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Gloucestershire Local Transport Plan Review

Habitats Regulations Assessment

Gloucestershire County Council

December 2020

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Document history

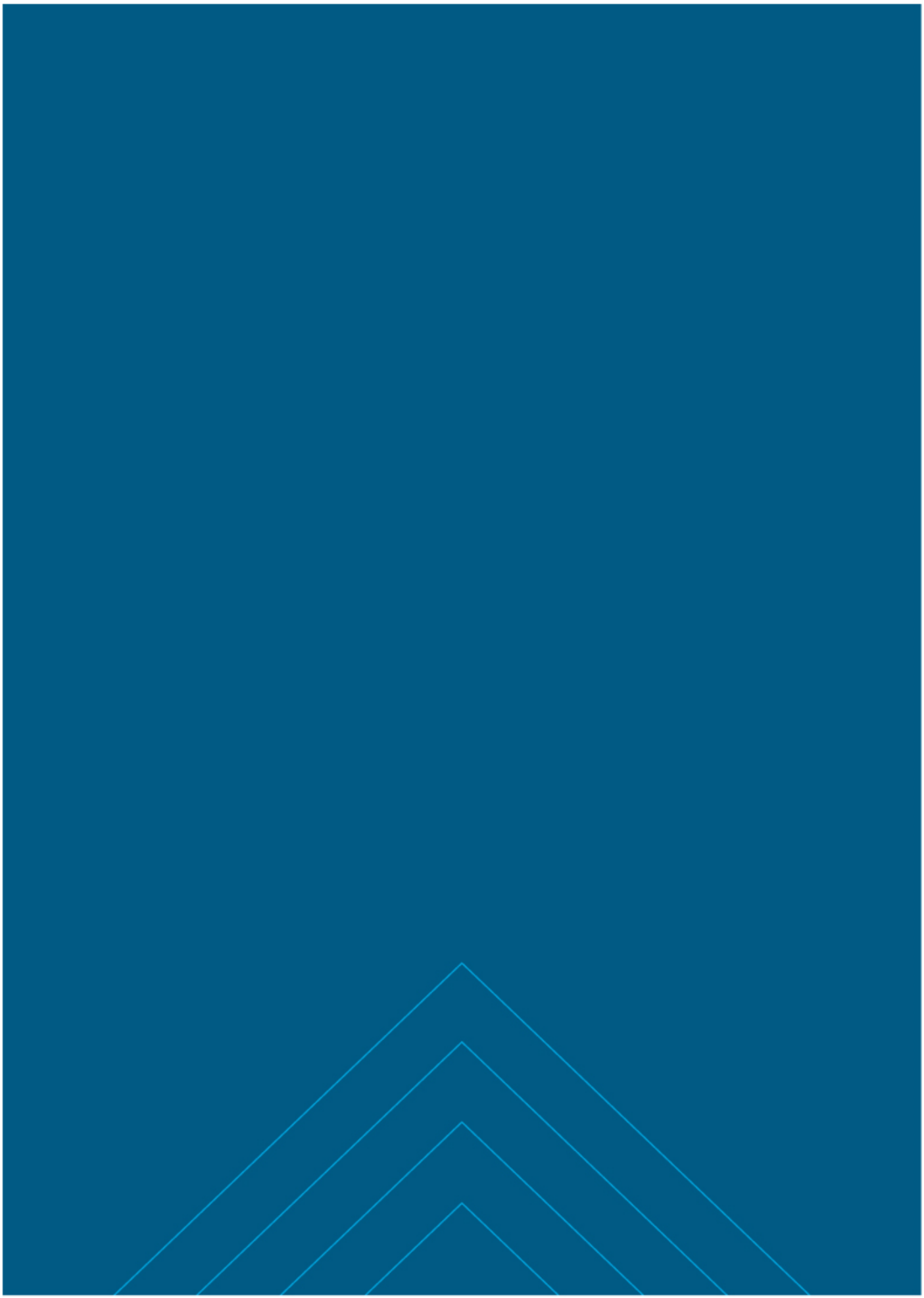
Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
Rev 1.0	Working draft for client comment	PW	JP	AW	CW	25 Oct 2019
Rev 2.0	Final draft following client comment	PW	PW	AW	CW	6 Nov 2019
Rev 3.0	Final draft	PW	PW	AW	CW	14 Nov 2019
Rev 4.0	Final	PW	PW	AW	CW	11 Sept 2020
Rev. 5.0	Final for issue	PW	PW	AW	CW	14 Dec. 2020

Client signoff

Client	Gloucestershire County Council
Project	Gloucestershire LTP Refresh ISA and HRA
Job number	5189457
Client signature / date	

Contents

Tables



1. Introduction

1.1. Background to this Assessment

Atkins Limited (member of the SNC-Lavalin group) (Atkins) has been commissioned by Gloucestershire County Council (GCC) to undertake a Habitats Regulations Assessment (HRA) of the GCC Local Transport Plan (LTP) review. The existing GCC LTP covers 2015 – 2031 and the plan is being reviewed to extend up to 2041. As such, this LTP is now known as LTP 2015-2041.

GCC is currently producing a review of the current LTP (2015-2031) aiming at:

- Shaping time horizon to 2041;
- Reflecting changes to national policy;
- Taking account of transport strategies developed for recently adopted Local Plans;
- Reflecting changes to local priorities as a result of recent studies and reviews.

A HRA Stage 1 Screening was undertaken by AECOM (April 2015) of the current Gloucestershire Local Transport Plan 2015-2031. The 2015 HRA Stage 1 Screening identified that there were no Likely Significant Effects (LSE) from the LTP as schemes will be assessed in greater detail at a lower tier in the planning process i.e. when specific projects arise as a result of the plan. The 2015 HRA Stage 1 Screening identified three projects within the LTP where there is a need for a detailed design to ensure that there are no adverse effects on the integrity of the European sites, either alone or in combination with other projects and plans.

1.2. Background to Habitats Regulations Assessment

HRA is required by Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations) for all plans and projects which may have likely significant effects on a European site and are not directly connected with or necessary to the management of the European site.

European sites include Special Areas of Conservation (SAC) and Special Protection Areas (SPA). As a matter of UK Government policy, potential SPAs (pSPA), possible SACs (pSAC), listed or proposed Wetlands of international importance (Ramsar sites) and sites identified, or required, as compensatory measures for adverse effects on European sites, pSPA, pSAC, and listed or proposed Ramsar sites, are included for the purposes of considering plans and projects which may affect them[1]. Hereafter all of the above designated nature conservation sites are referred to as 'European sites'.

There are four stages to the HRA process. These are summarised below:

- **Stage 1 – Screening:** To test whether a plan or project either alone or in combination with other plans and projects is likely to have a significant effect[2] on a European site;
- **Stage 2 – Appropriate Assessment:** To determine whether, in view of a European site's conservation objectives, the plan (either alone or in combination with other projects and plans) would have an adverse effect on the integrity of the site with respect to the site structure, function and conservation objectives. If adverse impacts are anticipated, potential mitigation measures to alleviate impacts should be proposed and assessed;
- **Stage 3 – Assessment of alternative solutions:** Where a plan is assessed as having an adverse impact (or risk of this) on the integrity of a European site, there should be an examination of alternatives (e.g. alternative locations and designs of development); and
- **Stage 4 – Assessment where no alternative solutions remain and where adverse impacts remain:** In exceptional circumstances where no alternative solutions remain and where adverse impacts remain (e.g. where there are imperative reasons of overriding public interest). Compensatory measures would usually be required to offset negative impacts.

1.2.1. Stage 1 Screening

Having determined that the project or plan is not directly connected with, or necessary for the management of a European site, it is necessary to undertake screening to determine whether the proposals are likely to have a Likely Significant Effect (LSE) on the European site(s).

It is important to note that the burden of evidence is to show, on the basis of objective information, that the project or plan will have no LSE on a European site. If there may be a LSE, or there is uncertainty and a LSE

[1] *National Planning Policy Framework*. Ministry of Housing, Communities and Local Government. February 2019 [Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf].

[2] Likely significant effect is any effect that may reasonably be predicted as a consequence of a plan or project that may affect the conservation objectives of the features for which the site was designated. If any plan or project causes the cited interest features of a site to fall into unfavourable condition they can be considered to have a likely significant effect on the site.

cannot be ruled out, this would trigger the need for an Appropriate Assessment (AA). As a result of European case law, irrespective of the normal English meaning of 'likely', in this statutory context a 'likely significant effect' is a 'possible significant effect', one whose occurrence cannot be ruled out on the basis of objective information (Tyldesley and Chapman, 2019).

According to the Waddenzee judgement (7th September 2004, Case C127/02) (paragraph 49) when the plan or project 'is likely to undermine the site's conservation objectives, it must be considered likely to have a significant effect on that site. The assessment of that risk must be made in the light inter alia of the characteristics and specific environmental conditions of the site concerned by such a plan or project'.

Recent European case law[3] also ruled that it was not acceptable at screening to take account of measures intended to avoid or reduce effects upon European sites. Therefore, mitigation measures can only be taken account of at Stage 2 AA.

As this is a plan HRA it is also possible to undertake a 'pre-screening' exercise, in accordance with The Habitat Regulations Assessment Handbook[4]. This enables text within the plan that is purely aspirational or administrative to be quickly and reasonably removed from the screening assessment. This allows the HRA to focus on policies and objectives that require assessment of LSE as they will result in development or local environmental changes.

1.2.2. Stage 2 Appropriate Assessment

For European sites where a LSE is predicted, or it cannot be concluded that there is no LSE, an AA is required to determine whether the project or plan will have an adverse effect on the integrity of the European site in view of its conservation objectives.

For all sites and associated qualifying features where it cannot be concluded that there will be no LSE, further information required to inform an AA includes:

- Conservation objectives of the site;
- Current condition status of the qualifying features;
- Site specific and regional population estimates for qualifying features;
- Assessment of potential impacts on qualifying features – this detailed assessment is usually based upon information provided during the Environmental Impact Assessment (EIA) process for projects. In the assessment of a plan this information is not usually available;
- Importance of the Zone of Influence (ZoI) for the relevant qualifying features, particularly mobile species, in the context of site and regional populations.

The strategic nature of the LTP means that the information available to undertake a detailed appropriate assessment is limited as there are no specific project details available. In such cases the level of assessment is commensurate with the level of plan detail provided.

This report comprises the Stage 1 Screening and Stage 2 AA of the GCC LTP.

1.3. Outline of this Report

Following this introduction:

- Section 2 of this report sets out the methodology used for the Stage 1 – Screening and Stage 2 – Appropriate Assessment;
- Section 3 details the European sites;
- Section 4 outlines the background of the GCC LTP 2015-2041;
- Section 5 provides the conclusions of the Stage 1 – Screening assessment; and
- Section 6 provides the Stage 2 Appropriate Assessment.

[3] People Over Wind and Sweetman vs Coillte Teoranta (Case C-323/17), 12th April 2018.
[4] Tyldesley, D. and Chapman, C. (2013) The Habitat Regulations Assessment Handbook, October 2019 edition UK: DTA Publications Limited.

2. Methodology

2.1. Determination of European Sites to be included in the HRA

An initial review of the LTP 2015-2041 in light of the Habitats Regulations has been undertaken as part of the HRA process. This initial review looked at the geographic extent or zone of influence of any impacts which could arise as a result of the LTP and considered which European sites should be included within the assessment.

In accordance with the Design Manual for Roads and Bridges (DMRB) Volume 11, Section 4, Assessment of Implications on European Sites (LA 115 Habitats Regulations assessment, September 2019)[5], all sites where potential direct, indirect and in-combination impacts to Natura 2000[6] (European) and Ramsar sites could reasonably be considered possible were screened for inclusion. As an initial baseline a buffer of 15 km from the LTP geographical boundary was established, which was extended to 30 km for SACs with bats[7] as a qualifying feature. This baseline captures all European sites that could potentially be affected by the LTP.

The following criteria were applied in the screening of schemes within the Connecting Places Strategies:

- within 2 km of a European site or functionally linked land;
- within 30 km of a SAC, where bats are a qualifying feature;
- crosses or lies adjacent to, upstream or downstream of, a watercourse which is designated in part or wholly as a European site; and,
- has potential hydrological or hydrogeological linkage to a European site with a groundwater dependent terrestrial ecosystem.

Table 2-1 to Table 2-4 below provide a summary of the constituent authorities and the European sites which fall within each area, representing the initial baseline. No cSAC, pSPA or pRamsar sites were identified.

[5] http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section4.htm

[6] https://ec.europa.eu/environment/nature/natura2000/index_en.htm

[7] DMRB methodology - the 30 km is set to cover the distances that bats may commute or forage from roost sites (winter or summer) and is thus aimed at capturing all potential likely significant effects

Table 2-1 – European Sites designated for nature conservation within Gloucestershire

District/Borough/City	SAC	SPA	Ramsar
Cheltenham Borough Council			
Cotswold District Council	Cotswold Beechwoods		
Forest of Dean District Council	Wye Valley & Forest of Dean Bat Sites		
	River Wye		
	Severn Estuary	Severn Estuary	Severn Estuary
	Wye Valley Woodlands		
		Walmore Common	Walmore Common
Gloucestershire City Council			
Stroud District Council	Cotswold Beechwoods		
	Rodborough Common		
	Severn Estuary	Severn Estuary	Severn Estuary
Tewksbury Borough Council	Cotswold Beechwoods		
	Dixon Wood		

Table 2-2 – European Sites designated for nature conservation in authorities that border Gloucestershire

Unitary or County	SAC	SPA	Ramsar
Warwickshire County Council			
Oxfordshire County Council			
Wiltshire Council (Unitary)	North Meadow & Clattinger Farm		
Swindon Borough Council (Unitary)			
South Gloucestershire Council (Unitary)	Severn Estuary	Severn Estuary	Severn Estuary
Monmouthshire County Council (Unitary)	River Wye		
	Wye Valley & Forest of Dean Bat Sites		
	Wye Valley Woodlands		
	Severn Estuary	Severn Estuary	Severn Estuary
Herefordshire County Council (Unitary)	River Wye		
	Wye Valley Woodlands		

Worcestershire County Council	Bredon Hill		

Table 2-3 – European Sites designated for nature conservation in authorities that do not border Gloucestershire but that have European sites within 15 km of Gloucestershire's boundary

Unitary or County	SAC	SPA	Ramsar
Bristol City Council (Unitary)	Severn Estuary	Severn Estuary	Severn Estuary
	Avon Gorge Woodlands		
Powys County Council (Unitary)	River Wye		
North Somerset (Unitary)	Severn Estuary	Severn Estuary	Severn Estuary
Somerset County Council	Severn Estuary	Severn Estuary	Severn Estuary
Newport City Council (Unitary)	Severn Estuary	Severn Estuary	Severn Estuary
Cardiff Council (Unitary)	Severn Estuary	Severn Estuary	Severn Estuary
The Vale of Glamorgan Council (Unitary)	Severn Estuary	Severn Estuary	Severn Estuary
Monmouthshire (Unitary) / Newport (Unitary)	River Usk/ Afon Wysg		

Table 2-4 – European Sites designated for nature conservation in authorities that do not border Gloucestershire but that have a European site designated for bats which is within 30 km of Gloucestershire's boundary

Unitary or County	SAC	SPA	Ramsar
North Somerset (Unitary)	North Somerset and Mendip Bats		
Bath and North East Somerset (Unitary)	Bath and Bradford-upon-Avon Bats		

2.2. Obtaining Information on the European Sites with the Potential to be Affected

A total of 17 European sites have been identified for inclusion in the screening assessment. These comprise 11 sites within Gloucestershire, a further four sites located within 15 km of the plan area/ county boundary and an additional two SACs designated for bats within 30 km. There are no cSACs, pSPAs or pRamsar sites present within the 15 km ZoI.

European sites within Gloucestershire:

- Cotswold Beechwoods SAC;
- Dixon Wood SAC;
- River Wye SAC;
- Rodborough Common SAC;
- Severn Estuary Ramsar site;
- Severn Estuary SAC;
- Severn Estuary SPA;
- Walmore Common Ramsar site;
- Walmore Common SPA;
- Wye Valley & Forest of Dean Bat Sites SAC;
- Wye Valley Woodlands SAC.

European sites within 15 km of the plan area/ country boundary:

- Avon Gorge Woodlands SAC;
- Bredon Hill SAC;
- North Meadow & Clattinger Farm SAC;
- River Usk/ Afon Wysg SAC.

European sites (SACs) designated for bats within 30 km of the plan area/ county boundary:

- Bath and Bradford-upon-Avon Bats SAC
- North Somerset and Mendip Bats SAC

Information on the vulnerabilities of European sites identified was obtained from the Natura 2000 Standard Data Form for each the European site (accessed via the Joint Nature Conservation Committee (JNCC) website[8]) and the Conservation Objective Supplementary Advice for each European site (accessed via the Natural England website[9]). The information is presented in Chapter 3.

2.3. Assessing the Impacts of the Plan 'Alone'

Following the gathering of information on the LTP 2015-2041 and the European sites, an assessment was undertaken to determine whether there could be any LSE on the European sites 'alone' as a result of LTP 2015-2041. In order to inform this process, all parts of the LTP 2015-2041 were assessed. A pre-screening exercise was initially undertaken to identify all policies that will not result in future development/ environmental change i.e. aspirational or administrative in nature, and therefore have no ability to impact upon European sites.

Likely significant effects are assessed by reference to the conservation objectives of the qualifying feature (interest feature) of the European site. Any plan or project that causes a cited interest features to fall into unfavourable condition can be considered to have a likely significant effect on the site. Stage 1 of the HRA process assess potential effects on the European sites without mitigation.

Plans or projects can adversely affect a site by:

- Causing delays in progress towards achieving the conservation objectives of the site;
- Interrupting progress towards achieving the conservation objectives of the site;

[8] http://jncc.defra.gov.uk
[9] http://publications.naturalengland.org.uk/category/6490068894089216

- Disrupting those factors that help to maintain the favourable conditions of the site; and
- Interfering with the balance, distribution and density of key species that are the indicators of the favourable condition of the site.

