi-natural stands maintained, although their location may alter. Area of ancient woodland retained	Temporary stand loss due to natural processes would be acceptable. Stand destruction may occur if the understorey and ground flora are irretrievably damaged even if the canopy remains intact. Loss = 0.5 ha or 0.5% of the stand area, whichever is the smaller. 20% canopy cover is conventionally taken as the lower limit for an area to be considered as woodland. Beech may not be abundant throughout the stand, particularly in regeneration patches, but this does not count as stand loss.	
Criteria feature	**Standard Attribute Name**	**Attribute term in guidance**	**Measure**	**Generic Target**	**Comments**	**Use for CA?**

Beech woodland (W12, W14)	Composition:	Composition	Cover of native versus non-native species (all layers) Death, destruction or replacement of native woodland species through effects of non-native fauna or external unnatural factors	At least the current level of site-native species maintained. At least 90% of cover in any one layer of site-native or acceptable naturalised species. Beech present in mature canopy at at least 30% cover for the feature on the site as a whole. Death, destruction or replacement of native woodland species through effects of introduced fauna or other external unnatural factors not more than 10% by number or area in a five year period.	Sycamore is currently scarce; an increase in distribution is undesirable and should be controlled. Sweet chestnut and various conifers are scattered through the wood but are not considered a threat to the conservation interest and can be allowed to stay in situ if not required for timber. There are no indications of any external factors currently affecting beech or the ground flora. Damage to trees by squirrels that does not lead to their death or replacement by non woodland species is not necessarily unacceptable in nature conservation terms. Browsing/grazing by deer does not currently appear to be at a level which is causing damage to ground flora or regeneration.	

Criteria feature	Standard Attribute Name	Attribute term in guidance	Measure	Generic Target	Comments	Use for CA?
Beech woodland (W12, W14)	6. Natural processes/regeneration	Regeneration potential	Successful establishment of young stems in gaps or on the edge of a stand	Signs of seedlings growing through to saplings to young trees at sufficient density to maintain canopy density over a 10 yr period. No regeneration by planting.	Natural regeneration is currently successful in the wood.	

Audit Trail
Rationale for limiting standards to specified parts of the site
Rationale for site-specific targets (including any variations from generic guidance)
Ghost orchid has very specific requirements and may require intervention to maintain suitable conditions where minimal or non-intervention might otherwise have been appropriate at this site.
Rationale for selection of measures of condition (features and attributes for use in condition assessment) **(**The selected vegetation attributes are those considered to most economically define favourable condition at this site for the broad habitat type and any dependent designated species).
Other Notes

2003 Higher Plant Species List

Frequency uses DAFOR scale where D = dominant, A = abundant, F = frequent, O = occasional and R = Rare.

Mosses and Liverwort Survey

On 28th September 2004, the Norfolk county recorder for mosses and liverworts, Robin Pearson, visited Tring Woodlands, and performed a one-day field survey.

A total of 50 species were recorded (45 mosses, 5 liverworts), which Colin suggests is about what could be expected in the habitat on a single days survey. He also comments that a more detailed examination, especially on a good damp day, would yield a slightly higher total. The smaller species associated with paths are not as well represented as they perhaps ought to be, presumably due to the relatively dry antecedent weather conditions, and the dry nature of beech woodland.

Colin was also slightly surprised by the general lack of epiphytes; however, he suggests that since he looked for them carefully enough their absence is real.

Colin divided the site in to 8 compartments, and comments that the (rather crude) picture that emerges is, however, quite nice: the smallest compartment had - inevitably - the lowest total. Those compartments that were predominantly acid (i.e. 1, 2, 3, 4 and 8) had slightly lower totals than did the more calcareous or mixed soil compartments, such as 5, 6 and 7.

The most interesting species included *Anomodon viticulosis, Cirriphyllum piliferum, Neckera complanata* and *Scleropodium cespitans* - 'good' woodland indicator species. Colin comments that it is good to see that they survived the storms.

Rhizomnium punctatum and *Riccardia chamedryfolia* were real surprises: they are usually associated with quite damp conditions - here they were found on moist rotting wood.

