



# **Cirencester Neighbourhood Plan**

## **Habitats Regulations Assessment Screening Report**

### **Cotswold District Council**

#### **Final report**

Prepared by LUC

October 2022

Version	Status	Prepared	Checked	Approved	Date
1	Draft HRA Screening Report	K Nicholls	K Sydney	K Nicholls	20.10.2022
2	Final HRA Screening Report	K Nicholls	K Sydney	K Nicholls	20.10.2022



**Land Use Consultants Limited**

Registered in England. Registered number 2549296. Registered office: 250 Waterloo Road, London SE1 8RD. Printed on 100% recycled paper

# Contents

## **Chapter 1** **1**

### Introduction

The requirement to undertake Habitats Regulations Assessment of development plans	1
Stages of Habitat Regulations Assessment	4
Previous HRA work	6
Structure of this report	7

## **Chapter 2** **8**

### Cirencester Neighbourhood Plan

Vision	8
Objectives	9
Policies	11

## **Chapter 3** **14**

### HRA Screening Method

Identifying European sites that may be affected and their conservation objectives	15
Assessment of 'likely significant effects' of the plan	16
Assessment of potential in-combination effects	17
Types of impact that have been considered	18

## **Chapter 4** **23**

### Screening Assessment

## Contents

HRA Screening of policies 23

**Chapter 5** **33**  
Assessment Conclusion

Summary of HRA Screening 33

**Appendix A** **35**  
Relevant legislation and case law

**Appendix B** **41**  
Map of European sites within 15km of the Cirencester  
Neighbourhood Plan Area

**Appendix C** **43**  
Attributes of European sites

**References** **60**

## Table of Figures

Figure B.1: Map of European sites within 15km of the Cirencester  
Neighbourhood Plan Area 41

# Chapter 1

## Introduction

1.1 LUC has been commissioned by Cotswold District Council to carry out Habitats Regulations Assessment (HRA) Screening of the Cirencester Neighbourhood Plan. The Neighbourhood Plan has been developed by a steering group supported by Cirencester Town Council and covers the full extent of the electoral boundary of the Town Council. This HRA report assesses the impacts of the Pre-Submission (Regulation 14) Draft Neighbourhood Plan (September 2022).

## The requirement to undertake Habitats Regulations Assessment of development plans

1.2 The requirement to undertake HRA of development plans was confirmed by the amendments to the Habitats Regulations published for England and Wales in 2007 [See reference 1]; the currently applicable version is the Habitats Regulations 2017 [See reference 2], as amended. Prior to the Cirencester Neighbourhood Plan being made, the Council is therefore required by law to carry out an HRA. The Council can commission consultants to undertake HRA work on its behalf and this (the work documented in this report) is then reported to and considered by the Council as the 'competent authority'. The Council considers this work and would usually [See reference 3] only progress a plan if it considers that the plan will not adversely affect the integrity [See reference 4] of any 'European site', as defined below. The requirement for authorities to comply with the Habitats Regulations when preparing a plan is also noted in the Government's online Planning Practice Guidance [See reference 5] (PPG).

**1.3** HRA refers to the assessment of the potential effects of a development plan on one or more sites afforded the highest level of protection in the UK: Special Protection Areas (SPAs) and Special Areas of Conservation (SACs). These were classified under European Union (EU) legislation but, since 1 January 2021, are protected in the UK by the Habitats Regulations 2017 (as amended). Although the EU Directives from which the UK's Habitats Regulations originally derived are no longer binding, the Regulations still make reference to the lists of habitats and species that the sites were designated for, which are listed in annexes to the EU Directives:

- SACs are designated for particular habitat types (specified in Annex 1 of the EU Habitats Directive [\[See reference 6\]](#)) and species (Annex II). The listed habitat types and species (excluding birds) are those considered to be most in need of conservation at a European level. Designation of SACs also has regard to the threats of degradation or destruction to which the sites are exposed and, before EU exit day, to the coherence of the 'Natura 2000' network of European sites. After EU exit day, regard is had to the importance of such sites for the coherence of the UK's 'national site network'.
- SPAs are classified for rare and vulnerable birds (Annex I of the EU Birds Directive [\[See reference 7\]](#)), and for regularly occurring migratory species not listed in Annex I.

**1.4** The term 'European sites' was previously commonly used in HRA to refer to 'Natura 2000' sites [\[See reference 8\]](#) and Ramsar sites (international designated under the Ramsar Convention). However, a Government Policy Paper [\[See reference 9\]](#) on changes to the Habitats Regulations 2017 post-Brexit states that:

- Any references to Natura 2000 in the 2017 Regulations and in guidance now refers to the new 'national site network'.
- The national site network includes existing SACs and SPAs; and new SACs and SPAs designated under these Regulations.
- Designated Wetlands of International Importance (known as Ramsar sites) do not form part of the national site network. Many Ramsar sites overlap

with SACs and SPAs and may be designated for the same or different species and habitats.

**1.5** Although Ramsar sites do not form part of the new national site network, Government guidance [\[See reference 10\]](#) states that:

**1.6** “Any proposals affecting the following sites would also require an HRA because these are protected by government policy:

- proposed SACs
- potential SPAs
- Ramsar sites - wetlands of international importance (both listed and proposed)
- areas secured as sites compensating for damage to a European site.”

**1.7** Furthermore, the NPPF [\[See reference 11\]](#) and practice guidance [\[See reference 12\]](#) currently state that competent authorities responsible for carrying out HRA should treat Ramsar sites in the same way as SACs and SPAs.

**1.8** The legislative requirement for HRA does not apply to other nationally designated wildlife sites such as Sites of Special Scientific Interest or National Nature Reserves. For simplicity, this report uses the term 'European site' to refer to all types of designated site for which Government guidance requires an HRA. The overall purpose of the HRA is to conclude whether or not a proposal or policy, or whole development plan would adversely affect the integrity of the European site in question. This is judged in terms of the implications of the plan for a site's 'qualifying features' (i.e. those Annex I habitats, Annex II species, and Annex I bird populations for which it has been designated). Significantly, HRA is based on the precautionary principle. Where uncertainty or doubt remains, an adverse effect should be assumed.

# Stages of Habitat Regulations Assessment

**1.9** The section below summarises the stages involved in carrying out an HRA, based on various guidance documents [See reference 13 and 14]. This HRA report presents the methodology and findings of Stage 1: Screening. Further details of the approach to Screening are provided in Chapter 3. Relevant legislation and case law that has informed the HRA methodology is described in Appendix A.

## Stage 1: Screening (the 'Significance Test')

### Tasks

- Description of the development plan and confirmation that it is not directly connected with or necessary to the management of European sites.
- Identification of potentially affected European sites and their conservation objectives.
- Assessment of likely significant effects of the development plan alone or in combination with other plans and projects, prior to consideration of avoidance or reduction ('mitigation') measures.

### Outcome

- Where effects are unlikely, prepare a 'finding of no significant effect report'.
- Where effects judged likely, or lack of information to prove otherwise, proceed to Stage 2.



## Stage 2: Appropriate Assessment (the ‘Integrity Test’)

### Task

- Information gathering (development plan and data on European sites).
- Impact prediction.
- Evaluation of development plan impacts in view of conservation objectives of European sites.
- Where impacts are considered to directly or indirectly affect qualifying features of European sites, identify how these effects will be avoided or reduced (‘mitigation’).

### Outcome

- Appropriate Assessment report describing the plan, European site baseline conditions, the adverse effects of the plan on the European site, how these effects will be avoided through, firstly, avoidance, and secondly, mitigation, including the mechanisms and timescale for these mitigation measures.
- If effects remain after all alternatives and mitigation measures have been considered proceed to Stage 3.

## Stage 3: Assessment where no alternatives exist and adverse impacts remain taking into account mitigation

### Task

- Identify and demonstrate ‘imperative reasons of overriding public interest’ (IROPI).
- Demonstrate no alternatives exist.
- Identify potential compensatory measures.

### Outcome

- This stage should be avoided if at all possible. The test of IROPI and the requirements for compensation are extremely onerous.

## Previous HRA work

**1.10** The Cirencester Neighbourhood Plan is a new plan and has not previously been subject to HRA. However, HRA work has been undertaken for the Cotswold District Local Plan.

**1.11** The Local Plan was adopted in 2018 and the most recent iteration of the HRA of the Local Plan was prepared by LUC in 2017. LUC is currently undertaking the HRA of the Local Plan Partial Update. Information from these Local Plan HRAs has informed the HRA of the Cirencester Neighbourhood Plan, where relevant.

## Structure of this report

**1.12** This chapter (Chapter 1) described the background to the production of the Cirencester Neighbourhood Plan and the requirement to undertake HRA. The remainder of the report is structured as follows:

- Chapter 2: Cirencester Neighbourhood Plan summarises the content of the plan, which is the subject of this report.
- Chapter 3: Method sets out the approach used, and the specific tasks undertaken during the screening stage of the HRA.
- Chapter 4: Screening assessment describes the findings of the screening stage of the HRA.
- Chapter 5: Conclusions and next steps summarises the HRA conclusions for the Cirencester Neighbourhood Plan and describes the next steps to be undertaken.

**1.13** The information in the main body of the report is supported by the following appendices:

- Appendix A provides details of relevant legislation and case law.
- Appendix B presents a map showing the European sites within 15km of the Cirencester Neighbourhood Plan Area.
- Appendix C sets out information about the European sites that are the focus of the HRA.