However, as LTP 2015-2041 is at a strategic level (i.e. other than the approximate location, the new infrastructure, extent of improvements to existing transport links and associated development that may arise as a result these interventions is unknown at this stage), the HRA has also been undertaken at a strategic level. It broadly assesses where there is scope for impacts upon European sites due to proximity and the type of impacts that may occur as a result of the proposed scheme e.g. changes in air quality. Due to the high-level strategic nature of the plan, potential significant effects can only be fully assessed at the project or scheme level, with reference to the conservation objectives of the qualifying features of each of the European sites.

2.4. Assessing the Impact of the Plan 'In-Combination'

If the individual project or plan does not have a LSE, but still has a residual effect i.e. no effect/ no appreciable effect cannot be demonstrated, then cumulative impacts with other plans and projects must be considered. However, if a LSE has been identified at Stage 1, the in-combination assessment does not need to be undertaken and the assessment proceeds to Stage 2 AA.

In the case that an in-combination assessment is required, other plans and projects also assessed for impacts on the same European sites need to be identified. Cumulative impacts or 'in-combination effects' occur where two or more plans or projects have similar impacts, (e.g., air and water quality impacts could combine to adversely affect vegetation), on the same interest feature within the same timeframe. Examples of how these in-combination effects may occur is summarised in Table 2-5 below.

Table 2-5 – Examples of Potential In-combination Effects

Example Plans and Projects	Potential In-combination Effects
Local Core Strategies and Allocation Plans	• Direct land take; • Hydrology changes, in particular from flooding; • Water and land quality; • Air quality; • Noise and vibration; • Waste; and • Recreation.
Local Transport Plans	
Nationally Significant Infrastructure Projects and associated development	
Other development: commercial, housing, minerals or waste developments	

Given the nature of the LTP 2015-2041, there is inevitably going to be a delay between the adoption of the LTP and any relevant development. Should an in-combination assessment be required, it is not possible to know when (or indeed if) any subsequent project proposal will come forward and therefore, it is not possible to predict what other plans and projects will be relevant to such a future project assessment. There is a need to consider the potential for in-combination effects at the plan stage, but that assessment is relevant to any subsequent development in its own right and needs to be scoped accordingly.

It will be necessary to determine the need for an in-combination assessment at the lower planning tiers i.e. project stage, as part of individual project HRAs, when the details of any proposals are known.

2.5. Approach to the HRA

HRA is an iterative process. Where necessary, suggestions can be made of how to amend the LTP to avoid likely significant effects on a European site. This iterative approach has been adopted as part of this assessment and recommendations that were submitted to GCC have been included in the LTP 2015-2041.

The precautionary principle (as enshrined in the Habitats Regulations) has been taken into account during this HRA. The precautionary principle is used when an HRA cannot objectively demonstrate that there will be no LSE on the European sites. If this occurs, the subsequent stages of HRA must be completed for the project or plan.

It is also noted that the lack of project-specific detail means that the HRA site selection and screening process is undertaken at a high level. Combined with recent European case law, which ruled that measures to avoid or reduce effects cannot be considered at the screening stage (see 1.2.1).

The LTP 2015-2041 is a very high-level plan which provides no specific details or outline of any development proposals, or details of where development may be located other than general areas, their design and/or when (or if) these sites will be constructed.

2.6. Stage 2: Appropriate Assessment

The purpose of this assessment is to establish whether there are elements of the LTP 2015-2041 which could have an adverse effect on the integrity of the European sites, considering mitigation measures where applicable.

The integrity of a site is defined as "the coherence of the site's ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/ or population of species for which the site is, or will be designated"[10].

European Commission guidance on the provisions of Article 6, emphasises that site integrity involves its ecological functions and that the assessment of adverse effect should focus on and be limited to the site's conservation objectives[11].

For the Appropriate Assessment, English Nature (now Natural England) guidance on 'site integrity' has been used[12] to identify suitable criteria for deciding whether impacts would be likely to be deemed 'adverse effects on integrity'.

As described in Natural England's guidance document The Habitats Regulations Assessment of Local Development Documents (Revised Draft)[13]:

> "*…it should be borne in mind that appropriate assessment for a plan is unlikely to be as detailed an assessment as one undertaken at project level*.
>
> *Occasionally, where a proposal in a plan is advancing rapidly at project development level, concurrently with the plan-making process, such detailed information could be available, but usually such detailed assessments are unlikely to be achievable or feasible. The object is to assess whether it can be ascertained that the elements of the plan, alone or in combination with each other, and/or other plans or projects, would not have an adverse effect on the integrity of a European site.*"

Where necessary, mitigation measures have been put forward to address any adverse effects on integrity of the European sites (see Section 8). Policy level HRA offers an opportunity to highlight where lower tier plans and projects will require HRA in order to avoid conflict with conservation objectives for European sites. The purpose of policy level HRAs is to assess whether particular policies will impact on designated sites. If it cannot be ruled out that there will be no adverse effects on the integrity of the European sites, then policies can be amended or deleted, or progressed to Stage 3. Where appropriate, safeguarding conditions can be used and/ or deliverable mitigation identified to avoid or remove the potential adverse impacts of a policy. This approach will ensure the plan is robust and deliverable. It is supported by the decision in the case of Feeney v Oxford City Council [2011] EWHC 2699, in which the Court ruled that the use of safeguard conditions is not excluded by the precautionary principle; on the contrary such a condition is based upon advance consideration of potential future risks.

Impacts of a plan depend to a large extent on how policies and proposals are implemented on the ground. Due to the uncertainties inherent in policy-making, the exact effect of a policy or proposal may not be certain until detailed implementation. This can make it difficult to conclude with any certainty that adverse effects on integrity will not take place. Due to the requirement within the

[10] Natural England (2019) MPA Conservation Advice Glossary of Terms. Available here: https://designatedsites.naturalengland.org.uk/pdfs/MPA_CAGlossary_March2019.pdf

[11] European Commission (2018) Managing Natura 2000 Sites. The Provision of Article 6 of the 'Habitats' Directive 92/43/EEC.

[12] *English Nature, May 2004. European Sites Guidance - Internal Guidance to Decisions on 'Site Integrity': A Framework for Provision of Advice to Competent Authorities.*

[13] *The Habitats Regulations Assessment of Local Development Documents*, Natural England, 2009.

Habitats Directive to apply the precautionary principle if it is not possible to be certain that adverse effects will not occur, this HRA proposes methods to mitigate for adverse effects that could occur. This is important, in order to demonstrate that any development brought forward as a result of policies in the LTP 2015-2041, can be delivered without adverse effects on integrity. Changes to the detailed design of development schemes, when they arise, may be necessary as well as mitigation.

3. The European Sites

3.1. Introduction

A total of 17 European sites were identified for inclusion in the HRA comprising 12 SACs, three SPAs and two Ramsar sites. The location of these sites in relation to the plan area/ county boundary is shown in Appendix A.

Details about each European site are provided in the tables below, including the location, brief description, conservation objectives, vulnerabilities of the European Site and the current condition if known.

3.2. European sites within Gloucestershire

3.2.1. Cotswold Beechwoods SAC

The table below provides information about the Cotswold Beechwoods SAC, its designation status and location in relation to the project boundary, a brief description, its conservation objectives, and its sensitivities.

Table 3-1 – Cotswold Beechwoods SAC

Location	The 585 ha Cotswold Beechwoods SAC covers parts of Stroud, Cotswold and Tewkesbury.
Brief Description	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*. The woods are structurally varied, including blocks of high forest and some areas of remnant beech coppice. In particular, the site encompasses inland water bodies, dry grassland, broad-leaved deciduous woodland, coniferous woodland, mixed woodland and other land uses, including towns, villages, roads, waste places, mines, industrial sites.

Conservation Objectives	The conservation objectives are as follows:
	• Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:
	  ○ The extent and distribution of qualifying natural habitats;
	  ○ The structure and function (including typical species) of qualifying natural habitats; and
	  ○ The supporting processes on which qualifying natural habitats rely.

Vulnerabilities of the European Site	Threats, pressures and activities with impacts on the site: • Outdoor sports and leisure activities, recreational activities • Interspecific floral relations • Problematic native species • Invasive non-native species Source: Natura 2000 Standard Data Form
Condition assessment	Cotswold Beechwoods SAC (Cotswold Commons and Beechwoods SSSI): Overall condition assessment is unfavourable as the majority of the site is classed as unfavourable (55.83%), however 44.17% is in favourable condition.

3.2.2. Dixton Wood SAC

The table below provides information about the Dixton Wood SAC, its designation status and location in relation to the project boundary, a brief description, its conservation objectives, and its sensitivities.

Table 3-2 - Dixton Wood SAC

Location	Dixton Wood is a 13 ha woodland, comprised of 100% broad-leaved deciduous flora located approximately 6.7 km south east from Tewksbury.
Brief Description	Dixton Wood is a small site with large number of ancient ash *Fraxinus excelsior* pollards, and supports a rich fauna of scarce invertebrate species associated with decaying timber on ancient trees, such as the Violet Click Beetle – a rare deadwood species. This particular species is dependent on veteran trees and hawthorn blossom found beyond the boundary of Dixton Wood. Any impact on these features on the scarp slopes between Teddington and Cleeve Common may also affect the integrity of Dixton Wood. Source: JNCC & consultation response from Natural England – Feb 2007.
Conservation Objectives	The conservation objectives are as follows: • Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring: ○ The extent and distribution of the habitats of qualifying species; ○ The structure and function of the habitats of qualifying species; ○ The supporting processes on which the habitats of qualifying species rely; ○ The populations of qualifying species; and ○ The distribution of qualifying species within the site.
Vulnerabilities of the European Site	Threats, pressures and activities with impacts on the site: • Changes in biotic conditions • Forest and plantation management and use • Interspecific floral relations Source: Natura 2000 Standard Data Form
Condition assessment	Dixon Wood SAC (Dixon Wood SSSI): The violet click beetle *Limoniscus violaceus* is classed as unfavourable recovering.

3.2.3. River Wye SAC

Table 3-3 below provides information about the River Wye SAC, its designation status and location in relation to the project boundary, a brief description, its conservation objectives, and its sensitivities.

Table 3-3 - River Wye SAC

Location	The River Wye SAC is a 22340 ha area encompassing the fifth-longest river in the UK (The River Wye) and forming part of the border between England and Wales. The SAC covers parts of the counties of Monmouthshire, Herefordshire and Powys.
Brief Description	The River Wye SAC includes a variety of marine ecosystems, such as tidal rivers, estuaries, mud flats, sand flats, lagoons, salt marshes, and inland water bodies. The site also encompasses land-based ecosystems, including bogs, marshes, fens, heathland, scrubland, dry grassland and broad-leaved deciduous woodland. There are also areas of other land uses present, including towns, villages, roads, waste places, mines, industrial sites.
Conservation Objectives	The conservation objectives are as follows: • Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring: ○ The extent and distribution of qualifying natural habitats and habitats of qualifying species; ○ The structure and function (including typical species) of qualifying natural habitats;

	○ The structure and function of the habitats of qualifying species; ○ The supporting processes on which qualifying natural habitats and habitats of qualifying species rely; ○ The populations of qualifying species; and ○ The distribution of qualifying species within the site.
Vulnerabilities of the European Site	Threats, pressures and activities with impacts on the site: • Pollution to groundwater (point sources and diffuse sources) • Human induced changes in hydraulic conditions • Other ecosystem modifications • Invasive non-native species • Forest and plantation management and use Source: Natura 2000 Standard Data Form
Condition assessment	River Wye SAC, condition assessment of each feature in both the River Lugg SSSI and River Wye SSSI: • Water courses of plain to montane levels with *R.fluitantis*: unfavourable recovering • Freshwater crayfish *Austropotamobius pallipes*: unfavourable recovering • Sea lamprey *Petromyzon marinus*: unfavourable recovering • Brook lamprey *Lampetra planeri*: unfavourable recovering • River lamprey *Lampetra fluviatilis*: unfavourable recovering • Allis shad *Alosa alosa*: unfavourable recovering • Twaite shad *Alosa fallax*: unfavourable recovering • Atlantic salmon *Salmo salar*: unfavourable recovering • Bullhead *Cottus gobio*: unfavourable recovering • Otter *Lutra lutra*: unfavourable recovering, although in some parts of the River Lugg SSSI the population is favourable

3.2.4. Rodborough Common SAC

The table below provides information about the Rodborough Common SAC, its designation status and location in relation to the project boundary, a brief description, its conservation objectives, and its sensitivities.

Table 3-4 - Rodborough Common SAC

Location	Rodborough Common is the most extensive area of semi-natural dry grasslands surviving in the Cotswolds of central southern England. The 104 ha site is sited south of Stroud and is owned and managed by the National Trust.
Brief Description	Rodborough Common represents an extensive area of *Brachypodium pinnatum* grassland, which is predominantly confined to the Cotswolds. The site contains a wide range of structural types, ranging from short turf to scrub margins, depending on the various soil types in the area. In particular, the site is composed of 10% phrygana, 70% steppes, 10% improved grassland and 10% broad-leaved deciduous woodland.
Conservation Objectives	The conservation objectives are as follows: • Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring: ○ The extent and distribution of qualifying natural habitats; ○ The structure and function (including typical species) of qualifying natural habitats; and ○ The supporting processes on which qualifying natural habitats rely.
Vulnerabilities of the European Site	Threats, pressures and activities with impacts on the site: • Grazing • Air pollution, air-borne pollutants • Outdoor sports and leisure activities, recreational activities Source: Natura 2000 Standard Data Form

Condition assessment	Rodborough Common SAC: Semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco-Brometalia), (note that this includes the priority feature "important orchid rich sites") is classed as favourable.

3.2.5. Severn Estuary SAC, SPA and Ramsar site

The table below provides information about the Severn Estuary SAC, SPA and Ramsar site, its designation status and location in relation to the project boundary, a brief description, its conservation objectives, and its sensitivities[14].

Table 3-5 - Severn Estuary SAC, SPA and Ramsar site

Location	The 24662 ha Severn Estuary SAC includes the estuary of the River Severn, the longest river in Great Britain. The large area covers parts of the following: Stroud, Forest of Dean, South Gloucestershire, Monmouthshire, Bristol City, North Somerset, Newport, Cardiff, Vale of Glamorgan.
Brief Description	The estuary's classic funnel shape, unique in Britain, is a factor causing the Severn to have the second-largest tidal range (approximately 15 m) in the world. This tidal regime results in plant and animal communities typical of the extreme physical conditions of liquid mud and tide swept sand and rock. The species-poor invertebrate community includes high densities of ragworms, lugworms and other invertebrates forming an important food source for passage and wintering waders. A further consequence of the large tidal range is the extensive intertidal zone, one of the largest in the UK, comprising mudflats, sand banks, shingle, and rocky platforms. Glassworts and annual sea-blite colonise the open mud, with beds of all three species of eelgrass occurring on more sheltered mud and sandbanks. Large expanses of common cord-grass also occur on the outer marshes. Grazed saltmarsh fringes the estuary with a range of saltmarsh types present. The middle marsh sward is dominated by common saltmarsh-grass with typical associated species. In the upper marsh, red fescue and saltmarsh rush become more prominent. The estuary is an important habitat for migratory fish. The Severn Estuary has been designated as a SAC due to the overarching “estuaries” feature within which subtidal sandbanks, intertidal mudflats and sandflats, Atlantic salt meadows and reefs (of *Sabellaria alveolata*) and three species of migratory fish are defined as both features in their own right and as sub-features of the estuary feature. In addition, hard substrate habitats including eel grass beds, the estuary-wide assemblage of fish species and the assemblage of waterfowl species (for which the Ramsar Site and SPA are specifically designated) are identified as notable estuarine assemblages which are an intrinsic part of the estuary ecosystem – these are therefore covered by the “estuaries” feature. The Severn Estuary was classified as a SPA on 13 July 1995. The SPA within the European Marine Site boundary includes saltmarshes and the adjacent extensive areas of intertidal mud, sand and rocky shores. All these habitats provide essential food and resting places for the wide range of wintering and migratory waterfowl and are therefore identified as key “supporting habitats” for the conservation of these species. The Severn Estuary was classified as a Ramsar Site on 13 July 1995. The 1995 citation is the basis for advice as this defines the legally protected species covered by the Ramsar designation at this time. The qualifying interest features of the Severn Estuary Ramsar Site overlap with those of the Severn Estuary SPA and SAC.

Conservation Objectives	The overall conservation objectives of the SAC are as follows:
	• Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:
	  ○ The extent and distribution of qualifying natural habitats and habitats of qualifying species;
	  ○ The structure and function (including typical species) of qualifying natural habitats;

[14] Conservation Objectives and Sensitivities have been taken from *Information on Natura 2000 Sites in the West Midlands* prepared for Natural England by Treweek Environmental Consultants (Version 2, dated 14/07/09)

	○ The structure and function of the habitats of qualifying species; ○ The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely; ○ The populations of qualifying species; and ○ The distribution of qualifying species within the site. The overall conservation objectives of the SPA are as follows: • Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: ○ The extent and distribution of the habitats of the qualifying features; ○ The structure and function of the habitats of the qualifying features; ○ The supporting processes on which the habitats of the qualifying features rely; ○ The population of each of the qualifying features; and The distribution of the qualifying features within the site.
Vulnerabilities of the European Site	Threats, pressures and activities with impacts on the SAC and SPA: • Other urbanisation, industrial and similar activities • Changes in abiotic conditions • Human induced changes in hydraulic conditions • Outdoor sports and leisure activities, recreational activities • Modification of cultivation practices Source: Natura 2000 Standard Data Form.
Condition assessment	Severn Estuary SAC: • Bridgewater Bay SSSI: the majority of the area is classed as favourable (88.42%), 11.28% is classed as unfavourable recovering and 0.29% is classed as unfavourable no change • Severn Estuary SSSI: 95.80% of the site is assessed as favourable, the remaining area is classed mainly as unfavourable declining (2.43%) with a small amount of area classed as unfavourable recovering and unfavourable no change • Upper Severn Estuary SSSI: 85.85% of the area is classed as favourable, whilst 10.84% is classed as unfavourable declining and 3.31% is classed as unfavourable no change Severn Estuary SPA and Ramsar site, condition assessment for each SSSI unit: • Severn Estuary SSSI: 95.80% of the site is assessed as favourable, the remaining area is classed mainly as unfavourable declining (2.43%) with a small amount of area classed as unfavourable recovering and unfavourable no change • Upper Severn Estuary SSSI: 85.85% of the area is classed as favourable, whilst 10.84% is classed as unfavourable declining and 3.31% is classed as unfavourable no change • Aust Cliff SSSI: Favourable • Blue Anchor to Lilstock Coast SSSI: Favourable • Bridgewater Bay SSSI: the majority of the area is classed as favourable (88.42%), 11.28% is classed as unfavourable recovering and 0.29% is classed as unfavourable no change • Clevedon Shore SSSI: Favourable • Lydney Cliff SSSI: Favourable • Middle Hope SSSI: the majority of the area is assessed as favourable (80.40%), the remaining 19.60% is classed as unfavourable recovering • Portishead Pier and Black Nore SSSI: Favourable • Purton Passage SSSI: Favourable • Spring Cove Cliffs SSSI: Favourable • Steep Holm SSSI: Favourable

3.2.6. Walmore Common SPA and Ramsar site

The table below provides information about the Walmore Common SPA and Ramsar site, its designation status and location in relation to the project boundary, a brief description, its conservation objectives, and its sensitivities.