Taken from: Botanical Survey of Tring Woodlands SSSI, 2003 – prepared on behalf of Dacorum District Council by Dr Paul Clack, Jan 2004. LandMAS HMWT.

Appendix 3: Figures

Project: AA screening of St Albans District Council's Issues and Options

Figure: 1.0 St Albans in Relation to Chilterns Beechwoods SAC

Halcrow | St Albans City and District

Legend

- District Boundary
- Settlements
- Green Belt Settlements
- Railway Lines
- Roads
- Indicative route of Hemel Hempstead Northern Bypass
- Chilterns Beechwoods SAC
- (1) Possible Park and Ride locations
- (1) Broad Locations for Future Growth

N

0 1 2 3 4 5

Kilometers

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Project: AA screening of St Albans District Council's Issues and Options

Figure 2: Development Sites and Site Allocations in relation to Chilterns Beechwoods SAC

Halcrow | St Albans City and District Council

Legend - Dacorum Issues and Options

- Borough Boundary
- Settlements
- Railway Lines
- Roads
- Indicative route of Hemel Hempstead Northern Bypass
- 3km Buffer of SAC
- Chilterns Beechwoods SAC
- Site Allocations and Growth at Hemel Hempsted sites
- Site Allocations (Major sites over 10Ha in size)/ within 3km buffer zone

N

0 2 4 6

Kilometres

Legend - St.Albans Issues and Options

- District Boundary
- Settlements
- Green Belt Settlements
- Railway Lines
- Roads
- Indicative route of Hemel Hempstead Northern Bypass
- Chilterns Beechwoods SAC
- (1) Possible Park and Ride locations
- (1) Broad Locations for Future Growth

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Appendix 4: Guidelines for the creation of Suitable Accessible Natural Green Space

Appendix 4: Guidelines for the creation of Suitable Accessible Natural Green Space[1]

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Introduction

'Suitable Accessible Natural Green Space' (SANGS) is the name given to green space that is of a quality and type suitable to be used as mitigation within the Thames Basin Heaths Planning Zone.

Its role is to provide alternative green space to divert visitors from visiting the Thames Basin Heaths Special Protection Area (SPA). SANGS are intended to provide mitigation for the potential impact of residential development on the SPA by preventing an increase in visitor pressure on the SPA. The effectiveness of SANGS as mitigation will depend upon the location and design. These must be such that the SANGS is more attractive than the SPA to users of the kind that currently visit the SPA.

This document describes the features which have been found to draw visitors to the SPA, which should be replicated in SANGS. It provides guidelines on the

- type of site which should be identified as SANGS
- measures which can be taken to enhance sites so that they may be used as SANGS.

These guidelines relate specifically to the means to provide mitigation for housing within the Thames Basin Heaths Planning Zone. They do not address nor preclude the other functions of green space (e.g. provision of disabled access). Other functions may be provided within SANGS, as long as this does not conflict with the specific function of mitigating visitor impacts on the SPA.

SANGS may be created from:

- existing open space of SANGS quality with no existing public access or limited public access, which for the purposes of mitigation could be made fully accessible to the public.
- existing open space which is already accessible but which could be changed in character so that it is more attractive to the specific group of visitors who might otherwise visit the SPA
- land in other uses which could be converted into SANGS

The identification of SANGS should seek to avoid sites of high nature conservation value which are likely to be damaged by increased visitor numbers. Such damage may arise, for example, from increased disturbance, erosion, input of nutrients from dog faeces, and increased incidence of fires. Where sites of high nature conservation value are considered as SANGS, the impact on their nature conservation value should be assessed and considered alongside relevant policy in the development plan.

The Character of the SPA and its Visitors

The Thames Basin Heaths SPA is made up of 13 Sites of Special Scientific Interest, and consist of a mixture of heathland, mire, and woodland habitats. They are essentially 'heathy' in character. The

[1] This document is currently under revision by Natural England.

topography is varied and most sites have a large component of trees and some contain streams, ponds and small lakes. Some are freely accessible to the public and most have a degree of pubic access, though in some areas this is restricted by army, forestry or other operations.