## Chapter 2

# Cirencester Neighbourhood Plan

## Vision

2.1 The overarching vision for Cirencester by the end of the Neighbourhood Plan period in 2033 is:

*Our vision for Cirencester, in the period to 2033, is to pass on to future generations a historic and vibrant, welcoming, and friendly rural market town with a strong sense of community. It will be rich in heritage, character, and cultural opportunities.*

*Cirencester will thrive by capitalising on its heritage and the character of its urban streets while facilitating sympathetic, high quality and sustainable economic and residential growth. This will deliver for all residents and users of the Town while, at the same time, respecting the environment and supporting employment and skills opportunities which respond to the climate emergency.*

*The Town will be well connected to a series of green parks and open spaces, nature, and the surrounding countryside, which will remain key attributes with improvements where appropriate. Opportunities for walking and cycling that link all areas of the town and its surrounding towns, villages and countryside will be enhanced.*

*All areas of the town will have easy and accessible access to key services, including transport, with a more diverse cultural scene and sport and recreation facilities that meet the needs of a growing population.*

## Objectives

**2.2** The overarching vision is supported by a series of objectives. The objectives for the Cirencester Neighbourhood Plan are as follows:

1. Maintain, protect, and enhance the distinctive Cotswold-rich visual character, views and heritage of Cirencester, its immediate historic setting and vistas and its connections to the surrounding areas.
2. Require all new development to contribute to the 20 Minute Neighbourhood model of development through the creation of safe, sustainable, liveable, and mixed communities with active transport to jobs and essential services to meet the daily needs of the community.
3. Create a robust yet flexible network of streets and shared spaces that promote all modes of active travel leading to reduced reliance on private vehicles. To support this, there is a need for enhanced public transport and a mobility hub.
4. More effectively integrate the outlying residential areas (e.g., Kingshill, Kingsmeadow, Stratton, Chesterton) by foot, cycle, and public transport to the town centre, which are currently hindered by highway barriers and footpath gaps. The key barrier is that created by the A419 and A429 road system which wraps around Cirencester town centre, frustrating easy access to the middle from outlying residential areas and safe links to the surrounding countryside.

5. Facilitate a reduction in carbon emissions and contribute to achieving the national goal of Net Zero by adopting and implementing the relevant recommendations.
6. Protect, maintain, and enhance the natural environment, including local green spaces, parks, trees and green buffers, habitats, the River Churn, Gumstool Brook and all wildlife corridors alongside their connection to the wider landscape, promoting biodiversity and planting native species where possible.
7. Improve the sustainability of new build development through use of low carbon materials, construction methods and facilitate low carbon running carbon costs in accordance with the Cotswold Design Code.
8. Ensure that land made available for new developments better facilitates and maintains a vibrant connected, economically active, and sustainable Town Centre without adding to congestion or flood-risk.
9. Prioritise new residential development towards affordable homes and first time buyers and avoid age-specific residences.
10. Minimise future flood risk by protecting and, where possible, extending the functional floodplain. Require new developments to provide multifunctional mitigation measures, such as sustainable urban drainage systems, to ensure that rainwater is attenuated within the site. Support solutions to improve the management of the river flow on the upper Churn to reduce flooding and drying up.
11. Protect existing, and deliver new easily accessible, community infrastructure, including for primary health care, skills development, recreation, sport, leisure, and cultural enrichment, to fill existing gaps and support the future of Cirencester and its population growth.

12. Facilitate a reduction in noise and light pollution within the town and in new development whilst maintaining and improving air quality through a reduction in emissions.

13. Support skills development for local people.

**2.3** These objectives are used as a framework for the Neighbourhood Plan policies.

## Policies

**2.4** The policies within the Cirencester Neighbourhood Plan are listed below. New development provided for within the Cirencester Neighbourhood Plan is expected to be in line with the Cotswold Local Plan, and no development sites are allocated within the Cirencester Neighbourhood Plan.

### Town Centre

- Policy TC1: Town Centre/General Development
- Policy TC2: Town Centre/Master Plan

### Access and Movement

- Policy AM1: Better Links between Town Centre & Neighbourhoods
- Policy AM2: Better Links between Neighbourhoods & Countryside
- Policy AM3: The Pedestrian Environment
- Policy AM4: Promotion of an Access and Mobility Hub
- Policy AM5: Promotion of Active Travel Modes

## Design and Built Environment

- Policy DBE1: 20 Minute Neighbourhood Model (20MN)
- Policy DBE2: Heritage Protection of Landscape and Townscape Views
- Policy DBE3: Contributing to the Local Cotswold Character
- Policy DBE4: Affordable Housing
- Policy DBE5: Principal Residence Requirement
- Policy DBE6: Ground Floor Conversion and Use of Upper Floors
- Policy DBE7: Sustainable Construction
- Policy DBE8: Non Designated Heritage Assets

## Quality of the Public Realm

- Policy QPR1: Quality Streets and Spaces
- Policy QPR2: Social and Civil Spaces
- Policy QPR3: Heritage Trails and Wayfinding Systems

## Local Economy

- Policy LE1: Protect and Enhance Economic Activity
- Policy LE2: Provision for Innovative Work Spaces, New and Small Businesses
- Policy LE3: Skills Development
- Policy LE4: New Employment Premises and Design Quality

## Natural Environment

- Policy NE1: Biodiversity and the Natural Environment



- Policy NE2: Green Corridors, Footpaths, Surrounding Landscape and Skylines
- Policy NE3: Biodiversity and the Natural Environment in Peripheral Areas
- Policy NE4: Flood Resilience
- Policy NE5: Cirencester Designated Local Green Spaces

## Well-Being and Community

- Policy WBC1: Improve Air Quality
- Policy WBC2: Health Impact Assessments (HIA)
- Policy WBC3: Access to Green Spaces
- Policy WBC4: Outdoor Recreation Spaces
- Policy WBC5: New Community Services and Facilities
- Policy WBC6: Minimise Light Pollution
- Policy WBC7: Design and Public Safety

## Chapter 3

# HRA Screening Method

**3.1** HRA Screening of the Cirencester Neighbourhood Plan has been undertaken in line with current available guidance and sought to meet the requirements of the Habitats Regulations. The tasks that were undertaken during the screening stage of the HRA are described in detail below; and the conclusions reached are provided in Chapter 4. Relevant legislation and case law is described in Appendix A.

**3.2** The purpose of the screening stage is to:

- Identify all aspects of the plan which would have no effect on a European site, so that that they can be eliminated from further consideration in respect of this and other plans.
- Identify all aspects of the plan which would not be likely to have a significant effect on a European site (i.e. would have some effect because of links/connectivity, but which are not significant), and which therefore do not require 'Appropriate Assessment'. These effects are considered in relation to the plan both alone and in combination with other aspects of the same plan or other plans or projects,
- Identify those aspects of the plan where it is not possible to rule out the risk of significant effects on a European site, either alone or in combination with other plans or projects. This provides a clear scope for the parts of the plan that will require Appropriate Assessment.

## Identifying European sites that may be affected and their conservation objectives

**3.3** In order to initiate the search of European sites that could potentially be affected by a development, it is established practice in HRA to consider sites within the area covered by the plan, and other sites that may be affected beyond this area.

**3.4** A distance of 15km from the boundary of the plan area is typically used in the first instance to identify European sites with the potential to be affected by the proposals within a development plan. Consideration is then given to whether any more distant European sites may be connected to the plan area via effects pathways, for example through hydrological links or recreational visits by residents. The 15km distance has been agreed with Natural England for HRAs elsewhere and is considered precautionary. All European sites within 15km have been assessed in this HRA.

**3.5** The assessment also takes into account areas that may be functionally linked to the European sites. The term 'functional linkage' is used to refer to the role or 'function' that land beyond the boundary of a European site might fulfil in terms of supporting the species populations for which the site was designated or classified. Such an area is therefore 'linked' to the site in question because it provides a (potentially important) role in maintaining or restoring a protected population at favourable conservation status.

**3.6** While the boundary of a European site will usually be drawn to include key supporting habitat for a qualifying species, this cannot always be the case where the population for which a site is designated or classified is particularly mobile. Individuals of the population will not necessarily remain in the site all the time. Sometimes, the mobility of qualifying species is considerable and may extend so far from the key habitat that forms the SAC or SPA that it would be entirely impractical to attempt to designate or classify all of the land or sea that

may conceivably be used by the species [See reference 15]. HRA therefore considers whether any European sites make use of functionally linked habitats, and the impacts that could affect those habitats.

**3.7** Three European sites are within 15km of the Cirencester parish boundary:

- North Meadow and Clattinger Farm SAC (c.5.5km south and south east);
- Cotswold Beechwoods SAC (c.9km north west); and
- Rodborough Common (c. 10km west).

**3.8** These sites are shown on the figure in Appendix B. Detailed information about each European site is provided in Appendix C, described with reference to Standard Data Forms for the SPAs and SACs, and Natural England's Site Improvement Plans [See reference 16]. Natural England's conservation objectives [See reference 17] for the SPAs and SACs have also been reviewed.

**3.9** None of the sites with 15km of the parish boundary has qualifying features that require functionally linked habitat (i.e. mobile species such as bats or birds). Functionally linked land from the Severn Estuary SPA and Ramsar site is considered in the HRA of the emerging Cotswold District Local Plan; therefore the potential for likely significant effects on those sites as a result of the Cirencester Neighbourhood Plan is considered in the next section. No other European sites beyond 15km from the parish boundary are considered to be linked to the Plan area.

## **Assessment of 'likely significant effects' of the plan**

**3.10** As required under Regulation 105 of the Conservation of Habitats and Species Regulations 2017 [See reference 18] (as amended), an assessment has been undertaken of the 'likely significant effects' of the plan. The assessment has been prepared in order to identify which policies would be

likely to have a significant effect on European sites. The screening assessment has been conducted without taking mitigation into account, in accordance with the 'People over Wind' judgment (see Appendix A).

**3.11** A risk-based approach involving the application of the precautionary principle has been adopted in the assessment, such that a conclusion of 'no significant effect' is only reached where it is considered unlikely, based on current knowledge and the information available, that a development plan policy would have a significant effect on the integrity of a European site.