Table 3-6 - Walmore Common SPA and Ramsar site

Location	The 52 ha Walmore Common SPA and Ramsar site is located on the flood-plain of the River Severn, found within the Forest of Dean area.
Brief Description	Walmore Common occupies a low-lying area in the Severn Vale, which is subject to winter flooding. The site is a wetland overlying peat providing a variety of habitats including improved neutral grassland, unimproved marshy grassland and open water ditches. The common is part of a series of sites within the Severn Vale which, in winter, form an important refuge and feeding area for wildfowl.
Conservation Objectives	The conservation objectives of the SPA are as follows: • Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: ○ The extent and distribution of the habitats of the qualifying features; ○ The structure and function of the habitats of the qualifying features; ○ The supporting processes on which the habitats of the qualifying features rely; ○ The population of each of the qualifying features; and ○ The distribution of the qualifying features within the site.
Vulnerabilities of the European Site	Threats, pressures and activities with impacts on the site: • Human induced changes in hydraulic conditions • Changes in biotic conditions • Outdoor sports and leisure activities, recreational activities • Modification of cultivation practices Source: Natura 2000 Standard Data Form.
Condition assessment	• Walmore Common Ramsar site: Unfavourable, no change. • Walmore Common SPA: Unfavourable, no change.

3.2.7. Wye Valley and Forest of Dean Bat Sites SAC

Table 3-7 below provides information about the Wye Valley and Forest of Dean Bat Sites SAC, its designation status and location in relation to the project boundary, a brief description, its conservation objectives, and its sensitivities.

Table 3-7 - Wye Valley and Forest of Dean Bat Sites SAC

Location	The Wye Valley and Forest of Dean Bat Sites SAC is a 142 ha site located on the border of England and Wales. The area covers parts of the counties of Gloucestershire, Herefordshire and Monmouthshire.
Brief Description	The site comprises of 26.2% broad-leaved deciduous woodland, while the remaining 73.8% is represented by other land uses, including towns, villages, roads, waste places, mines and industrial sites). This complex of sites on the border between England and Wales contains by far the greatest concentration of lesser horseshoe bat *Rhinolophus hipposideros* in the UK, as well as large numbers of greater horseshoe bats *Rhinolophus ferrumequinum*. The entire site supports an exceptional breeding population for both species as the majority of sites within the complex are maternity roosts. The site also includes several disused mines which are used as hibernation roosts for the bats.
Conservation Objectives	The conservation objectives are as follows: • Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring: ○ The extent and distribution of the habitats of qualifying species;

	○ The structure and function of the habitats of qualifying species; ○ The supporting processes on which the habitats of qualifying species rely; ○ The populations of qualifying species; and ○ The distribution of qualifying species within the site.
Vulnerabilities of the European Site	Threats, pressures and activities with impacts on the site: • Other ecosystem modifications • Outdoor sports and leisure activities, recreational activities • Human induced changes in hydraulic conditions Source: Natura 2000 Standard Data Form
Condition assessment	Wye Valley & Forest of Dean Bat Sites SAC, condition assessment for each feature: • Lesser horseshoe bat: Favourable condition in Caerwood and Ashberry Goose House SSSI and Sylvan House Barn SSSI, not recorded for other SSSI units • Greater horseshoe bat: Not recorded

3.2.8. Wye Valley Woodlands SAC

Table 3-8 below provides information about the Wye Valley Woodlands SAC, its designation status and location in relation to the project boundary, a brief description, its conservation objectives, and its sensitivities.

Table 3-8 - Wye Valley Woodlands SAC

Location	The 916 ha Wye Valley Woodlands SAC is located on the border of England and Wales, covering areas of Monmouthshire, Herefordshire and the Forest of Dean.
Brief Description	The Wye Valley lies on the southern Carboniferous limestone and contains abundant and near-continuous semi-natural woodland along the river gorge. The SAC contains a variety of structural woodlands, including old coppice, pollards and high forest types, which is rare within the UK. Lady Park Wood, one of the component sites, is an outstanding example of near-natural old-growth structure in mixed broad-leaved woodland and has been the subject of detailed long-term monitoring studies. The majority of the woodlands contain broad-leaved deciduous woodland (87%), dry grassland (10%) and other land uses, including towns, villages, roads, waste places, mines, industrial sites. The woods of the lower Wye Valley on the border of south Wales and England form one of the most important areas for woodland conservation in the UK and provide the most extensive examples of TilioAcerion forest in the west of its range. A wide range of ecological variation is associated with slope, aspect and landform.
Conservation Objectives	The conservation objectives are as follows: • Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring: ○ The extent and distribution of qualifying natural habitats and habitats of qualifying species; ○ The structure and function (including typical species) of qualifying natural habitats; ○ The structure and function of the habitats of qualifying species; ○ The supporting processes on which qualifying natural habitats and habitats of qualifying species rely; ○ The populations of qualifying species; and ○ The distribution of qualifying species within the site.
Vulnerabilities of the European Site	Threats, pressures and activities with impacts on the site: • Other ecosystem modifications • Invasive non-native species • Changes in biotic conditions • Problematic native species • Forest and plantation management and use

	Source: Natura 2000 Standard Data Form
Condition assessment	Wye Valley Woodlands SAC, condition assessment for each feature: • Asperulo-Fagetum beech forests: unfavourable recovering • Tilio-Acerion forests of slopes, screes and ravines: unfavourable recovering • Taxus baccata woods of the British Isles: unfavourable recovering • Lesser horseshoe bat: unfavourable recovering

3.3. European sites within 15 km of Gloucestershire

3.3.1. Avon Gorge Woodlands SAC

Table 3-9 below provides information about the Avon Gorge Woodlands SAC, its designation status and location in relation to the project boundary, a brief description, its conservation objectives, and its sensitivities.

Table 3-9 - Avon Gorge Woodlands SAC

Location	The 152 ha Avon Gorge Woodlands SAC is a long gorge on the River Avon in Bristol. The gorge forms the boundary between the unitary authorities of North Somerset and Bristol.
Brief Description	Avon Gorge is representative of *Tilio-Acerion* forests in south-west England on the limestone cliffs and screes of a large river gorge. It is important because of the high concentration of small-leaved lime *Tilia cordata*, compared with other sites in the region, the presence of rare whitebeams Sorbus spp., including two unique to the Avon Gorge (*S. bristoliensis and S. wilmottiana*), and other uncommon plants, such as green hellebore *Helleborus viridis*. Other characteristic species include soft shield-fern *Polystichum setiferum* and hart's-tongue *Phyllitis scolopendrium*. Species-rich transitions to scrub and grasslands are associated with the woodland. The site encompasses a variety of ecosystems, including heathland, scrubland, dry grassland, broad-leaved deciduous woodland, coniferous woodland, and mixed woodland.

Conservation Objectives	The conservation objectives are as follows:
	• Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:
	  ○ The extent and distribution of qualifying natural habitats;
	  ○ The structure and function (including typical species) of qualifying natural habitats; and
	  ○ The supporting processes on which qualifying natural habitats rely.

Vulnerabilities of the European Site	Threats, pressures and activities with impacts on the site: • Invasive non-native species • Changes in biotic conditions • Interspecific floral relations • Grazing • Outdoor sports and leisure activities, recreational activities Source: Natura 2000 Standard Data Form
Condition assessment	Avon Gorge Woodlands SAC, condition assessment for each feature: • Semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco-Brometalia), (note that this includes the priority feature "important orchid rich sites"): unfavourable recovering • Tilio-Acerion forests of slopes, screes and ravines: unfavourable recovering

3.3.2. Bredon Hill SAC

Table 3-10 below provides information about the Bredon Hill SAC, its designation status and location in relation to the project boundary, a brief description, its conservation objectives, and its sensitivities.

Table 3-10 - Bredon Hill SAC

Location	Bredon Hill is a 360 ha area of pasture woodland and ancient parkland situated approximately 4.5km to the South East of Evesham.
Brief Description	The site encompasses a variety of ecosystems, including heathland, scrubland, dry grassland, steppes, and non-forest areas cultivated with woody plants, including orchards, groves, and vineyards. The scarp slope that begins at Cleeve Common and extends north into Worcestershire contains many veteran trees in woods and hedgerows and is an important resource for deadwood invertebrates including the Violet click beetle. Impacts on the hedgerow and veteran tree resource in this area may affect the integrity of the site. Bredon Hill is a very important site for fauna associated with decaying timber on ancient trees, including many Red Data Book and Nationally Scarce invertebrate species. Source: JNCC & consultation response from Natural England – Feb 2007.
Conservation Objectives	The conservation objectives are as follows: • Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring: ○ The extent and distribution of the habitats of qualifying species; ○ The structure and function of the habitats of qualifying species; ○ The supporting processes on which the habitats of qualifying species rely ○ The populations of qualifying species; and ○ The distribution of qualifying species within the site.
Vulnerabilities of the European Site	Threats, pressures and activities with impacts on the site: • Changes in abiotic conditions • Interspecific floral relations • Air pollution, air-borne pollutants • Forest and plantation management and use • Unknown threat or pressure Source: Natura 2000 Standard Data Form
Condition Assessment	Bredon Hill SAC: The violet click beetle *Limoniscus violaceus* is classed as favourable.

3.3.3. North Meadow & Clattinger Farm SAC

Table 3-11 below provides information about the North Meadow & Clattinger Farm SAC, its designation status and location in relation to the project boundary, a brief description, its conservation objectives, and its sensitivities.

Table 3-11 - North Meadow & Clattinger Farm SAC

Location	The 104 ha North Meadow & Clattinger Farm SAC is located in Wiltshire and managed by the Wiltshire Wildlife Trust.
Brief Description	North Meadow and Clattinger Farm in the Thames Valley in southern England is one of two sites representing lowland hay meadows near the centre of its UK range. As in the case of the Oxford Meadows, this site represents an exceptional survival of the traditional pattern of management and so exhibits a high degree of conservation of structure and function. This site also contains a very high proportion (>90%) of the surviving UK population of fritillary *Fritillaria meleagris*, a species highly characteristic of damp lowland meadows in Europe and now rare throughout its range. The site contains a variety of ecosystems, such as inland water bodies, dry grassland, humid grassland, mesophile grassland and improved grassland.
Conservation Objectives	The conservation objectives are as follows: • Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring: ○ The extent and distribution of qualifying natural habitats;

	○ The structure and function (including typical species) of qualifying natural habitats; and ○ The supporting processes on which qualifying natural habitats rely.
Vulnerabilities of the European Site	Threats, pressures and activities with impacts on the site: • Pollution to groundwater (point sources and diffuse sources) • Human induced hydraulic change • Outdoor sports and leisure activities, recreational activities • Grazing • Other ecosystem modifications Source: Natura 2000 Standard Data Form
Condition assessment	North Meadow & Clattinger Farm SPA: • Clattinger Farm SSSI: Not recorded • North Meadow, Cricklade SSSI: Favourable

3.3.4. River Usk/ Avon Wysg SAC

Table 3-12 below provides information about the River Usk/ Avon Wysg SAC, its designation status and location in relation to the project boundary, a brief description, its conservation objectives, and its sensitivities.

Table 3-12 - River Usk/ Afon Wysg SAC

Location	The River Usk/Afon Wysg SAC is a 967.97 ha site located in Wales. The river runs through Powys, Carmarthenshire, Monmouthshire, Torfaen and Newport.
Brief Description	The site comprises of 37.9% inland water bodies whilst the remaining 62.1% is represented by other habitats including heathland, grassland, broadleaved woodland, salt marshes and estuaries. The River Usk is one of only four sites in the UK with a population of breeding twaite shad *Alosa fallax* and an important salmon *Salmo salar* spawning habitat. It also supports healthy populations of bullhead *Cottus gobio,* sea lamprey *Petromyzon marinus,* brook lamprey *Lampetra planeri* and river lamprey *Lampetra fluviatilis.* In addition, the river is also important otter *Lutra lutra* habitat with increasing signs of otters in recent years. The previously mentioned species are primary reasons for selection of this site as a SAC, but the presence to water courses with *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation are an important qualifying feature.
Conservation Objectives	The conservation objectives are as follows: • Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving Favourable Conservation Status of its Qualifying Features: ○ The capacity of the habitats and ecological status of the water environment to support each feature at near natural population levels should be maintained or restored ○ Flow regime, water quality and physical habitat should be maintained in a near-natural state to support ecosystem structure and function across the whole area of the SAC ○ Breeding, spawning and nursery sites of species should be maintained as suitable habitat, and not damaged or destroyed by engineering or gravel extraction activities ○ Avoid physical modifications that could have an adverse effect on the SAC ○ Modification of artificial factors that impact the capacity of each species to occupy its natural range should be modified, although natural factors will not be changed ○ Levels of water quality, suspended solids and nutrients will be agreed between EA and CCW and maintained
Vulnerabilities of the European Site	Threats, pressures and activities with impacts on the site: • Invasive non-native species • Forestry activities not referred to above (B01-B06)

	• Other ecosystem modifications • Forest and plantation management and use • Soil pollution and solid waste (excluding discharges) • Pollution to surface waters (limnic & terrestrial, marine & brackish) • Grazing • Human induced hydraulic change Source: Natura 2000 Standard Data Form
Condition assessment	River Usk/ Afon Wysg SAC, condition assessment of each feature: • Sea lamprey Petromyzon marinus: Unfavourable • Brook lamprey *Lampetra planeri* and River lamprey *Lampetra fluviatilis*: Favourable • Twaite shad *Alosa fallax* and Allis shad *Alosa alosa*: Unfavourable • Atlantic salmon *Salmo salar*: Unfavourable • Bullhead *Cottus gobio*: Unfavourable • European otter *Lutra lutra*: Favourable • Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation: Unfavourable

3.4. European sites (bat SACs only) within 30 km of Gloucestershire

3.4.1. Bath and Bradford-upon-Avon Bats SAC

Table 3-13 below provides information about the Bath and Bradford-upon-Avon Bats SAC, its designation status and location in relation to the project boundary, a brief description, its conservation objectives, and its sensitivities.

Table 3-13 - Bath and Bradford-upon-Avon Bats SAC

Location	The Bath and Bradford-upon-Avon Bats SAC is a 106.45 ha site located in South-West England, in the Gloucestershire, Wiltshire and Bristol/Bath area.
Brief Description	The site consists of 41% broadleaved deciduous woodland, 55% other land use including towns. Roads, mines and industrial sites. The remaining 4% is other habitat types including heath and scrub. The site is selected as a SAC due to the inclusion of hibernation sites for 15% of the UK greater horseshoe bat *Rhinolophus ferrumequinum* population and a small number of Bechstein's bat *Myotis bechsteinii* hibernating in abandoned mines in the area. Lesser horseshow bat *Rhinolophus hipposideros* use the complex of sites as important hibernating habitat.
Conservation Objectives	• 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 the habitats of qualifying species ○ The structure and function of the habitats of qualifying species ○ The supporting processes on which the habitats of qualifying species rely ○ The populations of qualifying species, and, ○ The distribution of qualifying species within the site
Vulnerabilities of the European Site	Threats, pressures and activities with impacts on the site: • Outdoor sports and leisure activities, recreational activities • Other ecosystem modifications • Other urbanisation, industrial and similar activities • Modification of cultivation practices • Unknown threat or pressure Source: Natura 2000 Standard Data Form
Condition assessment	Bath and Bradford-upon-Avon Bats SAC, condition assessment for each feature:

	• Lesser horseshoe bat: Favourable overall, although in Browns Folly SSSI the population is unfavourable recovering • Greater horseshoe bat: Favourable overall, although in Browns Folly SSSI the population is unfavourable recovering and there is no record for Winsley Mines SSSI • Bechstein's bat: Favourable overall, although in Browns Folly SSSI and Combe Down and Bathampton Down Mines SSSI the population is unfavourable recovering

3.4.2. North Somerset and Mendip Bats SAC

Table 3-14 below provides information about the North Somerset and Mendip Bats SAC, its designation status and location in relation to the project boundary, a brief description, its conservation objectives, and its sensitivities.

Table 3-14 - North Somerset and Mendip Bats SAC

Location	The North Somerset and Mendip Bats SAC is a 555.93 ha site located in South-West England in the Somerset County.
Brief Description	The site consists predominately of broad-leaved deciduous woodland (30%) and dry grassland (27.5%). The remaining 42.5% of the site is made up of mixed woodland, heath, scrub and other land uses. The primary reasons for the selection of the site as a SAC is the present of semi-natural dry grasslands and scrubland facies on calcareous substrates. The site is important for a large number of rare plants associated with Carboniferous limestone. The Tilio-Acerion forests at Kings and Urchins Wood is another priority feature. The limestone caves of the Mendips provide a range of important hibernation sites for lesser horseshoe bat *Rhinolophus hipposideros* and greater horseshoe bat *Rhinolophus ferrumequinum*. This site hosts 3% of the UK greater horseshoe bat population and its good conservation of structure and function, having both maternity and hibernation sites. This site contains an exceptionally good range of the sites used by the population, comprising two maternity sites in lowland north Somerset and a variety of cave and mine hibernation sites in the Mendip Hills
Conservation Objectives	• 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 and habitats of qualifying species ○ The structure and function (including typical species) of qualifying natural habitats ○ The structure and function of the habitats of qualifying species ○ The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely ○ The populations of qualifying species, and, ○ The distribution of qualifying species within the site
Vulnerabilities of the European Site	Threats, pressures and activities with impacts on the site: • Other urbanisation, industrial and similar activities • Forest and plantation management and use • Interspecific floral relations • Grazing • Unknown threat or pressure Source: Natura 2000 Standard Data Form
Condition assessment	North Somerset and Mendip Bats SAC, condition assessment of each feature: • Semi-natural dry grassland and scrubland facies: on calcareous substrates: unfavourable recovering • Caves not open to the public: Favourable • Tilio-Acerion forests of slopes screens and ravines: Favourable overall • Lesser horseshoe bat: Favourable • Greater horseshoe bat: Favourable

4. The LTP 2015-2041

The Revised Gloucestershire Draft LTP comprised of ten sections, which are listed below with the relevant LTP policies. The 'Shaping the Way to 2041' document set out the role and objectives of the plan and the Overarching Strategy highlights the strategic context and outlines the key policies that apply across the LTP as a whole. Policy documents 1-6 outline the specific policies within the LTP for each of the transportation themes.