A recent survey showed that more than 83% of visitors to the SPA arrive by car, though access points adjacent to housing estates showed a greater proportion arriving on foot (up to 100% in one case). 70% of those who visited by car had come from within 5km of the access point onto the SPA. A very large proportion of the SPA visitors are dog walkers, many of whom visit the particular site on a regular (more or less daily) basis and spend less than an hour there, walking on average about 2.5km. Almost 50% are retired or part-time workers and the majority are women. Further detailed information on visitors can be found in the reports referenced at the end of this document.

Guidelines for the Quality of SANGS

The quality guidelines have been sub-divided into different aspects of site fabric and structure. They have been compiled from a variety of sources but principally from visitor surveys carried out at heathland sites within the Thames Basin Heaths area or within the Dorset heathlands. These are listed as references at the end of this document.

The principle criteria contained in the Guidelines have also been put into a checklist format which is contained in Appendix 1.

Accessibility

Most visitors come by car and want the site to be fairly close to home. Unless SANGS are provided for the sole use of a local population living within a 400 metre catchment around the site, then **the availability of adequate car parking at sites larger than 10 ha is essential**. The amount and nature of parking provision should reflect the anticipated use of the site by visitors and the catchment size of the SANGS. It should provide an attractive alternative to parking by the part of SPA for which it is mitigation. **Car parks should be clearly signposted and easily accessed**.

New parking provision for SANGS should be advertised as necessary to ensure that it is known of by potential visitors.

Target groups of Visitors

This should be viewed from two perspectives, the local use of a site where it is accessed on foot from the visitor's place of residence, and a wider catchment use where it is accessed by car. **Most of the visitors to the SPA come by car and therefore should be considered as a pool of users from beyond the immediate vicinity of the site.** All but the smallest SANGS should therefore target this type of visitor.

It is apparent from access surveys that a significant proportion of those people who visit the sites on foot, also visit alternative sites on foot and so this smaller but significant group look for local sites. **Where large populations are close to the SPA, the provision of SANGS should be attractive to visitors on foot.**

Networks of sites

The provision of longer routes within larger SANGS is important in determining the effectiveness of the authorities' network of SANGS as mitigation, because a large proportion of visitors to the SPA have long walks or run or bicycle rides. The design of routes within sites smaller than about 40 ha will be critical to providing routes of sufficient length and attractiveness for mitigation purposes.

Where long routes cannot be accommodated within individual SANGS it may be possible to provide them through a network of sites. However, networks are inherently likely to be less attractive to users of the type that visit the SPA, and the more fragmented they are, the less attractive they will be, though this is dependent on the land use which separates each component. For example, visitors are likely to be less put off by green areas between SANGS than by urban areas, even if they restrict access to rights of way and require dogs to be kept on leads.

Though networks of SANGS may accommodate long visitor routes and this is desirable, they should not be solely relied upon to provide long routes.

Specific guidance on individual SANGS is summarised in Appendix 2.

Paths, Roads and Tracks

The findings suggest **that SANGS should aim to supply a choice of routes of around 2.5km in length** with both shorter and longer routes of at least 5km as part of the choice, where space permits. The fact that a considerable proportion of visitors were walking up to 5km and beyond suggests **the provision of longer routes should be regarded as a standard**, either on-site or through the connection of sites along green corridors.

Paths do not have to be of any particular width, and both vehicular-sized tracks and narrow PRoW type paths are acceptable to visitors.

The majority of visitors are female and safety is one of the primary concerns of site visitors. **Paths should be routed so that they are perceived as safe by the users**, with some routes being through relatively open (visible) terrain (with no trees or scrub, or well spaced mature trees, or wide rides with vegetation back from the path), especially those routes which are 1-3 km long.

The routing of tracks along hill tops and ridges where there are views is valued by the majority of visitors.

A substantial number of visitors like to have surfaced but not tarmac paths, particularly where these blend in well with the landscape. This is not necessary for all paths but **there should be some more visitor-friendly routes built into the structure of a SANGS, particularly those routes which are 1-3 km long.**

Artificial Infrastructure

Little or no artificial infrastructure is found within the SPA at present apart from the provision of some surfaced tracks and car parks. Generally an urban influence is not what people are looking for when they visit the SPA and some people undoubtedly visit the SPA because it has a naturalness about it that would be marred by such features.