**3.12** Relevant case law helps to interpret when effects should be considered as a likely significant effect, when carrying out HRA of a land use plan (see Appendix A).

**3.13** A screening assessment has been prepared, to document consideration of the potential for likely significant effects resulting from each policy in the Cirencester Neighbourhood Plan. A summary of the findings of this assessment is provided in Chapter 4.

## Assessment of potential in-combination effects

**3.14** Regulation 105 of the Habitats Regulations 2017 requires an Appropriate Assessment where "a land use plan is likely to have a significant effect on a European site (either alone or in combination with other plans or projects) and is not directly connected with or necessary to the management of the site". Therefore, where likely insignificant effects are identified for the plan alone, it is necessary to consider whether these may become significant effects in combination with other plans or projects.

**3.15** Where the plan is likely to have an effect on its own (due to impact pathways being present), but it is not likely to be significant, the in-combination assessment at Screening stage needs to determine whether there may also be

the same types of effect from other plans or projects that could combine with the plan to produce a significant effect. If so, this likely significant effect arising from the plan in combination with other plans or projects, would then need to be considered through the Appropriate Assessment stage to determine if the impact pathway would have an adverse effect on integrity of the relevant European site. Where the screening assessment has concluded that there is no impact pathway between development proposed in the plan and the conditions necessary to maintain qualifying features of a European site, then there will be no in-combination effects to assess at the Screening or Appropriate Assessment stage. This approach accords with recent guidance on HRA [See [reference 19](#)].

**3.16** If impact pathways are found to exist for a particular effect but it is not likely to be significant from the plan alone, the in-combination assessment will identify which other plans and programmes could result in the same impact on the same European site. This will focus on planned growth (including housing, employment, transport, minerals and waste) around the affected site, or along the impact corridor.

**3.17** The potential for in-combination impacts would therefore focus on plans prepared by local authorities that overlap with European sites that are within the scope of this HRA. The findings of any associated HRA work for those plans would be reviewed where available. Where relevant, any strategic projects in the area that could have in-combination effects with the plan would then also be identified and reviewed.

## Types of impact that have been considered

**3.18** Consideration has been given to the potential for the development proposed to result in significant effects associated with the following types of impact:

- Physical loss or damage to habitat;

- Non-physical disturbance (noise, vibration and light pollution);
- Non-toxic contamination;
- Air pollution;
- Recreation pressure; and
- Changes to water quantity or quality.

**3.19** Assumptions relating to these types of impact are set out below.

### Physical loss or damage to habitat

**3.20** Physical loss or damage to habitat will only occur where development is within the boundaries of a European site, or its functionally linked land. There are no European sites within the Plan area and functionally linked land is not relevant to the sites within 15km. Therefore, there is no impact pathway for physical loss or damage to habitat and this impact has not been assessed in the HRA Screening.

### Non-physical disturbance

**3.21** Non-physical disturbance is most likely to be significant within a distance of 500 metres from a European site. Noise and vibration effects are most likely to disturb bird species and thus a key consideration with respect to European sites where birds are the qualifying features. Artificial lighting at night has the potential to affect species where it occurs in close proximity to key habitat areas, such as key roosting sites of SPA birds. There are no European sites or functionally linked land within 500m of the Plan area; therefore there is no impact pathway for non-physical disturbance and this impact has not been assessed in the HRA Screening.

## Non-toxic contamination

**3.22** Non-toxic contamination can include the creation of dust which can smother habitats preventing natural processes and may also lead to effects associated with increased sediment and dust which can potentially affect the turbidity of aquatic habitats and can also contribute to nutrient enrichment which can lead to changes in the rate of vegetative succession and habitat composition. The effects of non-toxic contamination are most likely to be significant if development takes place within 500m of a European site with qualifying features sensitive to these disturbances, such as riparian and wetland habitats, or sites designated for habitats and plant species. There are no European sites or functionally linked land within 500m of the Plan area; therefore there is no impact pathway for non-toxic contamination and this impact has not been assessed in the HRA Screening.

## Air pollution

**3.23** Air pollution is most likely to affect European sites where plant, soil and water habitats are the qualifying features, but some qualifying animal species may also be affected, either directly or indirectly, by deterioration in habitat as a result of air pollution. In terms of vehicle traffic, nitrogen oxides (NO<sub>x</sub>, i.e. NO and NO<sub>2</sub>) are considered to be the key pollutants. Deposition of nitrogen compounds may lead to both soil and freshwater acidification, and NO<sub>x</sub> can cause eutrophication of soils and water.

**3.24** Based on the Highways England Design Manual for Road and Bridges (DMRB) LA 105 Air quality [See reference 20] (which sets out the requirements for assessing and reporting the effects of highway projects on air quality), it is assumed that air pollution from roads is unlikely to be significant beyond 200m from the road itself. Where increases in traffic volumes are forecast, this 200m buffer needs to be applied to the relevant roads in order to make a judgement about the likely geographical extent of air pollution impacts.



All three European sites within 15km of the Plan area are sensitive to air pollution (see Appendix C). Cotswold Beechwoods and Rodborough Common SACs are both within 200m of the A46 and North Meadow and Clattinger Farm SAC is within 200m of the A419. Therefore, air pollution has been considered within the HRA Screening.

## Recreation pressure

**3.25** Recreation activities and human presence can result in significant effects on European sites. European sites with qualifying bird species are likely to be particularly susceptible to recreational disturbances, for example from walking, dog walking, angling, and illegal use of off-road vehicles and motorbikes. Recreation can also physically damage habitat as a result of trampling, fire or vandalism and also through erosion associated with terrestrial activities. All three European sites within 15km of the Plan area have habitats that are sensitive to recreation pressure (see Appendix C); therefore recreation pressure has been considered within the HRA Screening.

**3.26** Each European site will typically have a 'Zone of Influence' (ZOI) within which increases in population would be expected to result in likely significant effects. ZOIs are usually established following targeted visitor surveys and the findings are therefore typically specific to each European site (and often to specific areas within a European site). ZOIs for the three European sites within 15km of the Plan area have been established through visitor survey work and are as follows:

- North Meadow and Clattinger Farm SAC: 8.0km **[See reference 21]**;
- Rodborough Common SA: 3.8km **[See reference 22]** and
- Cotswold Beechwoods SAC: 15.4km **[See reference 23]**.

**3.27** Cirencester Parish therefore lies within the ZOIs of North Meadow and Clattinger Farm SAC and Cotswold Beechwoods SAC but is outside of the ZOI for Rodborough Common SAC. Recreation impacts are therefore screened out of this HRA in relation to that site.

## Changes to water quality or quantity

**3.28** An increase in demand for water abstraction and treatment resulting from the growth can result in changes in hydrology at European sites. Depending on the qualifying features and particular vulnerabilities of the European sites, this could result in likely significant effects, for example, due to changes in environmental or biotic conditions, water chemistry and the extent and distribution of preferred habitat conditions.

**3.29** North Meadow and Clattinger Farm SAC is sensitive to water pollution carried by flood waters (see Appendix C), while the qualifying habitats of Rodborough Common SAC are also sensitive to changes in water quality. While Cirencester is not hydrologically connected to Rodborough Common SAC there is a potential impact pathway for changes to water quality and/or quantity at North Meadow and Clattinger Farm SAC as the River Churn flows south from Cirencester towards the Cotswold Water Park which is adjacent to North Meadow and Clattinger Farm SAC and is potentially functionally linked to the Severn Estuary SPA and Ramsar site. Therefore, the potential for hydrological impacts on North Meadow and Clattinger Farm SAC has been assessed in the HRA Screening.

## Chapter 4

# Screening Assessment

**4.1** As described in the Chapter 3, a screening assessment has been carried out in order to identify the likely significant effects of the plan on the scoped-in European sites. The detailed screening assessment, which sets out the decision-making process used for this assessment can be found below.

## HRA Screening of policies

### Policies with the potential for likely significant effects

**4.2** This section provides an explanation of the HRA Screening conclusions reached in this HRA, in relation to impact type and European site. The following categories are used:

- Screened out – due to distance thresholds/lack of sensitivities of qualifying features as discussed in this chapter.
- No likely significant effects – as impact of Cirencester Neighbourhood Plan is unlikely to be significant on its own or in combination.

### Policy TC1: Town Centre/General Development

**4.3** This policy requires development to meet a number of design and planning principles; however the policy will not itself result in new development.

## **Policy TC2: Town Centre/Masterplan**

**4.4** This policy requires that proposals for the redevelopment of opportunity sites within Cirencester Town Centre adhere to certain design and planning principles. This policy will not itself result in new development.

## **Policy AM1: Better links between Town Centres and Neighbourhoods**

**4.5** This policy states that support will be given to proposals for new and enhanced active travel routes (walking and cycling) that successfully connect outlying neighbourhoods with the town centre. This policy will not result in new development.

## **Policy AM2: Better links between Neighbourhoods and Countryside**

**4.6** This policy states that support will be given to proposals for new and enhanced active travel routes (walking and cycling) that successfully connect outlying areas with the surrounding countryside. This policy will not result in new development.

## **Policy AM3: The Pedestrian Environment**

**4.7** This policy states that support will be given for an enhanced pedestrian experience throughout the plan area, through a range of coordinated measures. The policy will not itself result in new development.

## **Policy AM4: Promotion of an Access and Mobility Hub**

**4.8** This policy sets out criteria that will apply to any proposals for the redevelopment of a town centre site and the land immediately around for the purposes of a multi-modal access and mobility hub should. The policy will not itself result in new development.

## **Policy AM5: Promotion of Active Travel Modes**

**4.9** This policy sets out criteria that will apply to proposals for new development which are likely to generate increased pedestrian and/or vehicular traffic movement, in order to ensure that they will promote the use of active modes of travel. However, the policy will not itself result in new development.