Crucially it is stated within the LTP 2015-2041 that: 'the policies set out in this document will be delivered through the implementation of the associated proposals and, subject to funding, the schemes identified in the Connecting Places Strategies. These scheme priorities are also set out in a separate Delivery Chapter addressing funding, monitoring, governance and review'.

Bearing this in mind, the Connecting Places Strategies document outline the schemes required within each specific strategy area to deliver the policies within the LTP 2015-2041 and the subsequent Delivery Chapter, outlines how these could be delivered.

The ten sections of the Draft LTP 2015-2041 with the relevant policies were as follows:

Overarching Strategy

Policy LTP PD 0.1 Reducing Transport Carbon Emissions and Adapting to a Changing Climate

Policy LTP PD 0.2 Local Environmental Protection

Policy LTP PD 0.3 Maximising Investment in a Sustainable Transport Network

Policy LTP PD 0.4 Integration with land use planning and new development

Policy LTP PD 0.5 Community Health and Wellbeing

Policy LTP PD 0.6 Think Travel – Influencing Travel Behaviour

Policy Document 1 – Public & Community Transport

Policy LTP PD 1.1 – Gloucestershire's Bus Network

Policy LTP PD 1.2 – Improving the Quality of the Road Based Public Transport

Policy LTP PD 1.3 – Bus Priority

Policy LTP PD 1.4 – Coach Travel

Policy LTP PD 1.5 – Community transport

Policy LTP PD 1.6 – Transport Interchange Hubs

Policy LTP PD 1.7 – Communicating Travel Information

Policy Document 2 – Cycle

Policy LTP PD 2.1 – Gloucestershire's Cycle Network

Policy LTP PD 2.2 – Cycle Asset Management

Policy LTP PD 2.3 – Active travel: Safety, Awareness and Confidence

Policy Document 3 - Freight

Policy LTP PD 3.1 – Gloucestershire's Freight Network

Policy LTP PD 3.2 – Journey Routing Information for Freight

Policy LTP PD 3.3 – Driver Facilities

Policy LTP PD 3.4 – Driving Better Practice

Policy LTP PD 3.5 – Managing deliveries in urban or other sensitive locations

Policy LTP PD 3.6 – Rail and Water Freight

Policy Document 4 - Highways

Policy LTP PD 4.1 – Gloucestershire's Highway Network

Policy LTP PD 4.2 – Highways Network Resilience

Policy LTP PD 4.3 – Highway Maintenance

Policy LTP PD 4.4 – Road Safety

Policy LTP PD 4.5 – On-street Car Parking

Policy Document 5 - Rail

Policy LTP PD 5.1 – Rail Infrastructure Improvements

Policy LTP PD 5.2 – Rail Service Capacity Improvements

Policy LTP PD 5.3 – Railway Stations Improvements

Policy Document 6 - Walking

Policy LTP PD 6.1 – Gloucestershire's Pedestrian Network

Policy LTP PD 6.2 – Rights of Way

Policy LTP PD 6.3 – Pedestrian Asset Management

Policy LTP PD 6.4 – Pedestrian Safety

Connecting Places Strategy

CPS 1: Central Severn Vale

CPS 2: Forest of Dean

CPS 3: North Cotswold

CPS 4: South Cotswold

CPS 5: Stroud

CPS 6: Tewkesbury

Delivery Chapter

It is to be noted that the structure of LTP 2015-2041 has changed post consultation. Through public consultation on the LTP during January to March 2020, it was recognised by a number of consultees and other stakeholders that the LTP was very lengthy and difficult to navigate clearly, with a corresponding difficulty in clearly understanding how the LTP vision and objectives translated into LTP policy, expected outcomes and investment priorities. In light of these observations, it was decided by GCC to re-structure the LTP, shorten it by removing text that was duplicated in a number of sections and to provide clarity on a number of areas.

The LTP Policy document proposes the following new structure, (with some chapter title changes), the supporting policy summary evidence base will be moved into a separate document:

0. ~~Foreword~~ Introduction
1. ~~Shaping the Way to 2041~~ Our Vision to 2041
2. ~~Overarching Strategy~~ Overarching Policy Document
3. Public & Community Transport Policy Document
4. Cycle Policy Document
5. Freight Policy Document
6. Highways Policy Document
7. Rail Policy Document
8. Walking Policy Document
9. Connecting Places Strategy to 2031
10. Transport Scenarios for 2041 (new chapter, taken from former "shaping the way to 2041")
11. Delivery

A detailed explanation of changes is set out in Appendix B.

GCC are also publishing an LTP Summary document to provide an overview of the LTP for those who may not have a full interest in all technical aspects of the Plan. It is intended that this summary will be published on the GCC website www.gloucestershire.gov.uk/ltp-review following adoption of the LTP in early 2021.

It is to be noted that while amendments have been made to the policy documents listed above, it has been considered within the ISA process (and documented within the Post Adoption Statement) that the amendments clarified and strengthened the policies in sustainability terms.

4.1. Additional Schemes within the LTP

No schemes have been removed from the LTP as a result of consultation and the consideration of these remains as outlined within the ISA Report and previous iterations of this HRA. However, an

additional eight scheme priorities are now to be included in the LTP. These schemes, along with an explanation of how these are in line with scheme prioritisation is provided below:

Table 4-1 - Additional schemes now included in LTP 2015-2041

CPS	Scheme	Explanation to support scheme prioritisation
N Cots	Andoversford - Bourton on Water Active travel greenway	Potential to utilise disused railway or quiet lane network to Improve accessibility to wider sustainable travel and connects rural areas to countywide strategic cycleway network.
N Cots	Bourton on Water - Kingham Active travel greenway	Potential to utilise disused railway or quiet lane network to Improve accessibility to wider sustainable travel and connects rural areas to countywide strategic cycleway network.
SD	Walking and Cycle access improvements, A4135 Box Road - A38 corridor	Improves accessibility to strategic cycle corridor, encourages sustainable transport in a local plan growth area.
FoD	Newent to Dymock Active Travel route	Potential to utilise disused railway/canal alignment & quiet lane network. Extension of existing scheme that terminated at Newent. Will provide enhanced accessibility to the countywide strategic cycleway network.
TKS	Tewkesbury to Upton upon Severn Active Travel Route	Improves cross boundary links and connects GCC Strategic cycle corridor with WCC's equivalent. Potential to use disused railway alignment or quiet lane network.
S Cots	Andoversford - Cirencester Active Travel Route	Potential to utilise disused railway or quiet lane network to Improve accessibility to wider sustainable travel and connects rural areas to countywide strategic cycleway network.
S Cots	Cycle access improvements: Cirencester – Fairford corridor	Scheme to fill missing gap in current cycle corridor improvements. This corridor is part of the countywide strategic cycleway network.
CSV	Cycle access improvements A46 corridor Cheltenham - Brockworth	A46 is a key corridor between Gloucester and Cheltenham and improving cycle access will help achieve mode shift ambitions.

In addition, it is to be noted that there will a minor name change to a scheme listed in the draft LTP for consultation – 'Cheltenham Transport Plan' will change to 'Connecting Cheltenham'.

While precise scheme alignments are not known at this stage, it is the case that none of the above areas within which schemes will be located fall within an area designated as a European site.

5. Stage 1 Screening Assessment

5.1. Screening Results

All elements of the LTP2015-2041 were screened for policies and actions that may result in LSE on European sites. The results of the screening are summarised in Table 5-1 below with the more detailed screening of the policies and strategies in tables in C1 and C2 in Appendix C.

Table 5-1 – LTP Screening Summary

Element/ Policy	LSE?	Justification
The Vision to 2041	No	Introductory text outlining the scope and ambitions of the LTP. No specific policies outlined.
Overarching Policy Document		
Policy LTP PD 0.1 Reducing Carbon Emissions	No	Policies with an LSE contain proposals that may lead to development. Policies with no LSE are unlikely to result in development. See Policy Screening table in C1, Appendix C
Policy LTP PD 0.2 Local Environmental Protection	No	
Policy LTP PD 0.3 Maximising Investment in a Sustainable Transport Network	No	
Policy LTP PD 0.4 Integration with land use planning and new development	Yes	
Policy LTP PD 0.5 Community Health and Wellbeing	Yes	
Policy LTP PD 0.6 Thinktravel – Influencing Travel Behaviour	No	
Policy Document 1 – Public & Community Transport		
Policy LTP PD 1.1 – Gloucestershire's Bus Network	No	Policies with an LSE contain proposals that may lead to development. Policies with no LSE are unlikely to result in development. See Policy Screening table in C1, Appendix C
Policy LTP PD 1.2 – Improving the Quality of the Road Based Public Transport	No	
Policy LTP PD 1.3 – Bus Priority	No	
Policy LTP PD 1.4 – Coach Travel	No	
Policy LTP PD 1.5 – Community transport	No	
Policy LTP PD 1.6 – Transport Interchange Hubs	Yes	
Policy LTP PD 1.7 – Communicating Travel Information	No	
Policy Document 2 – Cycle		
Policy LTP PD 2.1 – Gloucestershire's Cycle Network	No	None of the policies contain proposals that may lead to development. See Policy Screening table in C1, Appendix C
Policy LTP PD 2.2 – Cycle Asset Management	No	
Policy LTP PD 2.3 – Active travel: Safety, Awareness and Confidence	No	

Element/ Policy	LSE?	Justification
Policy Document 3 - Freight		
Policy LTP PD 3.1 – Gloucestershire's Freight Network	Yes	Policies with an LSE contain proposals that may lead to development. Policies with no LSE are unlikely to result in development. See Policy Screening table in C1, Appendix C
Policy LTP PD 3.2 – Journey Routing Information for Freight	No	
Policy LTP PD 3.3 – Driver Facilities	Yes	
Policy LTP PD 3.4 – Driving Better Practice	No	
Policy LTP PD 3.5 – Managing deliveries in urban or other sensitive locations	No	
Policy LTP PD 3.6 – Rail and Water Freight	Yes	
Policy Document 4 - Highways		
Policy LTP PD 4.1 – Gloucestershire's Highway Network	No	Policies with an LSE contain proposals that may lead to development. Policies with no LSE are unlikely to result in development. See Policy Screening table in C1, Appendix C
Policy LTP PD 4.2 – Highways Network Resilience	Yes	
Policy LTP PD 4.3 – Highway Maintenance	No	
Policy LTP PD 4.4 – Road Safety	No	
Policy LTP PD 4.5 – On-street Car Parking	No	
Policy Document 5 - Rail		
Policy LTP PD 5.1 – Rail Infrastructure Improvements	Yes	All policies contain proposals that may lead to development. See Policy Screening in C1, Appendix C
Policy LTP PD 5.2 – Rail Service Capacity Improvements	Yes	
Policy LTP PD 5.3 – Railway Stations Improvements	Yes	
Policy Document 6 - Walking		
Policy LTP PD 6.1 – Gloucestershire's Pedestrian Network	No	None of the policies contain proposals that may lead to development. See Policy Screening table in C1, Appendix C
Policy LTP PD 6.2 – Rights of Way	No	
Policy LTP PD 6.3 – Pedestrian Asset Management	No	
Policy LTP PD 6.4 – Pedestrian Safety	No	
Connecting Places Strategies (CPS)		
CPS 1: Central Severn Vale	Yes	All of the CPS lead to development, which cannot be ruled out from having an LSE on European sites within or adjacent to the plan area. See Strategy Screening table in C2, Appendix C
CPS 2: Forest of Dean	Yes	
CPS 3: North Cotswold	Yes	
CPS 4: South Cotswold	Yes	
CPS 5: Stroud	Yes	
CPS 6: Tewkesbury	Yes	

Element/ Policy	LSE?	Justification
Transport Scenarios for 2041	No	Introductory text outlining the scope and ambitions of the LTP. No specific policies outlined.
Delivery Chapter	No	Largely administrative outlining how identified schemes from the Connecting Places Strategies will be funded and monitored.

It can be seen in Table 5-1 above that Shaping the Way to 2041 and the Delivery Chapter have been assessed as having no LSE on European site. This is because these sections do not contain any policies and outline the vision and objectives of the LTP and how it might be delivered.

5.1.1. Policy Screening

Ten of the 34 LTP policies are considered likely to lead to development and therefore have potential to have an LSE on any European sites. Two policy documents have been assessed as having no LSE of European sites. These are Policy Document 2 – Cycle and Policy Document 6 – Walking. All of the policies within these two documents were screened as having no LSE as the proposals are unlikely to lead to development.

It is acknowledged within the LTP that all the policies are implemented through the six Connecting Places Strategies, therefore, assessment of the Connecting Places Strategies will cover the arising development proposed by the policies. Any text changes to the LTP as a result of the assessment will be applicable to the policies and subsequently the Connecting Places Strategies.

5.1.2. Strategy Screening

The strategy screening has not considered the individual schemes arising from the six Connecting Places Strategies at this stage, but makes a judgement based on the type of scheme proposed. Using this approach none of the Connecting Places Strategies can be screened out as they all have potential for LSE on European sites. As the schemes are effectively development proposals and the schemes are not being assessed individually, once the 'precautionary principle' of the Habitat Regulations is applied, all of the schemes can be said to have a LSE on one or more European sites identified as relevant to the plan.

5.2. Screening Conclusion

It has been demonstrated that of the ten elements of the LTP, four can be screened out as they were assessed as having no LSE on European site within or adjacent to the plan area, and no minor residual impacts were identified. These are:

- LTP Vision to 2041;
- Policy Document 2 – Cycle;
- Policy Document 6 – Walking;
- Delivery Chapter.

In the remaining sections, a LSE was concluded for the following ten policies and six strategies within the six Connecting Places Strategies:

Overarching Policy Document

- Policy LTP PD 0.4 Integration with land use planning and new development;
- Policy LTP PD 0.5 Community Health and Wellbeing.

Policy Document 1 – Public & Community Transport

- Policy LTP PD 1.6 – Transport Interchange Hubs.

Policy Document 3 – Freight

- Policy LTP PD 3.1 – Gloucestershire's Freight Network;
- Policy LTP PD 3.3 – Driver Facilities;
- Policy LTP PD 3.6 – Rail and Water Freight.

Policy Document 4 – Highways

- Policy LTP PD 4.2 – Highways Network Resilience.

Policy Document 5 – Rail

- Policy LTP PD 5.1 – Rail Infrastructure Improvements;
- Policy LTP PD 5.2 – Rail Service Capacity Improvements;
- Policy LTP PD 5.3 – Railway Stations Improvements.

Connecting Places Strategy

- CPS 1: Central Severn Vale;
- CPS 2: Forest of Dean;
- CPS 3: North Cotswold;
- CPS 4: South Cotswold;
- CPS 5: Stroud;
- CPS 6: Tewkesbury.

A precautionary approach has been taken here due to potential for impacts on European sites as a result of proposed schemes that may result in future development or changes to local environmental conditions.

5.2.1. Amendments to the LTP

To ensure the general protection of the European sites potentially affected by the LTP, the LTP 2015-2041 has been amended by GCC to specifically include text relating to the requirement to carry out HRA at the appropriate stage of scheme development, according to the following recommendations:

Gloucestershire contains both statutory and non-statutory designated sites that are protected for their importance for nature conservation. Prime among these sites are Special Areas of Conservation and Special Protection Areas, which form the Natura 2000 (European) network of core internationally important habitats and/ or rare, declining and threatened species. In addition to the Natura 2000 (European) sites, there are also internationally important wetlands designated as Ramsar Sites.

That Policy PD0.2 is amended to aim to 'deliver biodiversity net gains' and include the following text:

Commit to following the Habitats Regulations Assessment process for the protection of the Natura 2000 (European) sites and Ramsar sites.

The above text thereby commits to compliance with the relevant legislation and good practice as set out in the HRA Handbook at the development/ intervention/ scheme stage. Where a development/ intervention/ scheme could have a conceivable effect on a European (international) site then the HRA process will be initiated following as necessary the stages set out in Section 1.2 above.

To this aim it is recommended that Policy PD0.2 is amended to include the following text towards the end of the above wording, which will sit in the body of the LTP 2015-2041 document:

> *…This would include the Natura 2000 (European) sites and Ramsar sites for which Habitats Regulations Assessment will be carried out, as necessary, prior to final decisions being made on transport interventions. Opportunities for enhancement of these sites through transport interventions will be explored wherever it is feasible and appropriate to do so.*

Other nature conservation sites not covered by the HRA process will also be protected by policies within the LTP as described below:

There are also a large number of nationally important Sites of Special Scientific Interest, National Nature Reserves, Ancient Woodlands, Local Wildlife Sites, Local Geological Sites, some Local Nature Reserves and many green spaces that support wildlife and enhance the wellbeing of the local population. Any potential direct or indirect impacts on these sites that may arise from new or upgraded transport interventions will be appropriately assessed, mitigated, and/ or compensated for, in line with existing best practice and relevant legislation over the lifetime of the LTP.

5.3. LSE on European sites

Following the identification of which elements of the plan can be screened out, this section looks in more detail at the potential effect pathways and seeks to characterise the impacts on the European sites.