However, **SANGS would be expected to have adequate car parking with good information about the site and the routes** available. Some subtle waymarking would also be expected for those visitors not acquainted with the layout of the site.

Other infrastructure would not be expected and should generally be restricted to the vicinity of car parking areas where good information and signs of welcome should be the norm, though discretely placed benches or information boards along some routes would be acceptable.

Landscape and Vegetation

SANGS do not have to contain heathland or heathy vegetation to provide an effective alternative to the SPA.

Surveys clearly show that **woodland or a semi-wooded landscape is a key feature** that people appreciate in the sites they visit, particularly those who use the SPA. This is considered to be more attractive than open landscapes or parkland with scattered trees.

A **semi-natural looking landscape with plenty of variation** was regarded as most desirable by visitors and some paths through quite enclosed woodland scored highly. There is clearly a balance to be struck between what is regarded as an exciting landscape and a safe one and so some element of choice between the two would be highly desirable. The semi-wooded and undulating nature of most of the SPA sites gives them an air of relative wildness, even when there are significant numbers of visitors on site. SANGS should aim to reproduce this quality.

Hills do not put people off visiting a site, particularly where these are associated with good views, but steep hills are not appreciated. **An undulating landscape is preferred to a flat one.**

Water features, particularly ponds and lakes, act as a focus for visitors for their visit, but are not essential.

Restrictions on usage

The majority of the people using most of the SPA sites come to walk, with or without dogs. At two or three sites there were also a significant number of cyclists and joggers. A small amount of horse riding also occurs at some sites.

The bulk of visitors to the SPA came to exercise their dogs and so it is imperative that **SANGS allow for pet owners to let dogs run freely over a significant part of the walk**. **Access on SANGS should be largely unrestricted, with both people and their pets being able to freely roam along the majority of routes.** This means that sites where freely roaming dogs will cause a nuisance or where they might be in danger (from traffic or such like) should not be considered for SANGS.

It may be that in some areas where dog ownership is low or where the cultural mix includes significant numbers of people sensitive to pets, then the provision of areas where dogs are unrestricted can be reduced. It should also be possible to vary restriction over time according to the specific needs of a community, providing effective mitigation is maintained. SANGS proposals which incorporate restrictions on dogs should be in the minority of SANGS and would need to be considered on a case by case basis in relation to the need for restrictions.

Assessment of site enhancement as mitigation

SANGS may be provided by the enhancement of existing sites, including those already accessible to the public that have a low level of use and could be enhanced to attract more visitors. The extent of enhancement and the number of extra visitors to be attracted would vary from site to site. Those sites which are enhanced only slightly would be expected to provide less of a mitigation effect than those enhanced greatly, in terms of the number of people they would divert away from the SPA. In order to assess the contribution of enhancement sites in relation to the hectare standards of the Delivery Plan, it is necessary to distinguish between slight and great enhancement.

Methods of enhancement for the purposes of this guidance could include enhanced access through guaranteed long-term availability of the land, creation of a car park or a network of paths.

SANGS which have not previously been open to the public count in full to the standard of providing 8ha of SANGS per 1000 people in new development in zone B. SANGS which have an appreciable but clearly low level of public use and can be substantially enhanced to greatly increase the number of visitors also count in full. The identification of these sites should arise from evidence of low current use. This could be in a variety of forms, for example:

- Experience of managing the site, which gives a clear qualitative picture that few visitors are present
- Quantitative surveys of visitor numbers
- Identified constraints on access, such as lack of gateways at convenient points and lack of parking
- Lack of easily usable routes through the site
- Evidence that the available routes through the site are little used (paths may show little wear, be narrow and encroached on by vegetation)

SANGS with no evidence of a low level of use should not count in full towards the Delivery Plan standards. Information should be collected by the local planning authority to enable assessment of the level of increased use which can be made of the SANGS. The area of the site which is counted towards the Delivery Plan standards should be proportional to the increase in use of the site. For example, a site already used to half of its expected capacity should count as half of its area towards the standards.