## **Policy DBE1: 20 Minute Neighbourhood Model (20MN)**

**4.10** This policy states that all development proposals should demonstrate how they will contribute to the 20 Minute Neighbourhood Model (20MN) of connectivity to daily and weekly needs. It also sets out specific requirements that will apply to proposals that seek to support the 20MN. However, the policy will not itself result in new development.

## **Policy DBE 2 Heritage Protection of Landscape and Townscape Views**

**4.11** This policy states that proposals that obscure or result in the loss of the positive characteristics of significant views of and within the town will not be supported. The policy will not result in new development.

## **Policy DBE 3: Contributing to the Local Cotswold Character**

**4.12** This policy sets out criteria that will apply to proposals for new development in order to ensure that they are designed to respond positively to the Cotswold vernacular and to the distinctive Cirencester context. The policy will not itself result in new development.

## **Policy DBE 4: Affordable Housing**

**4.13** This policy sets out criteria relating to affordable housing, which will apply to residential development proposals. The policy will not itself result in new development.

## **Policy DBE 5: Principal Residence Requirement**

**4.14** This policy sets out criteria that will apply to residential developments, seeking to avoid the ongoing uncontrolled growth of dwellings used for second or holiday homes. The policy will not itself result in new development.

## **Policy DBE 6: Ground Floor Conversion and Use of Upper Floors**

**4.15** This policy sets out criteria that will apply to proposals for ground floor conversions and the use of upper floors in the town centre. It seeks to avoid adverse impacts on the appearance and character of the town centre and to support its vitality and viability. This policy will not result in new development.

## **Policy DBE 7: Sustainable Construction**

**4.16** This policy encourages applicants to design buildings to last, employing modern innovative technologies and methods of construction to reduce construction costs, speed up construction, and minimise energy consumption and carbon emissions during the building's lifetime. The policy will not itself result in new development.

## **Policy DBE 8: Non Designated Heritage Assets**

**4.17** This policy seeks to protect identified Non-Designated Heritage Assets from inappropriate demolition or alteration. This policy will not result in new development.

## **Policy QPR 1: Quality Streets and Spaces**

**4.18** This policy seeks to protect and enhance historic streets, parks, gardens and spaces across Cirencester. This policy will not result in new development.

## **Policy QPR 2: Social and Civic Spaces**

**4.19** This policy supports new developments that provide for a clear network of well-designed social and civic spaces that can help support the cultural, social, and economic life of the town. This policy will not result in new development.

## **Policy QPR 3: Heritage Trails and Wayfinding Systems**

**4.20** This policy supports proposals for heritage trails, wayfinding systems and the improved signposting of existing pedestrian and cycle routes within the town. Proposals that would facilitate better connections between the town centre, the surrounding areas and the wider countryside will be particularly encouraged. This policy will not result in new development.

## **Policy LE1: Protect and Enhance Economic Activity**

**4.21** This policy seeks to protect and enhance existing economic activity and premises across the town centre and avoid the loss of employment uses. This policy will not result in new development.

## **Policy LE2: Provision for Innovative Workspaces, New and Small Businesses**

**4.22** This policy supports development proposals that provide innovative hybrid and/or mixed-use working spaces which encourage creative small businesses or community uses. This policy will not itself result in new development.

## **Policy LE3: Skills Development**

**4.23** This policy supports development proposals that provide opportunities for training, obtaining skills and education. Proposals that will provide enhancements to existing skills and training facilities will be supported; however the policy will not itself result in new development.



## **Policy LE4: New Employment Premises and Design Quality**

**4.24** This policy sets out design criteria that will apply to proposals for new employment development outside existing industrial and employment areas, and requires them to demonstrate how they respect local character. The policy will not itself result in new development.

## **Policy NE 1: Biodiversity and the Natural Environment**

**4.25** This policy sets out criteria that will apply to development proposals to ensure that they protect and enhance biodiversity. This policy will not result in new development.

## **Policy NE 2: Green Corridors, Footpaths, Surrounding Landscapes and Skylines**

**4.26** This policy requires proposals to preserve and enhance the natural beauty of the Cotswold AONB and requires a Landscape and Visual Assessment where development may be prominent or adversely affect local landscape character. This policy will not result in new development.

## **Policy NE 3: Biodiversity and the Natural Environment in Peripheral Areas**

**4.27** This policy sets out criteria that will apply to development proposals towards the periphery of the plan area, requiring them to demonstrate how they

will provide a net gain in biodiversity and avoid or mitigate adverse effects. This policy will not result in new development.

## **Policy NE 4: Flood Resilience**

**4.28** This policy sets out criteria that will apply to development proposals in order to increase flood resilience. It requires proposals which would add to water discharge to address potential flood risk rising sea levels, groundwater levels and surface runoff as relevant. This policy will not result in new development.

## **Policy NE 5: Cirencester Designated Local Green Spaces**

**4.29** This policy provides protection for existing local Green Spaces in Cirencester and will not result in new development.

## **Policy WBC 1: Improve Air Quality**

**4.30** This policy supports measures that improve air quality, especially through a reduction in road vehicle use in the town centre and near educational establishments, and during construction. This policy will not result in new development.

## **Policy WBC 2: Health Impact Assessment (HIA)**

**4.31** This policy requires a Health Impact Assessment (HIA) to be undertaken for larger sites. This policy will not result in new development.

## Policy WBC 3: Access to Green Spaces

**4.32** This policy supports proposals that improve and extend the existing footpath and cycle network, allowing greater access between places where people live, the town and village centres, green spaces, recreation areas and the open countryside. This policy will not result in new development.

## Policy WBC 4: Outdoor Recreation Spaces

**4.33** This policy supports planning proposals that invest in a network of appropriate play spaces and outdoor gyms and trails for all ages, creating new play spaces in places where gaps are identified. This policy will not result in new development.

## Policy WBC 5: New Community Services and Facilities

**4.34** This policy supports proposals for new and improved community services within the settlement boundary as well as utility infrastructure to meet the identified needs of the community. However, the policy will not itself result in new development.

## Policy WBC 6: Minimise Light Pollution

**4.35** This policy requires proposals for external lighting schemes in any new development to minimise light pollution. This policy will not result in new development.

## Policy WBC 7: Design and Public Safety

**4.36** This policy sets out criteria which will apply to proposals for new development in the plan area in order to create and support a sense of safety. This policy will not result in new development.

## Chapter 5

# Assessment Conclusion

**5.1** At the Screening stage of HRA, no likely significant effects are predicted on European sites, either alone or in combination with other policies and proposals.

## Summary of HRA Screening

**5.2** The following impacts were screened out, as there is no potential impact pathway associated with development permitted by the Cirencester Neighbourhood Plan:

- Physical loss or damage to habitat;
- Non-physical disturbance; and
- Non-toxic contamination.

**5.3** The following impacts were screened in as there is a potential impact pathway associated with development permitted by the Cirencester Neighbourhood Plan, but no likely significant effects have been identified:

- Air pollution (in relation to all three European sites);
- Recreation pressure (in relation to Cotswold Beechwoods SAC and North Meadow and Clattinger Farm SAC); and
- Changes to water quality or quantity (in relation to North Meadow and Clattinger Farm SAC).

**5.4** The Cirencester Neighbourhood Plan does not allocate any sites for development. While the final part of the Neighbourhood Plan lists Neighbourhood Plan Projects, some of which could involve some small-scale physical works, these are not specific development allocations set out in policy and would not go beyond the scale of development already provided for in the

Cotswold Local Plan. The scale and nature of these projects are not considered likely to have significant effects on either the Cotswold Beechwoods SAC, Rodborough Common SAC, North Meadow and Clattinger Farm SAC or Severn Estuary SPA or Ramsar site, alone or in combination with other plans.

### Next steps

**5.5** An Appropriate Assessment is not required for the Cirencester Neighbourhood Plan as none of the policies will directly result in new built development and likely significant effects from the plan can therefore be ruled out.

**5.6** HRA is an iterative process and as such, this assessment should be updated if any relevant, newly available evidence or comments from key consultees are received prior to the plan being finalised. This report should be subject to consultation with Natural England to confirm that the conclusions of the assessment are considered appropriate at this stage of plan-making.

LUC

October 2022

## Appendix A

### Relevant legislation and case law

#### Requirements of the Habitat Regulations

#### Assessment

**A.1** In assessing the effects of the Plan in accordance with Regulation 105 of the Habitats Regulations (as amended), there are potentially two tests to be applied by the competent authority: a ‘Significance Test’, followed, if necessary, by an Appropriate Assessment which will inform the ‘Integrity Test’. The relevant sequence of questions is as follows:

- Step 1: Under Reg. 105(1)(b), consider whether the plan is directly connected with or necessary to the management of the sites. If not:
- Step 2: Under Reg. 105(1)(a) consider whether the plan is likely to have a significant effect on the site, either alone or in combination with other plans or projects (the ‘Significance Test’). [These two steps are undertaken as part of Stage 1: Screening shown above.] If so:
- Step 3: Under Reg. 105(1), make an Appropriate Assessment of the implications for the site in view of its current conservation objectives (the ‘Integrity Test’). In so doing, it is mandatory under Reg. 105(2) to consult Natural England, and optional under Reg. 105(3) to take the opinion of the general public. [This step is undertaken during Stage 2: Appropriate Assessment shown above.]
- Step 4: In accordance with Reg.105(4), but subject to Reg.107, give effect to the land use plan only after having ascertained that the plan will not adversely affect the integrity of the European site.