Potential effects are considered to be as follows:

- **Habitat loss and fragmentation** – includes direct loss of habitats under the footprint of temporary or permanent works. Indirect effects through the loss of habitat connectivity and supporting habitats e.g. those that support prey species for predatory birds or marine mammals are also considered under this category;
- **Species disturbance (visual, noise, vibration)** – this refers to disturbance by construction works or operation of schemes on species that may cause behavioural effects, e.g. avoidance, change in foraging behaviour. Construction plant and machinery, blasting, light pollution and movements of vehicles and workers are all considered;
- **Changes to water quality** – effects on aquatic species and habitats from discharges, contamination, increased nutrient loads or changes in sedimentation levels;
- **Changes to air quality** – evaluates the risk of discharges to air, including fugitive dust, combustion emissions and nitrogen deposition;
- **Changes to surface and groundwater hydrology** – changes to the flow, supply, availability and drainage of water, increased risks associated with flooding;
- **Introduction of invasive non-native species (INNS)** – the risk of introducing or spreading INNS throughout construction works;
- **Recreation impacts** – increased recreational pressure on European sites from increased accessibility and visitor numbers, resulting in disturbance and habitat erosion if not managed.

5.4. In-combination Assessment

As the LTP 2015-2041 was found to have an LSE alone, in-combination effects have not been considered as part of this assessment but will be taken forward for consideration at Stage 2, Appropriate Assessment. Those sections of the LTP 2015-2041 where no LSE was found were considered to have no minor residual effects and, therefore, do not require an in-combination assessment.

There is potential for the LTP 2015-2041 to contribute to in-combination effects on European sites in the plan area through combined delivery of multiple schemes within the plan, and with other plans and projects. Primarily the LTP 2015-2041 seeks to improve transportation, which may have the following combined effects:

- Reduction in air quality from increasing volumes of traffic;
- Generation of other sources of pollution e.g. water-borne;
- Habitat loss and disturbance from arising development in-combination with other projects; and,
- Disturbance of qualifying habitats and species from multiple sources, including recreation.

The potential for in-combination effects such as these having an LSE on European sites will need to be considered at Stage 2 Appropriate Assessment, unless it can be shown that the plan will have no adverse effects (or any minor residual effects) on European site integrity once mitigation has been considered.

6. Stage 2 Appropriate Assessment

6.1. Introduction

Following completion of the HRA Stage 1 Screening assessment, it was concluded that the following LTP 2015-2041 policies and schemes may result in likely significant effects on European sites. Consequently, these policies and schemes require a Stage 2 Appropriate Assessment.

Overarching Policy Document

- Policy LTP PD 0.4 Integration with land use planning and new development;
- Policy LTP PD 0.5 Community Health and Wellbeing.

Policy Document 1 – Public & Community Transport

- Policy LTP PD 1.6 – Transport Interchange Hubs.

Policy Document 3 – Freight

- Policy LTP PD 3.1 – Gloucestershire's Freight Network;
- Policy LTP PD 3.3 – Driver Facilities;
- Policy LTP PD 3.6 – Rail and Water Freight.

Policy Document 4 – Highways

- Policy LTP PD 4.2 – Highways Network Resilience.

Policy Document 5 – Rail

- Policy LTP PD 5.1 – Rail Infrastructure Improvements;
- Policy LTP PD 5.2 – Rail Service Capacity Improvements;
- Policy LTP PD 5.3 – Railway Stations Improvements.

Connecting Places Strategy

- CPS 1: Central Severn Vale;
- CPS 2: Forest of Dean;
- CPS 3: North Cotswold;
- CPS 4: South Cotswold;
- CPS 5: Stroud;
- CPS 6: Tewkesbury.

6.2. Stage 2 Appropriate Assessment of the Plan Alone

As there is not sufficient detail within the LTP 2015-2041 to enable the specific impacts on individual features of the European sites to be determined, those features on which there may be a LSE cannot be singled out and taken forward to AA. Therefore, the risk of having an impact was broadly assessed by considering all qualifying features, which will indicate whether there could be a subsequent risk to the integrity of the European site.

An assessment table has been produced for each international site potentially affected by the LTP 2015-2041. Within the assessment tables the impacts of schemes potentially arising from the plan, following mitigation, are considered together. Impacts during construction and operation are also considered, but as most schemes will be operational for the foreseeable future, decommissioning is not included. The assessment tables are provided in Appendix D, Tables D1 to D17.

6.2.1. Habitat Loss

Although broad locations of potential schemes have been provided within the Connecting Places Strategies, there is no detail currently available regarding the actual works to be undertaken as part of each scheme and the final scheme extent. However, none of the schemes fall within any of the European sites identified. Therefore, provided all schemes seek to avoid the loss of habitats during construction and operation, it is considered that habitat loss and/ or fragmentation will be unlikely as a result of the LTP 2015-2041. It is therefore concluded that an adverse effect on the integrity of the European sites identified will result from the Gloucestershire LTP 2015-2041 alone through habitat loss is unlikely.

6.2.2. Species Disturbance

Given the high level of the LTP2015-2041 and the lack of scheme details, it is not possible at this stage to confirm that species disturbance may occur. However, schemes arising out of the LTP 2015-2041 could in theory result in species disturbance via noise, vibration and visual disturbance of the qualifying species of European sites.

In order to limit the potential for impacts the following mitigation would be implemented for any schemes or actions arising out of the LTP 2015-2041:

- Obtain appropriate licencing for legally protected species to ensure no impact on favourable conservation status;
- Restrict timing of most disturbing activities to avoid or limit seasonal disturbance (e.g. whilst breeding);
- Limit noise from plant and machinery;
- Creation of noise attenuation bunds;
- Creation of buffer zones and set-back distances, particular around sensitive features (e.g. roosts);
- Visual screening of works;
- Restrict works either geographically or temporally (e.g. avoid winter or no night-time working);
- Educate workers on importance of adjacent European sites;
- Create alternative areas for outdoor recreation to discourage some workers from visiting European sites, particularly those with species prone to disturbance.

It is therefore concluded that no adverse effect on the integrity of the European sites identified will result from the Gloucestershire LTP 2015-2041 alone through species disturbance.

6.2.3. Changes to water quality

Changes in water quality could result from direct discharges from sewage or surface water run-off outfalls, altering water chemistry, nutrient levels, pH or oxygen levels. Any de-watering works could also result in sediment discharge into aquatic habitats. Other potential pollutant sources include accidental spillages of fuels or oil, heavy metals leaching from soil run-off, pollutants such as dust and construction waste in surface water run-off and increases in nutrient loading. Any surface water discharges that are made into local watercourses and waterbodies or directly or indirectly into European sites could be damaging. The release of these pollutants and increases in suspended sediment into freshwater (and estuarine) environments could lead to smothering of habitats and species, or changes in species diversity as a result of increased toxicity or nutrients, so affecting the achievement of the conservation objectives and site integrity.

In order to reduce these potential effects, drainage systems should be designed to either avoid discharge into watercourses or the sea, or to attenuate and reduce the risk of pollutants and suspended solids. Modelling of any discharges or releases will be required once any project-level details are known in order to quantify any impacts. As such, the following mitigation measures will be implemented:

- Drainage systems should be designed to avoid direct discharge into watercourses or the sea;
- Attenuation and/ or settlement ponds installed to reduce the risk of pollutants and suspended sediment reaching the receptors;
- Sustainable Drainage Systems (SuDS) installed;
- Implementation of a flocculant system before discharge;
- Silt curtains used whilst dredging;
- Implementation of pollution prevention guidelines;
- Effective soil management plans to avoid run-off from any earthworks;
- Foul water discharge to existing treatment plants and not to surface water;
- Appropriate bunding around fuel storage;
- Design of cooling water system to reduce the temperature of the water before it is released.

It is therefore concluded that no adverse effect on the integrity of the European sites identified will result from the Gloucestershire LTP 2015-2041 alone through changes in water quality.

6.2.4. Changes to surface and groundwater hydrology

Excavations and earthworks during construction and new roads and other impermeable surfaces during operation have the potential to change surface water hydrodynamics. Diversion or blocking of surface water features, the presence of earthworks or roads all have the potential to alter existing surface water drainage characteristics in the catchment. Pluvial flood events may become more frequent as the built-up area increases, and fluvial flooding may increase if surface water run-off is diverted into watercourses. A reduction or increase in surface water flows could affect water quality.

In order to limit the potential for impacts the following mitigation would be implemented for any schemes or actions arising out of the LTP 2015-2041:

- Re-routing of watercourses, positioning of earthworks to reduce risk of effects;
- Modelling or monitoring of flow rates and water levels in local watercourses where these may be affected by development;
- Complete a Flood Consequences Assessment (FCA) to assess potential surface water and groundwater effects during phases of development and operation;
- Mitigation to control any surface floodwater.

It is therefore concluded that no adverse effect on the integrity of the European sites identified will result from the Gloucestershire LTP 2015-2041 alone through changes in surface and groundwater hydrology.

6.2.5. Changes to air quality

During construction, emissions to air would be mainly from plant and machinery, road traffic and dust from works or emissions from concrete batching plants. During operation, traffic on new roads or increased volumes of traffic on existing roads may alter local air quality resulting in additional impacts on sensitive habitats within 200 m of the affected road network.

The potential effects of increases in deposition of nitrogen compounds (NOx) include long-term changes in habitat and species distribution and diversity as nutrient loading encourages more vigorous species, such as grasses, to out-compete forbs and slow growing non-vascular plants. Acidification of soils and freshwater (primarily today through nitrogen deposition) causes similar effects, depending on the geology and soil chemistry influence susceptibility of an ecosystem to acid deposition.

An assessment of any adverse impacts from changes in air quality should be undertaken on a site-by-site basis, through determination of the applicability of the critical levels and critical loads at each site, and further ecological assessment and modelling. Critical loads for vegetation types are presented on the Air Pollution Information System (APIS) website[15].

Good practice measures to control dust from construction sites should be sufficient to limit the amount of emissions reaching the European sites. With respect to emissions of NOx or acidic compounds through construction activities, generic mitigation measures such as turning engines off when idle, operating equipment on ultra-low sulphur diesel, ensuring engines are routinely maintained, providing public transport for workers etc. may limit emissions to within acceptable thresholds.

In order to limit the potential for impacts the following mitigation would be implemented for any schemes or actions arising out of the LTP 2015-2041:

- Enclosure of silos, cement powder delivery systems and installation of dust mitigation systems;
- Avoid dust releasing activities;
- Site design to reduce dust emissions (e.g. covering stockpiles, reducing vehicle speed);
- Dust control measures implemented (water bowsers);
- Regular maintenance of plant and machinery;
- Drivers to switch off vehicles when stationary;
- Avoid use of diesel generators;
- Implement air quality monitoring scheme;
- Turning engines off when idle;
- Operating equipment on ultra-low sulphur diesel;

[15] http://www.apis.ac.uk/

- Ensuring engines are routinely maintained;
- Providing public transport for workers.

Operational impacts cannot be mitigated in this way and would need to be avoided through modelling and management of the affected road network, particularly roads that lie within 200 m of a European site.

It is therefore concluded that no adverse effect on the integrity of the European sites identified will result from the Gloucestershire LTP 2015-2041 alone through changes in air quality.

6.2.6. Introduction of INNS

The risk of terrestrial or marine INNS introduction to European sites remains if appropriate mitigation measures are not implemented. Any works have the potential to spread INNS that are already established on the site and elsewhere in the UK. During operation the introduction and spread of INNS is considered less likely due to reduced movement of substrate and vehicles.

In practice, to manage these risks, any future project proponent will be required to apply Biosecurity Risk Assessments and Method Statements to cover all activities. These are likely to include regular survey and monitoring requirements for INNS. The implementation of effective Biosecurity Risk Assessments and procedures should enable to rule out any risk to site integrity.

In order to limit the potential for impacts the following mitigation would be implemented for any schemes or actions arising out of the LTP 2015-2041:

- Implement Biosecurity Risk Assessments and Method Statements to cover all activities;
- Undertake measures that would control and eradicate INNS within the area of works;
- Implement regular survey and monitoring requirements for INNS.

Mitigation through iterative design and the implementation of standard mitigation and good practice guidance should ensure no risk to achievement of conservation objectives and consequently no adverse effect on site integrity.

It is therefore concluded that no adverse effect on the integrity of the European sites identified will result from the Gloucestershire LTP 2015-2041 alone through the introduction of INNS.

6.2.7. Recreational pressures

Improving access to European sites, particularly in combination with local increases in population driven by housing and employment development, can increase the amount of recreation at a site. This may result in increased disturbance/ erosion of habitats, disturbance of species within the site from increased numbers of people and dogs, littering, vandalism and other anti-social behaviour. It can also drive the need for more visitor facilities and car parking facilities, visitor manage visitor access, an educational programme, site warden, increased recreational pressure on European sites from increased accessibility and visitor numbers, resulting in disturbance and habitat erosion if not managed.

In order to limit the potential for impacts the following mitigation would be implemented for any schemes or actions arising out of the LTP 2015-2041:

- Visitor management schemes, including provision of dedicated footpaths, fencing and screening of sensitive areas;
- Education of visitors through signage and online information;
- Provision of Suitable Alternative Natural Greenspace (SANGS) for new residential developments to ease the pressure on European sites where this is an issue.

It is therefore concluded that no adverse effect on the integrity of the European sites identified will result from the Gloucestershire LTP 2015-2041 alone through recreational pressures.

6.3. Stage 2 Appropriate Assessment - In-combination Effects

It has been concluded in Section 6.2 that the Gloucestershire LTP 2015-2041 will have no adverse effects on the integrity of European site once mitigation has been considered. As there is confidence that potential adverse effects arising from the LTP 2015-2041 as a result of scheme can be avoided or reduced with mitigation to ‘no appreciable effect’, there is no need to undertake an in-combination assessment.

The need for an in-combination assessment will still need to be considered at a lower level of plan making, once more details are available and particularly at the project-stage when more specific information about the scheme will be available.

6.4. Stage 2 Appropriate Assessment - Conclusion

In the absence of detailed project-specific information, a high-level assessment of the potential for actions within the LTP 2015-2041 to have an adverse effect on the integrity of European sites was undertaken. Seventeen European sites were assessed against the predicted impacts arising from development as a result of ten LTP 2015-2041 policies and six Connecting Places strategies.

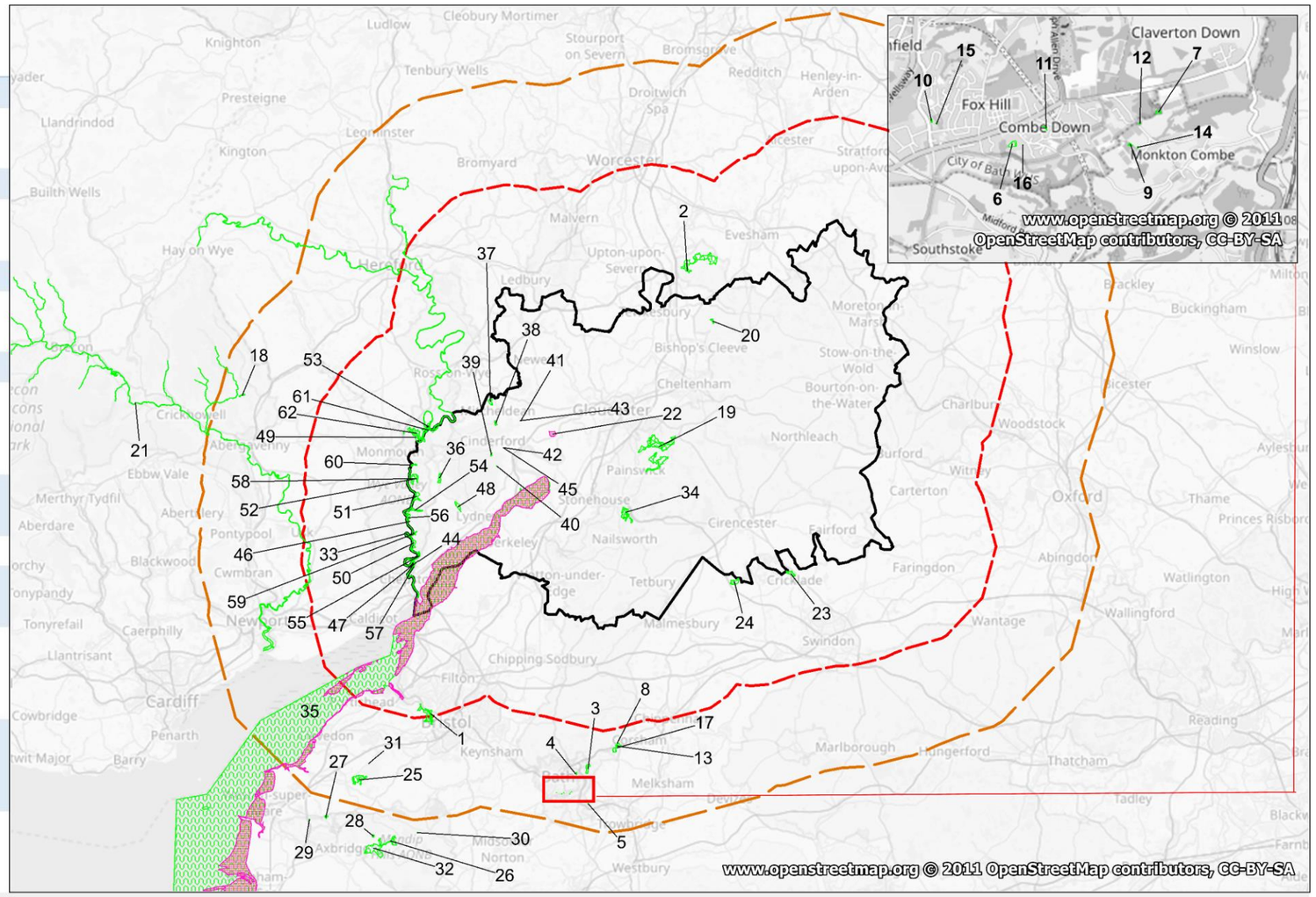
Detailed information is not yet available about the nature and extent of any works or actions as part of schemes that are likely to arise out of the LTP 2015-2041. However, it is considered reasonable to anticipate from the information available that the developments could be delivered in a manner which avoids any adverse effects on the integrity of the European sites through the use of standard mitigation techniques which are set out here. Furthermore, it is predicted that adverse impacts can be avoided or 'designed out' and to facilitate this process early consultation with Natural England is strongly recommended, i.e. the screening and scoping stage of projects (schemes). Note that, it is a policy of GCC that where individual transport schemes come forward, a more detailed HRA, with a consideration of ecological impact pathways included, highlighting specific mitigation where required, at project level stage is undertaken.