Staging of enhancement works

Where it is proposed to separate the enhancement works on a site into separate stages, to deliver incremental increases in visitor use, the proportion of the increase in visitor use arising from each stage should be estimated. This would enable the granting of planning permission for residential development to be staged in parallel to ensure that the amount of housing permitted does not exceed the capacity of SANGS to mitigate its effects on the SPA.

Practicality of enhancement works

The selection of sites for enhancement to be SANGS should take into account the variety of stakeholder interests in each site. Consideration should be given to whether any existing use of the site which may continue is compatible with the function of SANGS in attracting recreational use that would otherwise take place on the SPA. The enhancement should not result in moving current users off the SANGS and onto the SPA. The specific enhancement works proposed should also be considered in relation not only to their effects on the SANGS mitigation function but also in relation to their effects on other user groups.

References

CLARKE, R.T., LILEY, D., UNDERHILL-DAY, J.C., & ROSE, R.J. (2005). Visitor access patterns on the Dorset Heaths. *English Nature Research Report.*

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Appendix 1: Site Quality Checklist – for a suite of SANGS

This guidance is designed as an Appendix to the full guidance on Suitable Accessible Natural Greenspaces (SANGS) to be used as mitigation (or avoidance) land to reduce recreational use of the Thames Basin Heaths SPA.

The wording in the list below is precise and has the following meaning:

- Requirements referred to as "must" are essential in **all** SANGS
- Those requirements referred to as "should haves" should all be represented **within the suite** of SANGS, but do not all have to be represented in every site.
- All SANGS should have at least one of the "desirable" features.

Must haves

- For all sites larger than 4ha there must be adequate parking for visitors, unless the site is intended for local use, i.e. within easy walking distance (400m) of the developments linked to it. The amount of car parking space should be determined by the anticipated use of the site and reflect the visitor catchment of both the SANGS and the SPA.

- It should be possible to complete a circular walk of 2.3-2.5km around the SANGS.

- Car parks must be easily and safely accessible by car and should be clearly sign posted.

- The accessibility of the site must include access points appropriate for the particular visitor use the SANGS is intended to cater for.

- The SANGS must have a safe route of access on foot from the nearest car park and/or footpath/s

- All SANGS with car parks must have a circular walk which starts and finishes at the car park.

- SANGS must be designed so that they are perceived to be safe by users; they must not have tree and scrub cover along parts of the walking routes

- Paths must be easily used and well maintained but most should remain unsurfaced to avoid the site becoming to urban in feel.

- SANGS must be perceived as semi-natural spaces with little intrusion of artificial structures, except in the immediate vicinity of car parks. Visually-sensitive way-markers and some benches are acceptable.

- All SANGS larger than 12 ha must aim to provide a variety of habitats for users to experience.

- Access within the SANGS must be largely unrestricted with plenty of space provided where it is possible for dogs to exercise freely and safely off lead.

- SANGS must be free from unpleasant intrusions (e.g. sewage treatment works smells etc).

Should haves

- SANGS should be clearly sign-posted or advertised in some way.

- SANGS should have leaflets and/or websites advertising their location to potential users. It would be desirable for leaflets to be distributed to new homes in the area and be made available at entrance points and car parks.

Desirable

- It would be desirable for an owner to be able to take dogs from the car park to the SANGS safely off the lead.

- Where possible it is desirable to choose sites with a gently undulating topography for SANGS

- It is desirable for access points to have signage outlining the layout of the SANGS and the routes available to visitors.

- It is desirable that SANGS provide a naturalistic space with areas of open (non-wooded) countryside and areas of dense and scattered trees and shrubs. The provision of open water on part, but not the majority of sites is desirable.

- Where possible it is desirable to have a focal point such as a view point, monument etc within the SANGS.

Appendix 2: Site Quality Checklist – for an individual SANGS

The wording in the list below is precise and has the following meaning:

- Requirements referred to as "must" or "should haves" are essential
- The SANGS should have at least one of the "desirable" features.