**A.2** It is normally anticipated that an emphasis on Stages 1 and 2 of this process will, through a series of iterations, help ensure that potential adverse effects are identified and eliminated through the avoidance of likely significant

effects at Stage 1, and through Appropriate Assessment at Stage 2 by the inclusion of mitigation measures designed to avoid or reduce effects. The need to consider alternatives could imply more onerous changes to a plan document. It is generally understood that so called ‘imperative reasons of overriding public interest’ (IROPI) are likely to be justified only very occasionally and would involve engagement with the Government.

**A.3** The HRA should be undertaken by the ‘competent authority’, in this case Cotswold District Council, and LUC has been commissioned to do this on their behalf. The HRA also requires close working with Natural England as the statutory nature conservation body in order to obtain the necessary information and agree the process, outcomes and any mitigation proposals.

### Relevant case law

#### Screening

**A.4** This HRA has been prepared in accordance with relevant case law findings, including most notably the ‘People over Wind’ and ‘Holohan’ rulings from the Court of Justice for the European Union (CJEU).

**A.5** The People over Wind, Peter Sweetman v Coillte Teoranta (April 2018) judgment ruled that Article 6(3) of the Habitats Directive should be interpreted as meaning that mitigation measures should be assessed as part of an Appropriate Assessment and should not be taken into account at the screening stage. The precise wording of the ruling is as follows:

“Article 6(3) .....must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of



measures intended to avoid or reduce the harmful effects of the plan or project on that site.”

**A.6** In light of the above, the HRA screening stage does not rely upon avoidance or mitigation measures to draw conclusions as to whether the CNP could result in likely significant effects on European sites. Instead, any such measures are considered at the Appropriate Assessment stage as relevant.

**A.7** The approach to this HRA is also consistent with the *Holohan v An Bord Pleanala* (November 2018) CJEU judgement which stated that:

Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that an ‘appropriate assessment’ must, on the one hand, catalogue the entirety of habitat types and species for which a site is protected, and, on the other, identify and examine both the implications of the proposed project for the species present on that site, and for which that site has not been listed, and the implications for habitat types and species to be found outside the boundaries of that site, provided that those implications are liable to affect the conservation objectives of the site.

Article 6(3) of Directive 92/43 must be interpreted as meaning that the competent authority is permitted to grant to a plan or project consent which leaves the developer free to determine subsequently certain parameters relating to the construction phase, such as the location of the construction compound and haul routes, only if that authority is certain that the development consent granted establishes conditions that are strict enough to guarantee that those parameters will not adversely affect the integrity of the site.

Article 6(3) of Directive 92/43 must be interpreted as meaning that, where the competent authority rejects the findings in a scientific expert opinion recommending that additional information be obtained, the ‘appropriate assessment’ must include an explicit and detailed statement of reasons capable of dispelling all reasonable scientific doubt concerning the effects of the work envisaged on the site concerned.

**A.8** In undertaking this HRA, LUC consider the potential for effects on species and habitats, including those not listed as qualifying features, to result in secondary effects upon the qualifying features of European sites, including the potential for complex interactions and dependencies. In addition, the potential for offsite impacts, such as through impacts to functionally linked land, and/or species and habitats located beyond the boundaries of European site that may be important in supporting the ecological processes of the qualifying features, has also been fully considered in this HRA.

**A.9** The approach to the HRA also needs to take into consideration the ‘Wealden’ judgement and the ‘Dutch Nitrogen Case’ judgements from the Court of Justice for the European Union.

**A.10** Wealden District Council v Secretary of State for Communities and Local Government, Lewes District Council and South Downs National Park Authority (2017) ruled that it was not appropriate to scope out the need for a detailed assessment for an individual plan or project based on the annual average daily traffic (AADT) figures detailed in the Design Manual for Roads and Bridges or the critical loads used by Defra or Environmental Agency without considering the in-combination impacts with other plans and projects.

**A.11** In light of this judgement, HRA therefore needs to consider traffic growth based on the effects of development from the plan in combination with other drivers of growth such as development proposed in neighbouring districts and demographic change.

**A.12** The 2018 'Coöperatie Mobilisation for the Environment and Vereniging Leefmilieu (Dutch Nitrogen)' judgement stated that:

“...the positive effects of the autonomous decrease in the nitrogen deposition...be taken into account in the appropriate assessment..., it is important that the autonomous decrease in the nitrogen deposition be monitored and, if it transpires that the decrease is less favourable than had been assumed in the appropriate assessment, that adjustments, if required, be made.”

**A.13** The Dutch Nitrogen judgement also states that according to previous case law:

“...it is only when it is sufficiently certain that a measure will make an effective contribution to avoiding harm to the integrity of the site concerned, by guaranteeing beyond all reasonable doubt that the plan or project at issue will not adversely affect the integrity of that site, that such a measure may be taken into consideration in the 'appropriate assessment' within the meaning of Article 6(3) of the Habitats Directive.”

**A.14** The HRA of the Cirencester Neighbourhood Plan therefore will only consider the existence of conservation and/or preventative measures if the expected benefits of those measures are certain at the time of the assessment.

## Interpretation of 'likely significant effects'

**A.15** In the Waddenzee case [See reference 24], the European Court of Justice ruled on the interpretation of Article 6(3) of the Habitats Directive (translated into Reg. 102 in the Habitats Regulations), including that:

An effect should be considered 'likely', "if it cannot be excluded, on the basis of objective information, that it will have a significant effect on the site" (para 44). An effect should be considered 'significant', "if it undermines the conservation objectives" (para 48). Where a plan or project has an effect on a site "but is not likely to undermine its conservation objectives, it cannot be considered likely to have a significant effect on the site concerned" (para 47).

**A.16** A relevant opinion delivered to the Court of Justice of the European Union commented that:

"The requirement that an effect in question be 'significant' exists in order to lay down a de minimis threshold. Plans or projects that have no appreciable effect on the site are thereby excluded. If all plans or projects capable of having any effect whatsoever on the site were to be caught by Article 6(3), activities on or near the site would risk being impossible by reason of legislative overkill."

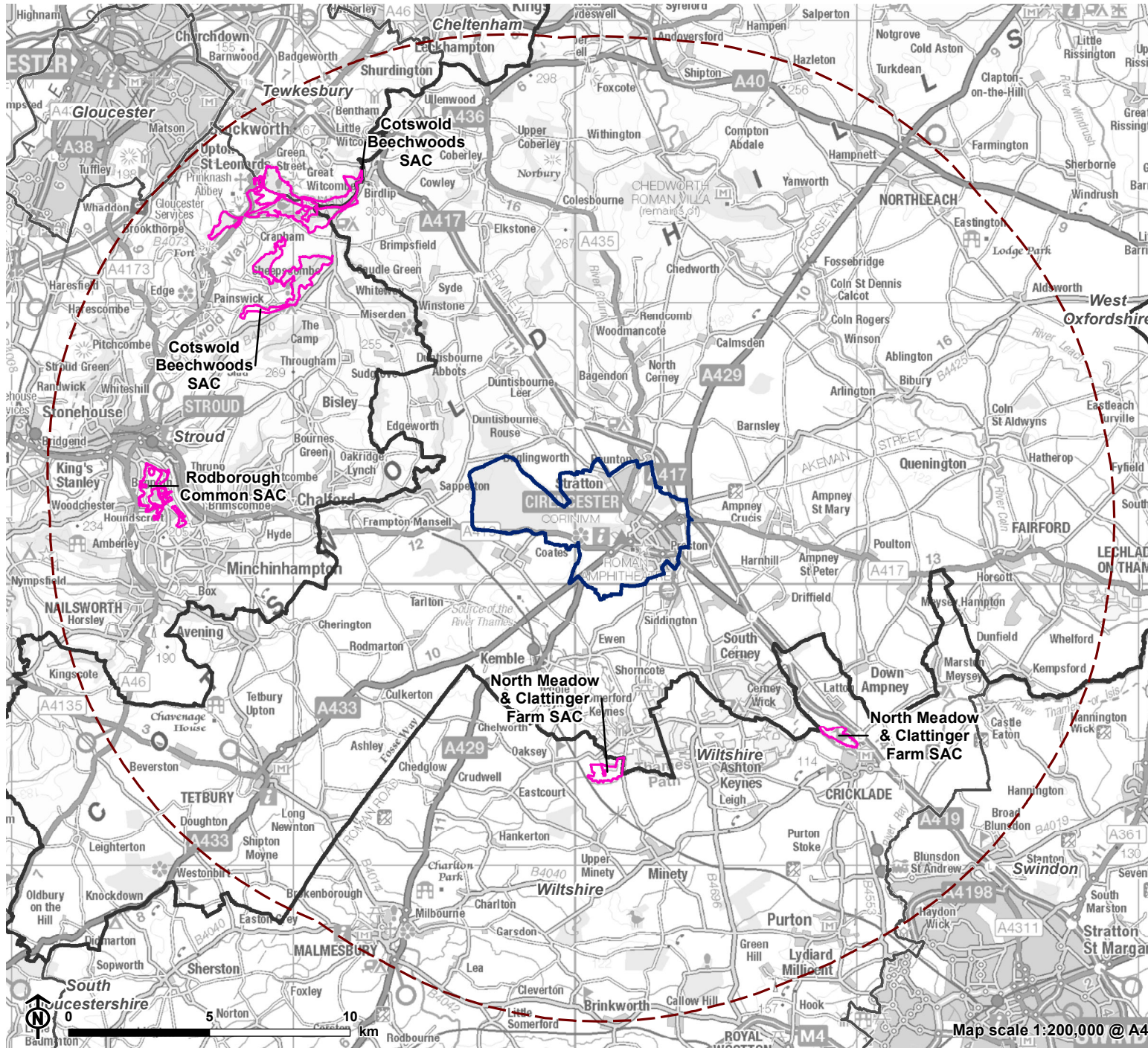
**A.17** This opinion (the 'Sweetman' case) therefore allows for the authorisation of plans and projects whose possible effects, alone or in combination, can be considered 'trivial' or de minimis; referring to such cases as those "that have no appreciable effect on the site". In practice such effects could be screened out as having no likely significant effect – they would be 'insignificant'.