Taking into account the proposed mitigation measures, the robust wording in the LTP 2015-2041 (as set out in 5.2.1 above) which commits to the protection of the European sites, it can therefore be concluded that the LTP 2015-2041 will not have an adverse effect on the integrity of the European sites alone and in combination.

Appendices

Appendix A. European Sites Relevant to the Plan Area

1	Avon George Woodlands (SAC)
2	Bredon Hill (SAC)
3-17	Bath & Bradford on Avon Bats (SAC)
18	Coed y Cerrig (SAC)
19	Cotswold Beechwoods (SAC)
20	Dixton Wood (SAC)
21	River Usk/ Afon Wysg (SAC)
22	Walmore Common
23 - 24	North Meadow & Clattinger Farm (SAC)
25 - 32	North Somerset & Mendip Bats (SAC)
33	River Wye (SAC)
34	Rodborough Common (SAC)
35	Severn Estuary (SAC, SPA + Ramsar)
36-48	Wye Valley & Forest of Dean Bat Sites (SAC)
49-62	Wye Valley Woodlands (SAC)



Gloucestershire County Council - European (Internationally designated) Sites

- Gloucestershire County Council Boundary
- 15km Buffer
- 30km Buffer
- Special Areas of Conservation
- Special Protection Areas
- Ramsar Sites

No potential SACs, candidate SPA's or proposed Ramsar sites have been identified from available mapping within the study area.

0 25 kilometres

N

Appendix B. LTP New Structure

New Structure	Change	Old Structure
Contents		***Contents***
Introduction	**Added introduction, from other parts of Document including Foreword text**	
Our Vision to 2041	**Rename - Chapter**	***Shaping the Way to 2041***
Introduction (previously Future Challenges)	**Future Challenges becomes the new introduction to Chapter 1**	*Introduction*
		Future Challenges
Horizon Scanning		*Horizon Scanning*
	Incorporate Summary into LTP Vision/Objectives	*Summary*
	Move to Chapter 10 (new)	*Potential Growth Scenarios beyond 2031*
		Potential long-term ambition
LTP Vision/Objectives	**Inserted from Overarching Strategy**	
Overarching Policy Document	**Rename - Chapter**	***Overarching Strategy***
Introduction	**Create 1 para Introduction**	
	Move to Chapter 1	*Introduction incl. LTP Vision/Objectives, Link&Place*
	Annexed	*Table A/Fig.C -' Link&Place'*
	Move to LTP Evidence Base	*Summary of Evidence Base*
Environment (policies PD0.1/PD0.2)	**Shorten each policy summary supporting text & reference back to LTP Summary Evidence Base document.**	*Environment (policies PD0.1/PD0.2)*
Gloucestershire is Growing (policies PD0.3/PD0.4)		*Gloucestershire is Growing (policies PD0.3/PD0.4)*
Community Health and Wellbeing (policy PD0.5)		*Community Health and Wellbeing (policy PD0.5)*
Influencing Travel Behaviour Change (policy PD0.6)		*Influencing Travel Behaviour Change (policy PD0.6)*
Public & Community Transport (PD1)		***Public & Community Transport (PD1)***
Introduction	**Table A - goes to LTP Summary Evidence Base document as new format**	*Introduction (keep Table A - LTP Objectives against LTP Expected Outcomes)*
	Move to LTP Evidence Base	*Summary of Evidence Base*
Gloucestershire's Bus Network (policy PD1.1)	**Shorten each policy summary supporting text & reference back to LTP Summary Evidence Base document.**	*Gloucestershire's Bus Network (policy PD1.1)*
Improving the quality of road based public transport (PD1.2)		*Improving the quality of road based public transport (PD1.2)*
Bus Priority (policy PD1.3)		*Bus Priority (policy PD1.3)*
Coach Travel (policy PD1.4)		*Coach Travel (policy PD1.4)*
Community Transport (policy PD1.5)		*Community Transport (policy PD1.5)*
Transport Interchange Hubs (policy PD1.6)		*Transport Interchange Hubs (policy PD1.6)*
Communicating Travel Infrmation (policy PD1.7)		*Communicating Travel Information (policy PD1.7)*
Cycle (PD2)		***Cycle (PD2)***
Introduction	**Table A - goes to LTP Summary Evidence Base document as new format**	*Introduction (keep Table A - LTP Objectives against LTP Expected Outcomes)*
	Move to LTP Evidence Base	*Summary of Evidence Base*
Gloucestershire's Cycle Network (policy PD2.1)	**Shorten each policy summary supporting text & reference back to LTP Summary Evidence Base document.**	*Gloucestershire's Cycle Network (policy PD2.1)*
Cycle Asset Management (policy PD2.2)		*Cycle Asset Management (policy PD2.2)*
Active Travel: Safety, Awareness and Confidence (policy PD2.3)		*Active Travel: Safety, Awareness and Confidence (policy PD2.3)*
Freight (PD3)		***Freight (PD3)***
Introduction	**Table A - goes to LTP Summary Evidence Base document as new format**	*Introduction (keep Table A - LTP Objectives against LTP Expected Outcomes)*
	Move to LTP Evidence Base	*Summary of Evidence Base*
Gloucestershire's Freight Network (policy PD3.1)	**Shorten each policy summary supporting text & reference back to LTP Summary Evidence Base document.**	*Gloucestershire's Freight Network (policy PD3.1)*
Freight Journey Route Planning Information (policy PD3.2)		*Freight Journey Route Planning Information (policy PD3.2)*
Driver Facilities (policy PD3.3)		*Driver Facilities (policy PD3.3)*

Driving Better Practice (policy PD3.4)		*Driving Better Practice (policy PD3.4)*
Managing Deliveries in Sensitive Areas (policy PD3.5)		*Managing Deliveries in Sensitive Areas (policy PD3.5)*
Rail and Water Freight (policy PD3.6)		*Rail and Water Freight (policy PD3.6)*
Highways (PD4)		***Highways (PD4)***
Introduction	**Table A - goes to LTP Summary Evidence Base document as new format**	*Introduction (keep Table A - LTP Objectives against LTP Expected Outcomes)*
	Move to LTP Evidence Base	*Summary of Evidence Base*
Gloucestershire's Highway Network (policy PD4.1)	**Shorten each policy summary supporting text & reference back to LTP Summary Evidence Base document.**	*Gloucestershire's Highway Network (policy PD4.1)*
Highways Network Resilience (policy PD4.2)		*Highways Network Resilience (policy PD4.2)*
Highways Maintenance (policy PD4.3)		*Highways Maintenance (policy PD4.3)*
Road Safety (policy PD4.4)		*Road Safety (policy PD4.4)*
On-Street car parking (policy PD4.5)		*On-Street car parking (policy PD4.5)*
Rail (PD5)		***Rail (PD5)***
Introduction	**Table A - goes to LTP Summary Evidence Base document as new format**	*Introduction (keep Table A - LTP Objectives against LTP Expected Outcomes)*
	Move to LTP Evidence Base	*Summary of Evidence Base*
Rail Infrastructure Improvements (policy PD5.1)	**Shorten each policy summary supporting text & reference back to LTP Summary Evidence Base document.**	*Rail Infrastructure Improvements (policy PD5.1)*
Rail Service Capacity Improvements (policy PD5.2)		*Rail Service Capacity Improvements (policy PD5.2)*
Rail Station Improvements (policy PD5.3)		*Rail Station Improvements (policy PD5.3)*
Walk (PD6)		***Walk (PD6)***
Introduction	**Table A - goes to LTP Summary Evidence Base document as new format**	*Introduction (keep Table A - LTP Objectives against LTP Expected Outcomes)*
	Move to LTP Evidence Base	*Summary of Evidence Base*
Gloucestershire's Pedestrian Network (policy PD6.1)	**Shorten each policy summary supporting text & reference back to LTP Summary Evidence Base document.**	*Gloucestershire's Pedestrian Network (policy PD6.1)*
Rights of Way (policy PD6.2)		*Rights of Way (policy PD6.2)*
Pedestrian Asset Management (policy PD6.3)		*Pedestrian Asset Management (policy PD6.3)*
Pedestrian Safety (policy PD6.4)		*Pedestrian Safety (policy PD6.4)*
Connecting Places Strategy to 2031		***Connecting Places Strategy***
Introduction		*Introduction*
	Move to Deliver Chptr 11	*Scheme Priorities*
CPS1 Central Severn Vale		*CPS1 Central Severn Vale*
CPS2 Forest of Dean		*CPS2 Forest of Dean*
CPS3 North Cotswold		*CPS3 North Cotswold*
CPS4 South Cotswold		*CPS4 South Cotswold*
CPS5 Stroud		*CPS5 Stroud*
CPS6 Tewkesbury		*CPS6 Tewkesbury*
Transport Scenarios for 2041	**New chapter**	
Potential Growth Scenarios beyond 2031	**Moved to CPS from Chapter 1**	
Potential long-term ambition		
Delivery		***Delivery***
Introduction		*Introduction*
Scheme Priorities	**Merge with Scheme Priorities form CPS**	*Scheme Priorities*
LTP Scheme Appraisal		*LTP Scheme Appraisal*
Funding		*Funding*
Monitoring, Outcomes and Targets		*Monitoring, Outcomes and Targets*
Governance & Review		*Governance & Review*
Supporting documents: LTP Evidence Base, Integrated Sustainability Appraisal Report, HRA, Post Adoption Station(including Health Impact Assessment (HIA), Equality Impact Assessment (EqIA), Community Impact Assessment (CIA))		

Appendix C. Screening Assessment Tables

C.1. Policy Screening

Policy	Policy proposals	LSE?	Justification
Overarching Policy Document			
Policy LTP PD 0.1 Reducing Carbon Emissions and Adapting to Climate Change	GCC will work with its partners to reduce transport carbon emissions by 2045 and improve air quality in the county by addressing travel demand promoting the use of sustainable modes of transport and the uptake of low emission vehicles to tackle climate change GCC will do this by implementing the following policy proposals: • Work in partnership with district councils, the GFirst Local Enterprise Partnership, Western Gateway Sub Transport Board, Highways England, Homes England and Department for Transport and any other necessary government bodies, to seek investment in sustainable transport and active travel infrastructure as funding opportunities arise. • Support digital connectivity and agile working to reduce travel demand. • Ensuring that Gloucestershire provides the infrastructure required for low emission vehicles in the future, for example a network of electric vehicle charging points or alternative technologies. • Working towards electric vehicle charging points being provided at interchange hubs and other key locations. • Promoting cleaner public sector vehicle fleet. • Work with public transport providers to accelerate the change to clean vehicles. • Encouraging behaviour change to promote sustainable transport modes and develop lower-emission driving, aligning closely with our policy of influencing travel behaviour change through the Thinktravel programme. • Minimise energy usage of traffic signals and street lighting. • Resolve to implement and strengthen the Gloucestershire Sustainable Energy Strategy and the Climate Change Strategy, by embedding the principles of the transition towards a circular economy. • Resolve to deliver on the recommendations following the county council's declaration of a climate change emergency. • Develop and maintain a comprehensive bus network supported by interchange hubs across rural and urban areas, to improve connectivity within and across the county boundary. • Make a positive contribution towards a step change in sustainable land use planning to enable a priority towards sustainable travel choices and reduce travel demand, while supporting digital connectivity to improve agile working. • Developers are required to design and implement their development to deliver sustainable transport, with appropriate connectivity to the existing transport network with good access to public transport, and a high permeability to walk, cycle and be mobility friendly.	No	The overall aim of the policy is to reduce carbon emissions and improve air quality. Two proposals may result in development. One that 'seeks to provide infrastructure for low emission vehicles', and one that will 'develop and maintain a comprehensive bus network'. However, the realisation of these is likely to result in small scale localised development within the existing transport network, which is considered unlikely to have an LSE on any European sites.
Policy LTP PD 0.2 Local Environmental Protection	GCC will work with District Councils and other partners over the lifetime of the LTP; to minimise the impact of transport on landscapes, townscapes, heritage assets and the wider historic environment, to protect and enhance; the water environment, air quality, soils and agricultural resources, to reduce the risk of flooding and levels of levels of noise pollution, to achieve biodiversity net gain and conserve geodiversity and the historic environment, from traffic or improvements on the highway network. GCC will do this by implementing the following policy proposals: • Promote the use of sustainable and active travel modes and align closely with our policy of influencing travel behaviour change through the Thinktravel programme. • Work with district councils to improve air quality, levels of noise and light pollution, including reducing severance and visual intrusion by adopting the latest good design practice (including, e.g., Building with Nature) and to develop, adopt and deliver Air Quality Action Plans required where Air Quality Management Areas have been declared, in relation to transport emissions. This should include plans for decreasing solo car use and the promotion of walking and cycling active modes of travel. • Ensure that developers or scheme promoters, through the planning process, undertake assessments to determine if their development or scheme will be subject to or create poor air quality or noise in excess of the thresholds as advised by Government and to commit to mitigating those effects that address traffic impacts on the natural environment and designated sites, in particular those within 200m of a main road. • Comply with Highways Biodiversity Guidance for Gloucestershire or subsequence guidance and the Green Infrastructure Pledge. • Seek contributions from industry, government and developers towards the costs of installing electric vehicle and bike charging points where such facilities will help to ensure that the opportunities for sustainable transport modes are taken up. • Promote energy saving, water conservation, improvements in surface water run-off and provision of SuDS, in both new schemes and retrofitting of existing schemes (where opportunities arise), recycling and use of sustainable materials in construction and operation of transport projects, encouraging whenever possible local suppliers that use sustainably-sourced and locally produced materials. • Promote the use of increasingly more sustainable waste management practices with transport-related infrastructure projects in line with the waste hierarchy.	No	Proposals within this policy will not lead to development and seek to protect the environment.

Policy	Policy proposals	LSE?	Justification
	• Align with the emerging Air Quality and Health Strategy for Gloucestershire. • Tackle air quality issues in the county; by promoting agile working and reducing the need to travel, and by enabling active travel ultra-low emission vehicles and the supporting infrastructure. • Where developers produce Health Impact Assessments as part of their application, these consider the impact of travel and transport – both positive and negative – on health and wellbeing of residents and communities. • Support environmentally sustainable transport access to the natural environment for both local residents and visitors. • Protect and avoid harm to geodiversity and biodiversity associated with transport infrastructure in addition to taking opportunities to enhance the natural environment wherever practicable. • Work with parish councils and communities to identify and seek solutions that minimise the impact of proposed developments. • Transport development proposals will need to demonstrate that there will be no unacceptable adverse impact upon public rights of way and recreational highways, unless suitable permanent diversions or alternative routes are provided. Temporary diversions or alternatives may be required during construction. • Working with Partners and other statutory bodies, such Historic England, the council will aim to minimise the impact of transport on heritage assets and protect and enhance the quality environment including buildings, structures, landscapes, townscapes and archaeological remains and their settings and ensure that due regard is given to the need to undertake archaeological investigations. • Promote transport schemes which tackle traffic congestion in Gloucestershire's historic villages, towns and city. • Improve physical access and/or interpretation, understanding and appreciation of the significance of heritage assets as part of transport development where appropriate. • Transport interventions that have unacceptable adverse impact on water availability or quality or fail to achieve the targets of the Water Framework Directive will not be considered. • Measures will be taken to prevent soil from being adversely affected by either physically or by pollution during transport intervention development. • Working with its partners and other statutory bodies, such as the Environment Agency and Natural England, Gloucestershire will work with natural processes to promote greater flood resilience to the network, ensuring Sustainable Drainage Systems (SuDS) and Natural Flood Management (NFM) are employed wherever possible. • Realise opportunities for green infrastructure enhancement associated with transport infrastructure resilience and performance through both the integration of green, blue and grey infrastructure, and the delivery of green naturally-based solutions to aid mitigation requirements. The latter includes carbon, nutrient and water capture to provide cleaner air, improved water quality, more sustainable flood risk management and increased resilience to climate change, as well as other place-making and visitor economy objectives. • Maximise the opportunities for transport interventions to contribute towards major new initiatives, including Nature Recovery Networks and large-scale woodland creation and other similar measures that would help to achieve biodiversity net gain targets. • Support Natural England's work on the Green Transport Corridors and Green Infrastructure Agreements, as well as their recommendations of the Linear Infrastructure Network, ensuring that within or adjacent to the rail network and Major Road Network, green infrastructure can deliver biodiversity gains, ecological connectivity and ecosystem services. • Protect geological sites from degradation and removal caused by transport interventions and where practicable provide enhancements to the geological site and to its accessibility. • Any potential direct or indirect impacts that may arise from new or upgraded transport interventions will be appropriately assessed, mitigated, and/or compensated for, in line with existing best practice and relevant legislation on statutory and non-statutory designated sites that are protected for their importance for nature conservation. • Commit to following the Habitats Regulations Assessment process for the protection of the Natura 2000 (European) sites and Ramsar sites.		
Policy LTP PD 0.3 Maximising Investment in a Sustainable Transport Network	GCC will work with partners, including Local Planning Authorities and developers to ensure the delivery of a financially sustainable transport network through maximising opportunities for inward investment. GCC will do this by implementing the following policy proposals: • Work with the district councils, GFirst Local Enterprise Partnership, Western Gateway Sub Transport Board, Highways England, Homes England and Department for Transport and any other necessary government bodies, to provide relevant information on transport issues to inform the development of Development Plans and support the delivery of the Local Enterprise Partnership's Strategic Economic Plan and Local Investment Strategy. • Work in partnership with district and borough councils, the GFirst Local Enterprise Partnership, Western Gateway Sub Transport Board, Highways England, Homes England and Department for Transport and any other necessary government bodies, to seek investment in the county's transport network as funding opportunities arise. • Work with Parish Councils and communities to identify and seek solutions that minimise the impact of proposed developments. • Secure contributions from developers towards priorities and schemes contained within the Local Transport Plan in line with the policies and tests outlined in the National Planning Policy Framework (or any subsequent legislation).	No	Although one proposal within this policy promotes 'seeking investment in the county's transport network', the proposal itself is not considered to directly lead to development. None of the other proposals will lead to development; they primarily outline how developers and other partners will contribute towards sustainable transport provisions. Therefore, no LSE on European sites has been concluded.