Must/ Should haves

- For all sites larger than 4ha there must be adequate parking for visitors, unless the site is intended for local use, i.e. within easy walking distance (400m) of the developments linked to it. The amount of car parking space should be determined by the anticipated use of the site and reflect the visitor catchment of both the SANGS and the SPA.

- It should be possible to complete a circular walk of 2.3-2.5km around the SANGS.

- Car parks must be easily and safely accessible by car and should be clearly sign posted.

- The accessibility of the site must include access points appropriate for the particular visitor use the SANGS is intended to cater for.

- The SANGS must have a safe route of access on foot from the nearest car park and/or footpath/s.

- All SANGS with car parks must have a circular walk which starts and finishes at the car park.

- SANGS must be designed so that they are perceived to be safe by users; they must not have tree and scrub covering parts of the walking routes.

- Paths must be easily used and well maintained but most should remain unsurfaced to avoid the site becoming to urban in feel.

- SANGS must be perceived as semi-natural spaces with little intrusion of artificial structures, except in the immediate vicinity of car parks. Visually-sensitive way-markers and some benches are acceptable.

- All SANGS larger than 12 ha must aim to provide a variety of habitats for users to experience.

- Access within the SANGS must be largely unrestricted with plenty of space provided where it is possible for dogs to exercise freely and safely off lead.

- SANGS must be free from unpleasant intrusions (e.g. sewage treatment works smells etc).

- SANGS should be clearly sign-posted or advertised in some way.

- SANGS should have leaflets and/or websites advertising their location to potential users. It would be desirable for leaflets to be distributed to new homes in the area and be made available at entrance points and car parks.

Desirable

- It would be desirable for an owner to be able to take dogs from the car park to the SANGS safely off the lead.

- Where possible it is desirable to choose sites with a gently undulating topography for SANGS

- It is desirable for access points to have signage outlining the layout of the SANGS and the routes available to visitors.

- It is desirable that SANGS provide a naturalistic space with areas of open (non-wooded) countryside and areas of dense and scattered trees and shrubs. The provision of open water on part, but not the majority of sites is desirable.

- Where possible it is desirable to have a focal point such as a view point, monument etc within the SANGS.

Appendix 3: Background

The Thames Basin Heaths SPA was designated in 2005 under the Habitats Regulations 1994 to protect the populations of three internationally-threatened bird species that use the heathlands: woodlark, nightjar and Dartford warbler. One of the principle threats to these species is disturbance during their breeding period which collectively extends from February to August. Freely roaming dogs hugely exacerbate the disturbance caused by people visiting the sites.

The Thames Basin Heaths area is much urbanised with little green space available to people apart from the designated areas of heathland. The whole area is also under pressure for more housing.

The Habitats Regulations require an Appropriate Assessment to be carried out for any plan or project (including housing developments) which may affect the designated interest, either alone or in combination with other plans or projects. The result is that each new planning application within the Thames Basin Heaths Planning Zone would have to be assessed in combination with all the other extant applications. A solution to this situation (which would cause a log jam in the planning system) is the Thames Basin Heaths Delivery Plan.

The Thames Basin Heaths draft Delivery Plan (DDP) has been promoted by Natural England as part of the wider Thames Basin Heaths Area Based Delivery Project. It provides advice on how open space provision can ensure that any potential effect on the SPA is fully mitigated. The DDP has recently been scrutinised in technical sessions convened to inform the Panel of the Examination in Public on the South East Plan. It is the subject of the Assessor's Report to the Panel and addenda to his report. The DDP approach is being further developed in the light of the Assessor's conclusions and recommendations. The Assessor's Report recommended that an 'Interim strategic Delivery Plan' (ISDP) be established.

The need to provide green space for the community was incorporated into planning policy through PPG 17, originally published in 1991 and revised in 2003 (CHECK date). It requires local authorities to set green space standards locally but that these should include aspects of quantity, quality and accessibility. PPG17 illustrates the breath of type and use of public open spaces that are encompassed by the guidelines. SANGS fit into a small proportion of these. Local authority may look at provision of SANGS in relation to other public open space provision within their area and identify potential SANGS as part of their audit of green space.