## Appendix B

### Map of European sites within 15km of the Cirencester Neighbourhood Plan Area



Figure B.1: Map of European sites within 15km of the Cirencester Neighbourhood Plan Area



-  Cirencester Parish
-  15km from Cirencester Parish boundary
-  Cotswold District boundary
-  Surrounding Local Authorities
- Habitat sites**
-  Special Area of Conservation (SAC)

Map scale 1:200,000 @ A4

## Appendix C

### Attributes of European sites

**C.1** This appendix contains information on the European sites scoped into the HRA. Site areas and designated features are drawn from SAC and SPA Standard Data Forms and Ramsar Site Information Sheets [See reference 25]. The overviews of sites and their locations are drawn from Natural England's Site Improvement Plans [See reference 26]. Site conservation objectives are drawn from Natural England's website and are only available for SACs and SPAs [See reference 27]

#### North Meadow and Clattinger Farm SAC

##### Overview of site and its location

**C.2** North Meadow & Clattinger Farm Meadows SAC consists of a series of traditionally managed unimproved grasslands within the floodplain of the Upper Thames which continue to be managed as pasture and as hay meadow.

**C.3** It contains a rich variety of species-rich grassland types including the rare MG4 community for which the SAC is designated as well as a number of notable plant species. These grasslands represent rare and scattered remnants of a much more widespread unimproved grassland habitat before agricultural intensification and extensive gravel quarrying locally were responsible for widespread losses of this habitat and its subsequent fragmentation.

##### Qualifying features

**C.4** Annex I habitats that are a primary reason for selection of this site:

- Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*)

## Conservation objectives

**C.5** Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats;
- The structure and function (including typical species) of qualifying natural habitats; and
- The supporting processes on which qualifying natural habitats rely.

## Key Vulnerabilities

**C.6 Inappropriate Water Levels:** An effective WLMP needs to be in place in order to protect the integrity of the site. There have been several unseasonal floods over the last six years which are beginning to cause changes and losses in the vegetation communities on the site.

**C.7 Water Pollution:** Both sediment and nutrient input are of concern. A diffuse pollution plan is in place and catchment sensitive farming initiative covers the catchment. Diffuse pollution has the potential to affect aquatic habitats and species as well as habitat quality in areas of riverside habitat supporting *Vertigo moulinsiana*. Diffuse pollution is arising from highway runoff as well as from farmland. Pollution also results from overflowing sewers (a result of high groundwater levels infiltrating sewers) with ongoing/recurring incidents at numerous locations on the River Lambourn.

**C.8 Habitat Fragmentation:** The two component SSSIs are located 8km apart. Inclusion and restoration of a number of intervening sites locally would increase the habitat, thereby making it more resilient to fluctuating water levels in the face of climate change. The NNR team at North Meadow has, over a number of years, been working to achieve this aim. Also, one option is that additional land should be included within the North Meadow SSSI for this purpose. This would help buffer the site, possibly provide space for adaptation in anticipation of the



## Appendix C Attributes of European sites

effects of climate change, and better manage visitor impacts. Clattinger forms part of a more extensive site which provides good opportunities for on-site management.

**C.9 Commons Management:** Fencing is required to keep livestock from straying off site. North Meadow NNR is common land and it is the responsibility of neighbouring landowners to erect fences. There are a number of problems involved in achieving this.

**C.10 Public Access/Disturbance:** There is increasing visitor pressure especially during the flowering time of Snake's-head Fritillary leading to localised damage on sites in the SAC.

**C.11 Water Pollution:** The SAC's hay meadow vegetation communities are sensitive to elevated nutrient levels. With increasing flooding there is an increased risk of flood water carrying diffuse pollution onto the site and causing soil enrichment with negative consequences for the species richness of the meadows. For this Annex I feature, the deposition of nutrients, particularly phosphate ('P'), as sediment in floodwaters have the potential to impact the site,

**C.12 Conservation Measures:** Active and ongoing conservation management is needed to protect, maintain or restore hay meadow vegetation. Conservation measures for hay meadow vegetation will typically include grazing, cutting, scrub management, weed control, recreation/visitor management. Also covered is maintenance of surface drainage features and retention of suitable land use infrastructure/patterns to enable site management.

**C.13 Air Quality:** Hay meadows is considered sensitive to changes in air quality. Exceedance of these critical values for air pollutants may modify the chemical status of its substrate, accelerating or damaging plant growth, altering its vegetation structure and composition and causing the loss of sensitive typical species associated with it. There are critical levels for ammonia (NH<sub>3</sub>), oxides of nitrogen (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>), and critical loads for nutrient nitrogen deposition and acid deposition. There are currently no critical loads or levels for other pollutants such as Halogens, Heavy Metals, POPs, VOCs or

Dusts. Ground level ozone is regionally important as a toxic air pollutant but flux-based critical levels for the protection of semi-natural habitats are still under development. Overall nitrogen deposition, which includes ammonia, at both sites currently falls just below the critical loading for the habitat present. North Meadow is adjacent to the A419 trunk road and on the outskirts of the market town of Cricklade whilst Clattinger Farm is in a more rural location, further from potential sources of pollution.

**C.14 Adaptation and resilience:** Such environmental changes may include changes in sea levels, precipitation and temperature for example, which are likely to affect the extent, distribution, composition and functioning of a feature within a site. The vulnerability and response of features to such changes will vary. The overall vulnerability of this particular SAC to climate change is high. This SAC is on two locations, 4.5 miles apart. This current fragmentation means that neither site is able to support the other through buffering and connectivity. Both sites have potential, associated restoration opportunities which could help to buffer the feature. Climate change may bring differing challenges at both sites. Since the early 2000's North Meadow has been subject to prolonged and often unseasonal periods of flooding which has brought shifts towards wetter, less species-rich plant communities. Clattinger Farm has experienced less prolonged and large scale flooding and may in the future suffer from lack of water as the adjacent Swill Brook regularly dries up in the summer months.

**C.15 Functional connectivity with wider landscape:** Increasing actual and functional landscape-scale connectivity would be beneficial. The agricultural drainage ditch network associated with both sites has fallen out of regular maintenance. Regular ditch maintenance has been re-instated on North Meadow through the management of the NNR and also across some of Clattinger Farm by the owner. However, the drainage of both sites, particularly North Meadow, rely on properly functioning agricultural drainage ditches beyond the control of the site owners on third party land. It will be necessary to re-instate regular maintenance on ditches downstream of both sites to restore functional connectivity to the wider landscape and help maintain the Hay meadows.

**C.16 Hydrology: Flooding Regime:** Hay meadows are strongly dependent on moist, but not waterlogged, soils on floodplains. Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants present. Too much inundation can result in a shift from H6510 to other vegetation types (such as inundation grassland, swamps); too little flooding may compromise the necessary conservation/agricultural management due to reduced nutrient inputs which will reduce hay yields, making hay management less viable and sustainable.

**C.17 Hydrology: Water Table:** Hay meadows is strongly dependent on moist, but not waterlogged, soils on floodplains. Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present.

**C.18 Soils, substrate and nutrient cycling:** Changes to natural soil properties may therefore affect the ecological structure, function and processes associated with this Annex I feature. Prolonged periods of flooding at North Meadow since 2007 have significantly increased the soil P index to as much as index 3 in some years.

**C.19 Vegetation community transitions:** Transitions/zonations between adjacent but different vegetation communities are usually related to naturally-occurring changes in soil, aspect or slope. Such 'ecotones' retain characteristics of each bordering community and can add value in often containing species not found in the adjacent communities. Retaining such transitions can provide further diversity to the habitat feature, and support additional flora and fauna.

**C.20 Vegetation: undesirable species:** Undesirable non-woody and woody vascular plants species may require active management to avert an unwanted succession to a different and less desirable state. Often they may be indicative of a negative trend relating to another aspect of a site's structure and function. These species will vary depending on the nature of the particular feature, and in some cases these species may be natural/acceptable components or even dominants.

**C.21 Vegetation community composition:** This habitat feature will comprise a number of associated semi-natural vegetation types and their transitional zones, reflecting the geographical location of the site, altitude, aspect, soil conditions (especially base-status and drainage) and vegetation management. Maintaining or restoring these characteristic and distinctive vegetation types, and the range of types as appropriate, will be important to sustaining the overall habitat feature. This will also help to conserve their typical plant species, and therefore that of the SAC feature, at appropriate levels.

**C.22 Key structural, influential and distinctive species:** Some plant or animal species (or related groups of such species) make a particularly important contribution to the necessary structure, function and/or quality of an Annex I habitat feature at a particular site. There may be natural fluctuations in the frequency and cover of each of these species. The relative contribution made by them to the overall ecological integrity of a site may vary.

**C.23 Spatial distribution of the feature within the site:** A contraction in the range, or geographic spread, of the feature (and its component vegetation and typical species, plus transitional communities) across the site will reduce its overall area, the local diversity and variations in its structure and composition, and may undermine its resilience to adapt to future environmental changes. Fragmentation can impact on their viability and the wider ecological composition of the Annex I habitat. Smaller fragments of habitat can typically support smaller and more isolated populations which are more vulnerable to extinction. These conditions may not be suitable for some of the typical and more specialist species associated with the Annex I habitat feature.

**C.24 Extent of the feature within the site:** For Hay meadows, there will be year to year fluctuations in climate resulting in variable flooding regimes. A series of summer floods at North Meadow have caused a decline in the area of MG4 grassland, which corresponds to H6510. Excessive and unseasonal flooding presents the most significant risk to Hay meadows at North Meadow.

## Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

**C.25** The qualifying habitats rely upon soil quality and water quality/quantity.

## Cotswold Beechwoods SAC

### Overview of site and its location

**C.26** The Cotswold Beechwoods represent the most westerly extensive blocks of *Asperulo-Fagetum* beech forests in the UK. The woods are floristically richer than the Chilterns, and rare plants include red helleborine *Cephalanthera rubra*, stinking hellebore *Helleborus foetidus*, narrow-lipped helleborine *Epipactis leptochila* and wood barley *Hordelymus europaeus*. There is a rich mollusc fauna. The woods are structurally varied, including blocks of high forest and some areas of remnant beech coppice.

### Qualifying features

**C.27** Annex I habitats that are a primary reason for selection of this site:

- *Asperulo-Fagetum* beech forests

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

- Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (\* important orchid sites)

## Conservation objectives

**C.28** Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats;
- The structure and function (including typical species) of qualifying natural habitats; and
- The supporting processes on which qualifying natural habitats rely.

## Key Vulnerabilities

**C.29 Invasive Species:** The dumping of garden waste and the consequent spread of invasive plants is an on-going threat. The spread of the non-native sycamore provides a challenge and has made particular use of canopy gaps created by storm damage. Although sycamore is considered an acceptable component of woodlands, including beechwoods, on the continent, in the Cotswold it tends to dominate understorey and canopy to the detriment of other (native) tree species.

**C.30 Deer:** Deer browsing of regenerating trees (and possibly ground flora) remains a major threat to favourable condition throughout the beechwoods.

**C.31 Invasive Species:** Grey squirrel numbers have increased sharply over the past decade or so and now cause significant damage to tree species, in particular beech. In places, this can lead to pole stage beech being systematically ring barked and killed.

**C.32 Disease:** Although not known to be present in the Cotswold as yet, Chalara (ash disease) is a major future threat to the beechwoods.

**C.33 Public Access/Disturbance:** A particular increase has been the use of mountain bikes and horse-riding which use the woods far beyond the limited network of bridleways. This has created numerous additional trackways and so increasing the erosion of the ground flora and potentially opportunities for water erosion. Although the routes away from bridleways are not usually permitted, much of the SAC woodland is NNR or has public access by foot. Additionally, dog walking has increased within the SAC especially at Coopers Hill where car parking is available. This has become a particular issue where professional dog walkers release large numbers of dogs (up to 12) to run uncontrolled through the woods. This causes disturbance to wildlife as well as local nutrification through dog faeces.

**C.34 Changes in Species Distributions:** There is a risk that global warming will increase the risk of drought to beech trees (which are shallow rooted).

**C.35 Air Pollution:** impact of atmospheric nitrogen deposition – Nitrogen deposition exceeds site relevant critical loads. High atmospheric nitrogen levels could affect the SAC features through: changes in ground vegetation and mycorrhiza; nutrient imbalance; changes to soil fauna; increase in tall grasses; decline in diversity; increased mineralization; N leaching; or surface acidification. There are critical levels for ammonia (NH<sub>3</sub>), oxides of nitrogen (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>), and critical loads for nutrient nitrogen deposition and acid deposition. There are currently no critical loads or levels for other pollutants such as Halogens, Heavy Metals, POPs, VOCs or Dusts. The levels of Nitrogen and Acid deposition are currently exceeding the critical loads for this habitat.

**C.36 Extent of the feature within the site:** There should be no measurable reduction (excluding any trivial loss) in the extent and area of beech forests. Restoration of plantation on ancient woodland is ongoing and will take some time before it is assignable to an Annex 1 habitat type. There is some scope to increase the extent of the SAC feature through plantation restoration but also scope to increase the quality (as the secondary woodland improves). Loss of any woodland area which fragments a site into different parts may interrupt the movement of species between the remaining parts of the woodland, especially those with limited powers of dispersal.

**C.37 Spatial distribution of the feature within the site:** A contraction in the range, or geographic spread, of beech forest, dry grassland and scrublands across the site will reduce its overall area, the local diversity and variations in its structure and composition, and may undermine its resilience to adapt to future environmental changes. This may also reduce and break up the continuity of a habitat within a site and how well its typical species are able to move around the site to occupy and use habitat. Fragmentation can impact on their viability and the wider ecological composition of the Annex I habitat. Conditions may not be suitable for some of the typical and more specialist species associated with the Annex I habitat feature.

**C.38 Vegetation community composition:** Beech forests, dry grasslands and scrublands will comprise a number of associated semi-natural vegetation types and their transitional zones, reflecting the geographical location of the site, altitude, aspect, soil conditions (especially base-status and drainage) and vegetation management. Maintaining or restoring these characteristic and distinctive vegetation types, and the range of types as appropriate, will be important to sustaining the overall habitat feature.

**C.39 Woodland canopy cover:** Woodland canopy density and structure is important because it affects ecosystem function and in particular microclimate, litterfall, soil moisture, nutrient turnover and shading; this in turn influences the composition of plants and animals in lower vegetation layers and soil. The woodland canopy of this feature should provide a core of woodland interior conditions with some open and edge habitat as well.

**C.40 Open Space:** Having some open, sunlit and largely tree-less areas as part of the woodland community is often important to facilitate natural tree and shrub regeneration and also to provide supporting habitat for specialist woodland invertebrates, birds, vascular and lower plants. This SAC currently contains good sized areas of permanent open space/rides (in SSSI units 12 and 15 of the SAC), however, other units would benefit from more open space and thinning.



**C.41 Old growth:** For this habitat type, old or over-mature elements of the woodland are particularly characteristic and important features, and their continuity should be a priority. Due to the historic management on this SAC some areas have few or no veteran trees. Maintain veterans at suitable frequency whether they exist and to develop trees to over-maturity and death in those units where ancient/veteran trees are currently lacking.

**C.42 Dead and decaying wood:** Due to the historic management and existing commoners rights of estover, the targets vary across the site, however, in some of the underpinning SSSI units one of the components causes of failing to achieve favourable condition, is a lack of deadwood.

**C.43 Tree age class distribution:** Appropriate age structure is affected by a lack of younger trees in some of the underpinning SSSI units and the historic management limits the largest age class in other units.

**C.44 Woodland edge (graduated edge; buffered; mosaics with other habitats):** Woodland structure plays a critical role in woodland ecosystem functioning. Scrub is an important component of the transition from the woodland into the surrounding unimproved calcareous grassland commons adjacent to areas of this SAC. A number of priority butterfly species rely on the graduated transition such as Duke of Burgundy. Scrub requires ongoing management to prevent it encroaching excessively onto the Grassland habitat and progressing into secondary woodland.

**C.45 Species diversity:** Sycamore is invasive at this site and in areas where sycamore is present, up to 15% Sycamore is acceptable in the understorey and up to 5% in the canopy on the basis that these are not seed bearing.

**C.46 Supporting off-site habitat:** Changes in surrounding land-use may adversely (directly/indirectly) affect the functioning of the feature and its component species. This supporting habitat may be critical to the typical species of the feature to support its population dynamics ('metapopulations'), pollination or to prevent/reduce/absorb damaging impacts from adjacent land uses e.g. pesticide drift, nutrient enrichment.

**C.47 Browsing and grazing by herbivores:** In some areas of the site, deer browsing is heavier than target levels and causes the failure in favourable condition of some underpinning SSSI units. Squirrel damage is also impacting tree regeneration as they tend to target young trees (8-10 year growth), ring barking them and causing their death.

**C.48 Regeneration potential:** High levels of deer browsing are currently preventing sufficient regeneration in some locations, as is the impact of squirrels.

**C.49 Tree and shrub species composition:** High densities of sycamore currently result in unfavourable condition at some locations within this SAC. Whilst it is appropriate for beech to be the most prominent tree across the SAC feature, a diversity of native tree and scrub species is to be encouraged both to support the associated fauna and flora and to retain resilience from the threat of tree diseases.

**C.50 Key structural, influential and/or distinctive species:** Some plant or animal species (or related groups of such species) make a particularly important contribution to the structure, function and/or quality of an Annex I habitat feature at a particular site.

**C.51 Undesirable species:** These include invasive non-natives such as periwinkle or coarse and aggressive native species e.g. sycamore which may uncharacteristically dominate the composition of the feature. These may also include invasive non-natives such as Cotoneaster species or coarse and aggressive native species which may uncharacteristically dominate the composition of the feature. The named Invasive species were chosen to indicate problems of eutrophication and disturbance from various sources when outside target e.g. poaching, stock feeding.

**C.52 Soils, substrate and nutrient cycling:** Changes to natural soil properties may therefore affect the ecological structure, function and processes associated with this Annex I feature.

**C.53 Root zones of ancient trees:** Unless carefully managed, activities such as construction, forestry management and trampling by grazing livestock and human feet during recreational activity may all contribute to excessive soil compaction around ancient trees. Recreational pressure including walking and mountain biking can be an issue in this SAC.

**C.54 Hydrology:** Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present. Currently there are no large abstractions within 3 km of the site. The vulnerability of the site to groundwater abstraction is low. When deciding future groundwater applications consideration should be given to protecting the spring flow and base-flow of the Painswick Stream system. Wet flush features forming part of the H9130 feature are important for the assemblage of rare woodland snails as well as tufa deposits.

**C.55 Illumination:** Flowering and development of trees and plants can also be modified by un-natural illumination which can disrupt natural seasonal responses. Old mine/cave structures below the SAC are used by greater and lesser horseshoe bats which are typical of this habitat type and particularly sensitive to artificial light levels. Other bats species also use the woodland.

**C.56 Extent of the feature within the site:** There should be no measurable reduction (excluding any trivial loss) in the extent and area of dry grasslands and scrubland, and in some cases, the full extent of the feature may need to be restored. This feature is susceptible to natural dynamic processes, there may be acceptable variations in its extent through natural fluctuations. As these grassland areas are surrounded by woodland, care must be taken that the woodland does not encroach on the extent of the grassland. Scrub is an integral part of the habitat and its location can vary, but it should be managed so that it does not smother the grassland and progress into secondary woodland.