Policy	Policy proposals	LSE?	Justification
	• Where the Community Infrastructure Levy (CIL) or similar approach is introduced by Local Planning Authorities in Gloucestershire, GCC will work with district authorities to ensure strategic transport priorities are reflected within and paid for by CIL and s106 agreements. • Where possible, transport strategies arising in support of development should have regard to the potential to achieve betterment for trips originating near the development, and facilitate or synergise with priorities for investment with neighbouring authorities and transport providers including; Highways England, bus operators and Train Operating Companies. This should be considered on the basis of travel corridors, such as the M5, A46 or other locally-strategic corridors. • Work with district authorities, partners and stakeholders to seek to ensure that land or routes that may be required for transport uses during the LTP period are protected from any development that may compromise the use of that land in future for transport purposes. • Respect of smaller development proposals outside defined settlement boundaries contributions towards public transport and community transport will be determined using the approach contained in the Manual for Gloucestershire Streets. • Exploring opportunities to generate revenue through advertising on highway assets (roundabouts, street lights etc.). • To promote schemes that encourage and enable active and sustainable travel options, whilst taking due regard for vulnerable users and the Equality Act. • Developers are required to contribute financially and/or to the design and implementation of sustainable transport, in order to mitigate against the impacts of proposed new development on the transport network. Through including at the design stage facilities, routes and infrastructure for electric vehicle charging, homeworking, connectivity for walking and cycling, provision of local amenities and access to public transport, so sustainable trips are increased and dependence on motor vehicles reduced. • New development is required to contribute financially and/or to design to facilitate and encourage active travel (walk/cycle and mobility use) through ensuring seamless connectivity to local amenities and public transport. • New development is required to contribute financially and/or to the design for the provision of mass public transport provision between urban conurbations, and community transport or any other form of Mobility as a Service (MaaS) transport provision and/or infrastructure where there is a current or potential demand where a standard bus service is not a viable long term solution. • Large/medium scale developments are required to contribute financially and/or to the design for the provision of proposals to ensure bus priority (and bus stops) and for the provision of Strategic Transport Interchange Hub(s) or Local Interchange Hub(s), for the betterment of all public transport users. Bus priority on new development and accessing core bus corridors should be for the efficiency of buses and other appropriate priority users, over car trips. • Developers are required to contribute financially and/or in the design of their proposals, to provide high quality interchange facilities (e.g., secure cycle parking, bus priority) and passenger facilities at rail stations, segregated active travel routes (walk/cycle and public transport) for new development to access to the nearest mainline rail station by the most accessible direct route, that serve their development. • Under the Highways Act 1980, any developer or scheme promoter, that delivers highway infrastructure to be adopted by GCC, must fully comply with the Council's Enhanced Materials Policy (Manual for Gloucestershire Streets - MfGS) and Commuted Sums Policy, whereby appropriate materials are specified and the full costs of implementation and future maintenance are factored in to the scheme budget.		
Policy LTP PD 0.4 Integration with land use planning and new development	GCC will work with local planning authorities and developers to develop a clear spatial strategy for Gloucestershire based on our long term sustainable transport and growth ambitions, which will deliver large scale development, designed and developed in a sustainable manner, ensuring that sustainable transport principles are embedded into the planning, design and future development of these strategic sites as a core fundamental feature from the outset. This will deliver a step change in sustainable land use planning, ensuring that all new development is located in places with high levels of sustainable transport accessibility and services, and reduces car dependency. GCC will support development that enables sustainable travel choices and will require that developers-of new medium/large sites submit site master plans and ensure that transport considerations are integral to the design of schemes and contribute to making high quality places, in accordance with Gloucestershire's emerging Spatial Strategy, emerging Climate Change Strategy, Carbon Reduction Targets, NPPF and MfGS. GCC will do this by implementing the following policy proposals: (shows all policy proposals including amended & additional) • Development will be resisted where the impact on the transport network requires retrofitting or where safe and suitable access is not provided. GCC will support new compact, high density mixed use development of new sites already served by public transport over other more remote and inherently less sustainable locations. • Collaborate with District and Parish Councilsto ensure that new development is appropriately located next to the existing transport network and ensure permeability within the development to inclusive public transport with a high propensity to walk, cycle and be mobility friendly. Seek solutions that minimise the impact of proposed developments, (e.g. through Parish and Neighbourhood Development Plans). • Support multi-functional green and blue infrastructure to underpin the overall sustainability of new development to perform a range of functions including flood risk management, accessible green space transport corridors, climate change adaptation and supporting biodiversity net gain. • Where developers produce Health Impact Assessments as part of their application, these should consider the impact of travel and transport – both positive and negative – on the health and wellbeing of residents and communities. • Developers of medium/large scale new development are required to submit to GCC at outline or masterplan stage, full details of highway and access proposals. And, encouraged to consult early with GCC to agree design principles at pre-application. • Developers are required to provide digital connectivity infrastructure suitable for future proofing to promote agile working in order to reduce the need to travel.	Yes	Proposals under policy PD0.4 will give rise to a number of highway and transport schemes in support of new development allocations.

Policy	Policy proposals	LSE?	Justification
	• Developers are required to provide electric vehicle charge point network or alternative that complies to MfGS and Technical Specifications. • Developers are required to assess the needs of all vulnerable road within and associated with their development, users in line with government Road User Hierarchy, to substantially improve; the county's cycle and pedestrian network and the delivery of LCWIP and where appropriate PRoW or multi-tracks, and meet improved design standards and audits; for example MfGS, LCWIP and other Context Reports and emerging DfT cycle design guidance and best practice, as well as addressing the needs of those with mobility impairments. • Developers are required to identify, protect and exploit opportunities for sustainable transport measures ahead of delivering necessary highway capacity deficit, based on both green infrastructure principles and active design principles including 'invisible infrastructure', whereby the spatial grain and layout invites slow speeds and direct route priority with natural surveillance and lighting for active travel (walk, cycle, mobility friendly & public transport) over other modes. • Developers are required to use of innovative design (including meeting with Building with Nature standards) to enhance the aesthetic appeal and desirability of using high quality multi-modal interchange facilities (e.g., inclusive public transport facilities). • Developers are required to identify and safeguard existing and potential quiet highway routes and connections, within and between settlements, where walking /cycling and mobility use are to be promoted to support community connectivity and permeability, supporting multi-functional green and blue infrastructure. • Ensure developers promote existing public transport infrastructure and realistic opportunities for travel choice are consistently and comprehensively promoted to residents, employers and visitors. Promote Mobility as a Service (MaaS), such as electric vehicle car clubs or car sharing, in order to encourage sustainable car use within new housing and employment developments and in association with businesses within Gloucestershire. • Developer will be required to use Personalised Travel Planning (PTP) and travel plans as part of the toolkit of measures for delivering smarter travel choices, where appropriate, in new and existing residential developments, making sure that travel plans are maintained and enforced. Contributions from new development are required towards GCC's sustainable travel programme, Thinktravel for the development and monitoring of travel plans, and an ongoing commitment to communicating updated travel information in line the Thinktravel programme.		
Policy LTP PD 0.5 Community Health and Wellbeing	GCC will work with partners to improve community health and wellbeing and safety by encouraging greater numbers of people from all social and economic groups and including those with disabilities, to use safe and affordable multimodal travel options (e.g. by walking or cycling or by public transport) for short distance trips; helping children and adults, including families and those economically and physically disadvantaged to enjoy more independent, physically active lifestyles; improving air quality; and connecting people to services, employment, housing, education, health services, social and leisure amenities to allow equality of opportunity to health, social and economic wellbeing and remove barriers that can create social isolation. GCC will do this by implementing the following policy proposals: • Identify opportunities for transport and health outcomes and resources to be aligned to attain cross-sector health benefits and cost savings. • Ensure Health Impact Assessments (HIAs) are used where appropriate – either within a Strategic Environmental Assessment (SEA) or as a standalone exercise – to understand the impact on health and wellbeing (and on health inequalities) in its broadest sense and mitigate negative impacts and enhance positive impacts where possible. • Align with; the emerging Climate Change Strategy, the Gloucestershire Sustainable Energy Strategy, the Air Quality & Health Strategy for Gloucestershire, the county's Joint Health and Wellbeing Strategy and the strategic priorities set out the Police & Crime Commissioners' Plan. • Support 'Safer Gloucestershire' to create a safer county.Investigate community based vehicle restriction zones that will benefit communities and protect vulnerable highway users from a safety and health perspective, and introduce speed limits in accordance with the current national guidelines and prioritise them based on available evidence, including 20mph zones. • Improve public transport accessibility, including demand responsive public and community transport options. • To deliver campaigns to increase cycling, walking and use of public transport across all segments of the population and target those with the greatest propensity to use alternatives to the car. • Reduce both actual and perceived risk to personal safety by improving the pedestrian and cycle infrastructure and experience by making if feel safe to use and visually appealing. • Integrate pedestrian, cycle and horse riding routes with the road network where it is safe to do so to promote a cohesive path network and, where a route has to cross a busy road, provide a safe crossing point. • Ensure walking and cycling routes are safe and form a continuous accessible network accessing town centres, residential areas, employment areas, and routes to schools. • Support the Rights of Way and Countryside Access Improvement Plan where there is an identified need to accommodate less mobile users, walkers, cyclists and horse riders, within the existing Rights of Way network. • Encourage people away from busy routes, where traffic flows or speeds cannot reasonably be reduced, by agreeing measures to safeguard quieter and safer routes and improve accessibility to and within green space, rural and inter-urban settlements. • Encourage the use of the rights-of-way network for utility journeys, particularly in the urban fringe and between some villages by ensuring their safety and accessibility.	Yes	The proposals include aims to 'improve the pedestrian and cycle infrastructure', 'integrate pedestrian, cycle and horse riding routes with the road network and provide a safe crossing point' and to ensure walking and cycling routes 'form a continuous accessible network'. It is possible that these proposals will result in development with new footpaths and cycle routes, extension to existing routes or upgrading and maintenance schemes. The work associated with such development is likely to be small-scale with relatively localised impacts. However, there is potential for a LSE if the works are near to a European site or if the scheme will increase the amount of recreational pressure on the European site. The schemes within the Connecting Places Strategies are the realisation of the 'development' promoted by this policy. Potential for LSE will be considered in more detail within each of the six Connecting Places Strategies (see B2 below).

<table>
<tr><th>Policy</th><th>Policy proposals</th><th>LSE?</th><th>Justification</th></tr>
<tr><td></td><td>Encourage developers to include both informal and formal playable space in new development and engage children and the local community in the design process to ensure streets should be are safe for children to play, and where walking and cycling is encouraged and supported through street design and development layout.
Identify and exploit opportunities to align active travel objectives with wider stakeholders' priorities e.g. Gloucestershire Healthy Living and Learning (healthy schools programme), healthy lifestyles service priorities, Active Gloucestershire 'we can move' social movement, workplace health & wellbeing and productivity.
Investigate community based vehicle restriction zones that will benefit communities and protect vulnerable highway users from a safety and health perspective, and introduce speed limits in accordance with the current national guidelines and prioritise them based on available evidence, including 20mph zones.
Recognise the benefits to health and wellbeing from other policies that protect and enhance; biodiversity net gain, blue and green infrastructure, landscapes, townscapes and the historic environment from the adverse effects of transport.</td><td></td><td></td></tr>
<tr><td>Policy LTP PD 0.6 Thinktravel – Influencing Travel Behaviour</td><td>GCC will continue to use the 'Thinktravel' brand and associated marketing and information tools to ensure we carry out a range of travel awareness initiatives to influence travel behaviour change and promote the benefits and use of sustainable modes of transport.
GCC will do this by implementing the following policy proposals:
Work with its partners to reduce single occupancy private car use by promoting alternative travel choices to individuals through a variety of media channels.
Deliver campaigns to increase cycling, walking and use of public transport across all segments of the population and target those with the greatest propensity to use alternatives to the private car.
Work with local businesses, educational establishments and housing developers to secure appropriate travel plans to encourage sustainable travel and to investigate and implement measures to overcome specific barriers.
Within Travel Plans, support the promotion of walking & cycling for journeys under 2 km and 5 km respectively. Promotional material will be issued alongside infrastructure improvements using methods that have been tested nationally and applied through the Thinktravel programme.
Encourage operators to provide discounted fares for young people, families and regular travellers, and other incentives to increase patronage.
Ensure accurate service availability, timetable information and location information is available at all bus stops and railway stations within the county and through the Thinktravel website (www.thinktravel.info).
Introduce Real Time Passenger Information systems, and improve the quality of information provided at passenger waiting facilities in conjunction with Thinktravel travel information apps and other mobile phone based technologies.
Work with partners and providers to embrace technologies which support Thinktravel objectives such as charging points for electric vehicles, bike share schemes and SMART ticketing.
Recognise the benefits to influencing travel behaviour from other policies that support health and wellbeing and protect and enhance; biodiversity net gain, blue and green infrastructure, landscapes, townscapes and the historic environment from the adverse effects of transport.</td><td>No</td><td>None of the proposals under this policy will directly lead to development; they outline how GCC will ensure promote its travel awareness initiatives.</td></tr>
<tr><td colspan="4">Policy Document 1 – Public & Community Transport</td></tr>
<tr><td>Policy LTP PD 1.1 – Gloucestershire's Bus Network</td><td>Bus Network Standards – towards an effective network<table><tr><td>Core Services (Tier 1)</td><td>High frequency core bus services (mostly commercial), on a route that is one or more of:
- Commercially operated (i.e. no GCC subsidy)
- High frequency (one bus every 30 minutes or less)
- High use (a minimum of 250,000 passenger trips per year)
- Inter-urban (operating between 2 urban areas of at least 20,000 population)
- Intra-urban (operating entirely within an urban area of at least 20,000 population)</td></tr><tr><td>Intermediate (Tier 2)</td><td>Frequent bus services (mixture of commercial and subsidised), on a route that is one or more of:
- Partially commercial (GCC subsidises a maximum of 50% of the route)
- Medium frequency (one bus every 31-180 minutes)
- Medium use (50,000-250,000 passenger trips per year)
- Part urban (serves at least one urban area of at least 10,000 population)</td></tr><tr><td>Supported Services (Tier 3)</td><td>Supported bus services (infrequent and mostly subsidised), on a route that does not meet any tier 1 or 2 criteria, likely to include:
- Majority or entirely subsidised
- Low frequency (2 buses per day or less)
- Low use (under 50,000 passenger trips per year)
- Rural (no urban centres of at least 10,000 population)</td></tr></table></td><td>No</td><td>Although this policy promotes bus lanes and other bus priority infrastructure, any such schemes will be located in existing travel corridors and are likely to be of small scale with localised impacts. An LSE on any European sites is considered unlikely.</td></tr>
</table>

Policy	Policy proposals	LSE?	Justification
	GCC will work in a concerted and focused way, across all functions, and in collaboration with commercial bus and coach operators in particular, to develop and maintain a comprehensive bus network across both urban and rural areas in line with the our bus standards. GCC will work with partners and communities to provide attractive and relevant opportunities for travel choice by bus and coach for residents, employers, and visitors and, and work collaboratively to promote them as an alternative to the car to encourage increased levels of use. GCC will do this by implementing the following policy proposals: • Collaborate with transport providers to provide an appropriate level of service throughout the day, evening and at weekends to links communities with employment, education, health services, retail centres and social/leisure opportunities and enable high levels of connectivity between bus and rail services. • Work with neighbouring authorities and bus operators to provide attractive cross boundary services to key local and longer-distance destinations outside the county in particular seeking to provide relevant travel choices as an alternative to the car. • Where services cannot operate on a commercial basis GCC may choose to subsidise those which are socially necessary, subject to the funding available. • Support improved linkages between urban centres on key bus corridors, sufficient to offer a relevant choice. For locations not served by these corridors, access should be to the nearestlocal interchange hub.. • Support Gloucestershire's most vulnerable and physically isolated residents and communities by providing the means for them to access the services they need including leveraging 'Total Transport' and wider flexible and demand-responsive service approaches to ensure that the maximum value is achieved relative to known expressed requirements.. • Develop the 'Total Transport' approach to utilise all appropriate forms of transport available in Gloucestershire before procuring individual transport solutions and encourage travel behaviour change. • Encourage transport operators to invest in ultra-low emission vehicles and maintain the quality of their vehicles to ensure high quality bus fleet, VOSA compliant, has CCTV in operation, and where necessary on dedicated school and community bus services drivers must be DBS checked. • Maintain the phased introduction of traffic signal-based bus priorities measures at highway network pinch points. • Deliver bus lanes and other bus priority infrastructure in alignment with Thinktravel cycling and walking objectives where this can be justified.		
Policy LTP PD 1.2 – Improving the Quality of the Road Based Public Transport	GCC will encourage investment in public and community transport to increase patronage, improve safety and promote bus travel as a viable alternative to the car. GCC will do this by implementing the following policy proposals: • Work in partnership with local communities to maintain the quality of waiting facilities and their surrounding environment. • Encourage transport operators to invest in ultra-low emission vehicles and maintain the quality of their vehicles to ensure high quality public and community transport fleet. To maintain the phased introduction of traffic signal based bus and cycle priority measures at highway network pinch points along strategic corridors. • Maintain the phased introduction of Real Time Passenger Information systems where it is technically and financially viable to do so and; improving the quality of information provided at passenger waiting facilities, the Thinktravel website and other travel applications that may be provided through mobile phone based technologies. Real time displays will be prioritised for stops in market towns and interchange hubs. • Work in partnership with district councils, Highways England, the Local Enterprise Partnership, developers and Department for Transport to seek investment in the county's transport network as funding opportunities arise. • Work with our major operators to address the gap in contactless ticketing and help create seamless transfer between public transport modes. • Reduce both actual and perceived risk to personal safety by encouraging transport operators to adopt safeguarding policies and by improving public transport infrastructure so that it feels safe to use and visually appealing.	No	Although one proposal within this policy promotes 'seeking investment in the county's transport network', the proposal itself is not considered to directly lead to development. Therefore, no LSE on European sites has been concluded.

Policy LTP PD 1.3 – Bus Priority	To manage and develop bus priority to facilitate the free movement of buses along congested routes, ensuring the safe movement of all highway users.
	GCC will do this by implementing the following policy proposals:
	• Consider locations where it would be beneficial to introduce further bus priority measures, including the removal of general highway capacity, in order to improve the attractiveness of public transport over the car.
	• Restrict the use of bus lanes to the following users:
	  ○ Buses and coaches
	  ○ Taxis (Hackney carriage) andPrivate Hire Vehicles may be permitted to use bus lanes on county council maintained highways, where local circumstances allow and the impact on other users is minimal.
	  ○ Pedal cycles
	  ○ Emergency service vehicles
		No	None of the proposals under this policy will directly lead to development; they outline how GCC will prioritise bus transportation.