**C.57 Abundance of herbaceous species:** A low proportion of grassland herbs can indicate eutrophication, usually from fertilisers, or insufficient removal of biomass, leading to dominance by grasses.

**C.58 Vegetation community transitions:** Transitions/zonations between adjacent but different vegetation communities are usually related to naturally-occurring changes in soil, aspect or slope. Such 'ecotones' retain characteristics of each bordering community and can add value in often containing species not found in the adjacent communities. Retaining such transitions can provide further diversity to the H6210 habitat feature, and support additional flora and fauna.

**C.59 Supporting off-site habitat:** Increasing actual and functional landscape-scale connectivity would be beneficial. Changes in surrounding land-use may adversely (directly/indirectly) affect the functioning of the feature and its component species. This supporting habitat may be critical to the typical species of the feature to support their feeding, breeding, population dynamics ('metapopulations'), pollination or to prevent/reduce/absorb damaging impacts from adjacent land uses e.g. pesticide drift, nutrient enrichment. In some locations the connectivity is good, however, other stretches of the scarp would benefit from appropriate management of grassland and woodland rides and glades to improve the linkages of the network.

**C.60 Adaptation and resilience:** It is currently considered that the sensitivity of unimproved calcareous grassland to climate change at this SAC is low. Older established grasslands being more resilient to those in the earlier stages of succession. Any necessary or likely adaptation or adjustment by the feature and its management in response to actual or expected climatic change should be allowed for, as far as practicable, in order to ensure the feature's long-term viability.

**C.61 Air quality:** Dry grasslands and scrublands is considered sensitive to changes in air quality. Exceedance of these critical values for air pollutants may modify the chemical status of its substrate, accelerating or damaging plant growth, altering its vegetation structure and composition and causing the loss of sensitive typical species associated with it. There are critical levels for ammonia (NH<sub>3</sub>), oxides of nitrogen (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>), and critical loads for nutrient nitrogen deposition and acid deposition. Concentrations are currently within maximum limits set for this habitat. There are currently no critical loads or

levels for other pollutants such as Halogens, Heavy Metals, POPs, VOCs or Dusts.

**C.62 Conservation measures:** Active and ongoing conservation management is needed to protect, maintain or restore this feature at this site.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

**C.63** The qualifying habitats rely upon soil quality and water quality/quantity.

## Rodborough Common SAC

### Overview of site and its location

**C.64** Rodborough Common is the most extensive area of semi-natural dry grasslands surviving in the Cotswolds of central southern England, and represents CG5 *Bromus erectus* – *Brachypodium pinnatum* grassland, which is more or less confined to the Cotswolds. The site contains a wide range of structural types, ranging from short turf through to scrub margins, although short-turf vegetation is mainly confined to areas of shallower soils.

### Qualifying features

**C.65** Annex I habitats that are a primary reason for selection of this site

- Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (\* important orchid sites)

## Conservation objectives

**C.66** Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitat;
- The structure and function (including typical species) of qualifying natural habitat; and
- The supporting processes on which qualifying natural habitat rely.

## Key Vulnerabilities

**C.67 Undergrazing** - Undergrazing is an issue due to the reliance on the rights of commoners to turn out cattle. The number of stock have dropped over the years to the point that additional cattle now need to be electric fenced on to the most species-rich areas on the slopes. It is the lower slopes that are the most species-rich and are suffering from a lack of grazing.

**C.68 Public Access/Disturbance** - The common is very close to Stroud and recreational use has greatly increased over the past few decades. This has created many new paths and parking areas which cause soil compaction to the detriment of the surrounding sward. Dog faeces is a particular issue which also damages the sward . New and proposed housing continues to add to the problem.

**C.69 Air Pollution: risk of atmospheric nitrogen deposition** - Nitrogen deposition exceeds the site-relevant critical load for ecosystem protection and hence there is a risk of harmful effects, but the sensitive features are currently considered to be in favourable condition on the site.

**Non-qualifying habitats and species upon which the  
qualifying habitats and/or species depend**

**C.70** The qualifying habitats rely upon soil quality and water quality/quantity

# References

- 1 HM Government (2007) The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007 (SI No. 2007/1843) [online]. Available at: <https://www.legislation.gov.uk/ukxi/2007/1843/contents>
- 2 HM Government (2017) The Conservation of Habitats and Species Regulations 2017 (SI No. 2017/1012) [online]. Available at: <https://www.legislation.gov.uk/ukxi/2017/1012/contents/made>, as amended by HM Government (2019) The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI No. 2019/579) [online]. Available at: <https://www.legislation.gov.uk/ukdsi/2019/9780111176573>
- 3 The exception to this would be where 'imperative reasons of overriding public interest' can be demonstrated; see paragraph 1.17.
- 4 The integrity of a site is 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 designated. (Source: UK Government Planning Practice Guidance).
- 5 Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities and Local Government (2019) Appropriate assessment: Guidance on the use of Habitats Regulations Assessment [online]. Available at: <https://www.gov.uk/guidance/appropriate-assessment>
- 6 Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive').
- 7 Directive 2009/147/EC of 30 November 2009 on the conservation of wild birds (the 'Birds Directive').
- 8 The network of protected areas identified by the EU: European Commission (2008) Natura 2000 [online]. Available at: [https://ec.europa.eu/environment/nature/natura2000/index\\_en.htm](https://ec.europa.eu/environment/nature/natura2000/index_en.htm)
- 9 Department of Environment, Food and Rural Affairs (2021) Changes to the Habitats Regulations 2017 [online]. Available at:



## References

---

- <https://www.gov.uk/government/publications/changes-to-the-habitats-regulations-2017/changes-to-the-habitats-regulations-2017>
- 10 Defra and Natural England (2021) Guidance - Habitats regulations assessments: protecting a European site, <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>
  - 11 Department for Levelling Up, Housing and Communities (2012) National Planning Policy Framework, para 176 [online]. Available at: <https://www.gov.uk/guidance/national-planning-policy-framework>
  - 12 David Tyldesley & Associates, The HRA Handbook, Section A3. A subscription based online guidance document, available at: <https://www.dtapublications.co.uk/handbook/European>
  - 13 Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities and Local Government (2019) Appropriate assessment: Guidance on the use of Habitats Regulations Assessment [online]. Available at: <https://www.gov.uk/guidance/appropriate-assessment>
  - 14 David Tyldesley & Associates, The HRA Handbook. A subscription based online guidance document, available at: <https://www.dtapublications.co.uk/handbook>
  - 15 Chapman, C. & Tyldesley, D. (2016) Functional linkage: How areas that are functionally linked to European sites have been considered when they may be affected by plans and projects – a review of authoritative decisions. Natural England Commissioned Reports, Number 207.
  - 16 Obtained from the Natural England website. Available at: [www.naturalengland.org.uk](http://www.naturalengland.org.uk)
  - 17 Natural England (undated) Conservation Objectives for European Sites [online]. Available at: <http://publications.naturalengland.org.uk/category/6490068894089216>
  - 18 SI No. 2017/2012.

## References

---

- 19** The HRA Handbook. David Tyldesley & Associates, a subscription based online guidance document [online] Available at:  
<https://www.dtapublications.co.uk/handbook/European>
- 20** National Highways (2019) Design Manual for Roads and Bridges, LA 105 Air quality,  
<https://www.standardsforhighways.co.uk/prod/attachments/10191621-07df-44a3-892e-c1d5c7a28d90>
- 21** Footprint Ecology (2020). Cotswold Beechwoods SAC Recreation Mitigation Strategy.
- 22** Footprint Ecology (2019). Rodborough Common Visitor Survey.
- 23** LUC (2021). North Meadow and Clattinger Farm SAC. North Meadow Interim Mitigation Strategy. Interim draft report. LUC, London
- 24** ECJ Case C-127/02 “Waddenzee” Jan 2004.
- 25** JNCC (2019) UK Protected Area Datasets for Download [online]. Available at:  
<https://jncc.gov.uk/our-work/uk-protected-area-datasets-for-download/>
- 26** Natural England (2014-2015) Site Improvement Plans: East of England [online]. Available at:  
<http://publications.naturalengland.org.uk/category/4873023563759616>
- 27** Natural England (undated) Conservation Objectives for European Sites [online]. Available at:  
<http://www.naturalengland.org.uk/ourwork/conservation/designations/sac/conservationobjectives.aspx>

Report produced by LUC

# Report produced by LUC

## **Bristol**

12th Floor, Colston Tower, Colston Street, Bristol BS1 4XE  
0117 929 1997  
bristol@landuse.co.uk

## **Cardiff**

16A, 15th Floor, Brunel House, 2 Fitzalan Rd, Cardiff CF24 0EB  
0292 032 9006  
cardiff@landuse.co.uk

## **Edinburgh**

Atholl Exchange, 6 Canning Street, Edinburgh EH3 8EG  
0131 202 1616  
edinburgh@landuse.co.uk

## **Glasgow**

37 Otago Street, Glasgow G12 8JJ  
0141 334 9595  
glasgow@landuse.co.uk

## **London**

250 Waterloo Road, London SE1 8RD  
020 7383 5784  
london@landuse.co.uk

## **Manchester**

6th Floor, 55 King Street, Manchester M2 4LQ  
0161 537 5960  
manchester@landuse.co.uk

## **landuse.co.uk**

Landscape Design / Strategic Planning & Assessment  
Development Planning / Urban Design & Masterplanning  
Environmental Impact Assessment / Landscape Planning & Assessment  
Landscape Management / Ecology / Historic Environment / GIS & Visualisation