Policy	Policy proposals	LSE?	Justification
	○ Motorcycles, where it is possible to provide a consistent route approach and following a robust risk assessment and the use of guidelines. • Investigate appropriate multiple occupancy vehicle users of bus lanes. • Investigate bus priority on 'core' bus corridors using 'invisible infrastructure', giving priority to sustainable travel modes on direct routes over other vehicles. • Adhere to the standard width of 4m for the implementation of new bus lanes where feasible, to minimise the risk of incidents with other road users. • The minimum bus lane width should be 3m, where buses should follow a cyclist until there is space in the adjacent lane to overtake. • The use of bus lanes will be managed by Traffic Regulation Orders (TROs)and enforced by the Police or by the use of Automatic Number Plate Recognition (ANPR) cameras operated by GCC. Where TROs are broken by road users GCC will use a civil enforcement process to administer fines.		
Policy LTP PD 1.4 – Coach Travel	GCC will work with coach operators to provide a reliable and efficient coach network that supports the county's bus network, connects interchange hubs in towns and cities, and provides tourist day trips to key locations in and to Gloucestershire. GCC will do this by implementing the following policy proposals: • Work with coach operators and partners such as Highways England, to enhance the role of coach travel to service; transport interchange hubs, long and short distance connectivity between key destinations, such as towns, cities and areas of key employment. • New large/medium scale development that generates significant coach trips, are required to include sufficient coach parking, to be determined by GCC in agreement with Local Planning Authorities. • Work with transport providers to provide an appropriate level of service throughout the day and at weekends. • Improve connectivity between bus and rail services by allowing bus services longer waiting times at stations where feasible. • Encourage transport operators to invest in ultra-low emission vehicles and maintain the quality of their vehicles to ensure high quality fleet.	No	None of the proposals under this policy will directly lead to development; they outline how GCC will work with coach operators to improve the service or detail requirements within developments to support the coach network.
Policy LTP PD 1.5 – Community transport	GCC will support those with limited travel choice and local communities to develop innovative responses to local transport need. GCC will do this by implementing the following policy proposals: • Develop the 'Total Transport' project to strengthen the community and voluntary transport offer to a wider user base. • Work with community transport providers including voluntary car schemes to deliver a step change in the way community transport is perceived, used and delivered in Gloucestershire, particularly in rural areas. • Work with public transport operators (Bus, Community Transport and Rail) to encourage service timetables which complement one another, where it is operationally feasible. • Encourage communities to recognise the role of Community Transport when writing their Neighbourhood Development Plans. • Monitor developments from the DfT with regards to the section 19 and 22 permit issue and to support community transport providers were possible. • Encourage transport operators and voluntary car schemes to invest in ultra-low emission vehicles and maintain the quality of their vehicles to ensure high quality fleet.	No	None of the proposals under this policy will directly lead to development; they outline how GCC will support local communities address local transport needs.
Policy LTP PD 1.6 – Transport Interchange Hubs	GCC will work with our partners to provide realistic opportunities for travel choice for residents, employers, and visitors through the delivery of Strategic Transport Interchange Hubs and Local Interchange facilities. GCC will do this by implementing the following policy proposals: • Strategic Transport Interchange Hubs are defined as located on or have the potential to attract very high frequency transport corridors 'core super routes' and having significant parking for cars and bikes. • All railway stations should be enabled to fulfil interchange hub functions for maximum integration with all modes and onward connectivity. • Local Interchange Hubs are defined as; in key locations in/near rural towns or on urban residential roads or situated on dedicated cycle routes or near private car parking where sufficient demand and commercial viability exits. Some local Interchange Hubs may be focused on interchange between public transport and active travel modes only, without the provision of dedicated car parking. • Transport Interchange Hub facilities should ideally include upgraded passenger waiting facilities, Real Time Passenger Information (RTPI), electric vehicle and bike charging points, safe and secure parking for cycles and accessible car parking, along with exemplar and safe segregated good quality cycling and walking accesses. • Work with local planning authorities, communities and developers and bus operators to identify Strategic Transport Interchange Hub facilities located on existing very high frequency commercial 'core super routes' bus corridors, or have the potential to attract very high frequency routes, which encourage mode transfer onto a bus for part of the journey. • Where developer funding can be gained towards such sites the county council will take a lead role in ensuring facilities and infrastructure can be established to help to mitigate traffic growth.	Yes	The policy aims to deliver Strategic Transportation Interchange Hubs, which will have significant parking, be on high frequency transport corridors and promote journey transfer onto a bus. Depending on the location and scale of development, and operational changes in traffic/ air quality, new Strategic Transportation Interchange Hubs could have a LSE on nearby European sites. Local Interchange hubs are considered unlikely to have a LSE being smaller scale and focused within existing areas of development. The schemes within the Connecting Places Strategies are the realisation of the 'development' promoted by this policy. Potential for LSE will be considered in more detail within each of the six Connecting Places Strategies (see B2 below).

Policy	Policy proposals	LSE?	Justification
	• Continue to promote and where necessary work towards the further development of existing commercially operated Strategic Transport Interchange and will consider opportunities for new sites, subject to a satisfactory business case and support from the local planning authority. • Seek third party funding to support the construction and maintenance of new Strategic Transport Interchange Hubs and will endeavour to identify locations that ensure that the bus service has potential in the medium term to be operated on a commercial basis. • High frequency bus routes serving Transport Interchange Hubs should be prioritised for the provision of bus priority measures. • Support multi-modal integration at Transport Interchange Hubs with demand responsive transport options, as well as walking and cycling infrastructure where viable. • Work with district councils to align on and off-street parking policies and tariffs in central areas to encourage the use and viability of interchange hubs and to support measures to improve air quality in urban areas. • Work towards the provision of Local Interchange Hub or similar in all town centres for integration with all modes and wider connectivity.		
Policy LTP PD 1.7 – Communicating Travel Information	GCC will provide clear and accurate travel information on services for passengers through a variety of outlet mediums, reaching every individual in every location. GCC will do this by implementing the following policy proposals: • To encourage public and community transport operators to use the Thinktravel website (http://thinktravel.info/) to provide up to date information on fares and services. • To optimise the use of RPTI by ensuring existing displays are located in key stops and interchanges, to add to this network of displays where financially and technically feasible, and to continue the support of mobile based technologies for those with access to them. • To develop the Total Transport platform to extend travel options to a wider audience. • To support the marketing of bus services and ticketing options for journeys within travel corridors where there is a greater propensity to influence travel choice. • To ensure accurate service availability, timetable information and location information is available at all bus stops and railway stations within the county and through the Thinktravel website (https://www.thinktravel.info/). And explore the use of social media to disseminate information using the Thinktravel brand and provide it in a variety of formats to meet customer expectations.	No	Policy LTP PD 1.7 will not result in development likely to affect any European sites as the proposals cover the provision and sources of travel information.
Policy Document 2 - Cycle			
Policy LTP PD 2.1 – Gloucestershire's Cycle Network	GCC will deliver a high quality coherent, direct, safe, comfortable and attractive cycle network by improving cycle reinforcing quiet highway connectivity. GCC will do this by implementing the following policy proposals: • Promote Gloucestershire's cycle network through Thinktravel. • Work with delivery partners, other agencies, and community stakeholders to identify and address barriers (physical and psychological) to cycling and make cycling a more inclusive activity for all. • Improve cycle links between and within settlements throughout Gloucestershire. • Focus investment in cycling in more developed areas and especially where new development is planned where the propensity is greatest. • Recognise the role and function of the existing quiet lane network and seek to expand this where possible to provide safe cycle linkages. • Ensure cycle routes are safe and form a continuous accessible network accessing town centres, residential areas, employment areas, and routes to school and supported with cycle parking/storage. • Ensure all cycle infrastructure will meet approved design standards; for example, Manual for Gloucestershire Streets (MfGS), LCWIP and DfT cycle design guidance LTN1/20 and best practice, as well as addressing the needs of those with mobility impairments. • Ensure all schemes on the local highway network will be subject to appropriate context reports and audits (including the Countywide Cycleway, LCWIPs, green infrastructure pledge, road safety, non-motorised users, walking, cycling,quality audits and Building with Nature) before design approval. • Support the development and promotion of the leisure cycle network, and Public Rights of Way Network to encourage greater use linking centre of population, including findings from the latest National Cycle Network Review. • Work in partnership with communities in identifying local transport needs and solutions (such as through Parish and Neighbourhood Plans, Travel Plans, JCS, health & wellbeing strategies and plans). • Work with district and borough councils to ensure that new development is well connected to the existing transport network and cycle friendly. • Ensure development sites connect to the strategic and LCWIP desire lines. • Developers are required to make an assessment needs of all pedestrian/mobility user/cyclist in line government Road User Hierarchy within and associated with their development, to substantially improve the county's cycle network and meet improved design standards and audits; for example MfGS, LCWIP and other Context Reports and emerging DfT cycle design guidance and best practice, as well as addressing the needs of those with mobility impairments. • Under the Highways Act 1980, any developer or scheme promoter, that delivers highway infrastructure to be adopted by GCC, must fully comply with the Council's Enhanced Materials Policy (MfGS) and Commuted Sums Policy, whereby appropriate materials are specified	No	None of the proposals under this policy will directly lead to development. Although use of the cycle network is promoted, it is not for recreational use alone and the broad-brush approach makes it unlikely that recreation will be increased at any European site sufficiently so as to result in an LSE.

Policy	Policy proposals	LSE?	Justification
	and the full costs of implementation and future maintenance are factored in to the scheme budget, to limit the long term burden on pedestrian highway asset.		
Policy LTP PD 2.2 – Cycle Asset Management	GCC will manage cycle infrastructure in line with the Highways Asset Management Framework and other guidance or policies such as the Codes of Practice for Well Managed Highway Infrastructure. GCC will do this by implementing the following policy proposals: • Work with the Highways Maintenance supplier to deliver the works and services outlined in the Transport Asset Management Framework. • Manage the street lighting network to minimise environmental impact without compromising on road safety and personal security. • Continue to deliver the GCC 'Highways Local Initiative' and the highway 'Big Community Offer' to prioritise the delivery of highway services that deliver cycle improvements measures for the community. • Ensure promoters of new transport schemes comply with the Enhanced Materials Policy (MFGS) whereby appropriate materials are specified and the full costs of implementation and future maintenance are factored into the scheme budget. • Regularly review the winter maintenance and vegetation clearance procedures and policies and in line with the Gloucestershire Highways Biodiversity Guidance or subsequent guidance. • Work with partners to maximise investment in the county's cycle network as funding opportunities arise. This will include working in partnership with the Local Enterprise Partnership, District Councils, Parish and Town Councils, communities, developers, Sustrans, Gloucestershire Local Nature Partnership, Highways England, and Department for Transport. • Follow green infrastructure principles in the design, maintenance and operation of cycling infrastructure as set out in the Gloucestershire Green Infrastructure Pledge. • Deliver cycle path maintenance works outlined in the Transport Asset Management Framework. • Ensure development sites contribute towards the improvement of the strategic and LCWIP desire lines. • Under the Highways Act 1980, any developer or scheme promoter, that delivers highway infrastructure to be adopted by GCC, must fully comply with the Council's Enhanced Materials Policy (Manual for Gloucestershire Streets - MfGS) and Commuted Sums Policy, whereby appropriate materials are specified and the full costs of implementation and future maintenance are factored in to the scheme budget, to limit the long term burden on pedestrian highway asset.	No	None of the proposals under this policy will directly lead to development. The policy sets out the approach to managing the cycling infrastructure. Any maintenance works arising are likely to be small scale with localised impacts and are considered unlikely to have an LSE on any European sites.
Policy LTP PD 2.3 – Active travel: Safety, Awareness and Confidence	GCC will contribute towards better safety, security, health and thereby longer life expectancy by reducing the risk of death, injury or illness arising from journeys travelling by bike and other forms of transport. This will be provided by working with partners to improve personal safety perceptions of using the transport network services and promote the use of public transport and active travel options to contribute to enjoyment and psychological wellbeing. GCC will do this by implementing the following policy proposals: • Ensure a co-ordinated approach to road safety with partners that includes proactive highway design guidance, delivery of reactive engineering solutions to highway issues, delivery of educational or campaign materials and support to assist in the monitoring and enforcement of traffic regulations. • Reduce the rate of pedestrian and cycle casualties within Gloucestershire by providing an environment that reduces both actual and perceived risk to personal safety and enable more people to walk and cycle everyday. The choice to walk and cycle is strongly influenced by the urban setting, for example in terms of available infrastructure, aesthetics and perceived safety. • Deliver cycle path maintenance works outlined in the Transport Asset Management Framework. • Work with developers and transport scheme promoters to consider, when designing new schemes, factors which influence the success of routes and facilities in terms of their use and function, such as gradient, lighting, natural surveillance, integration and signing. • Recommend the use of designated cycle routes where they provide attractive and safe alternatives to routes carrying high volumes of motorised traffic. • Ensure children, young people and adults are equipped with knowledge, skills and training to become more confident cyclists. • Work collaboratively with Gloucestershire Police, agencies and campaign groups to target young drivers, motorcyclists, distraction and alcohol and drug related driving in education programmes. • Support communities to deliver local speed campaigns through the Safer Community Teams. • Introduce speed limits in accordance with the current national guidelines and prioritise them based on available evidence, including 20mph zones. • Investigate community based vehicle restriction zones that will benefit communities and protect vulnerable highway users from a safety and health perspective.	No	None of the proposals under this policy will directly lead to development. The policy sets out the approach GCC will take to improve travel safety.
Policy Document 3 - Freight			
Policy LTP PD 3.1 – Gloucestershire's Freight Network	GCC in its role as Local Highway Authority will work in partnership with Highways England, Network Rail, neighbouring highway authorities, District, Parish and Town Councils, designated neighbourhood forums and Gloucestershire Police to; maintain a functioning freight network by ensuring the safe and expeditious movement ofgoods, and facilitate the decarbonisation of freight by 2045. GCC will achieve this through the following policy proposals:	Yes	Although largely addressing the management of freight, this policy also promotes the development of trans-modal freight facilities and the delivery of highway and flood alleviation schemes. Depending on the location and scale of development, and operational changes in traffic/ air

Policy	Policy proposals	LSE?	Justification
	• Work with partners to attract investment to mitigate vehicle delay pinch points and explore opportunities for trans-modal freight facilities. • Work with the business community including freight companies and our partners to achieve an increase in freight being transported by sustainable, low-carbon modes of non-road transport wherever possible and support the transition to ultra-low emission freight vehicles. • Continue to work collaboratively with the county's local planning authorities and other partners to ensure the effective implementation of adopted transport-related land-use policies with development proposals that could impact on the county's functional freight network. • Continue to work with designated neighbourhood forums and neighbouring authorities to ensure that cross-boundary weight restrictions that could adversely affect sensitive routes in Gloucestershire. • Identify the most vulnerable parts of the transport network and develop contingency plans to ensure a functioning network during unplanned events. • Continue to deliver highway and flood alleviation schemes to reduce the risk of highway closures on primary route corridors. • Work in partnership with Highways England and neighbouring highway authorities to manage cross boundary advisory freight routes including the management of abnormal loads. This partnership will be on the basis of an informal working relationship rather than a formal Quality Partnership arrangement. • Work with Highways England and neighbouring highway authorities to ensure that freight routes are clearly identified on signs and maps and ensure updated or temporary route updates are shared with information portals accessed by the freight industry. • Work with national freight mapping companies to inform freight operating route planning systems. Ensure the freight primary route corridor map is reviewed periodically, and that frieight transport use the primary route corridors wherever possible and avoid roads not included in corridors. • Ensure freight companies transporting abnormal loads greater than 4.95 metres high or 4.1 metres wide for non-motorway use and 4.6 metres for motorway use, contact Gloucestershire County Council and Gloucestershire Constabulary providing at least two days' notice before any planned travel. • Continue working with Gloucestershire Police in the management and enforcement of the Cotswold Lorry Management Zone. • Continue to observe the Lorries in the Vale of Evesham policy adopted by Cotswold District Council. • Apply the Link and Place highway spectrum when prioritising investment decisions and during discussions with local communities when producing their Neighbourhood Plans. • Introduce speed limits in accordance with the current national guidelines and prioritise them based on available evidence, including 20mph zones. • Lobby government to pursue opportunities for the decriminalisation of the enforcement of moving traffic offences, regulated under the Traffic Management Act. • Developers are required to submit through planning, Delivery and Servicing Plans and where appropriate, Construction Management Plans to; manage site traffic, and to reduce carbon emissions and other pollutants.		quality, new trans-modal freight facilities could have a LSE on nearby European sites. The schemes within the Connecting Places Strategies are the realisation of the 'development' promoted by this policy. Potential for LSE will be considered in more detail within each of the six Connecting Places Strategies (see B2 below).
Policy LTP PD 3.2 – Journey Routing Information for Freight	GCC will work in partnership with Highways England, neighbouring highway authorities and Gloucestershire Police to maximise the role of technology for the dissemination of journey information for freight. GCC will do this by implementing the following policy proposals: • Work with national freight mapping companies to inform freight operating route planning systems and ensure the primary route corridors map is reviewed periodically and that freight transport use the primary route corridors wherever possible and avoid roads not included in the corridors. • Developers are required to submit through planning, Delivery and Servicing Plans and where appropriate, Construction Management Plans to; manage site traffic, and to reduce carbon emissions and other pollutants. • Investigate an alternative freight route planning platform (including Lorry Route). • Work in partnership with Highways England and neighbouring highway authorities to manage cross boundary advisory freight routes, including the management of abnormal loads. This partnership will be on the basis of an informal working relationship, rather than a formal Quality Partnership arrangement. • Continue to work with designated neighbourhood forums and neighbouring authorities on cross-boundary weight restrictions that could adversely affect sensitive routes in Gloucestershire. • Increase the use of technology and social media to increase awareness of any delays on the highway network to ensure highway users are informed in advance or during their journey. • Disseminate journey routing information during times of extreme weather so people are informed about the most appropriate routing options. • Develop a network of smart information posts at lorry waiting areas that provide including access to the advisory freight map. • Update the advisory freight map with QR Code at lorry waiting areas and laybys. • Investigate opportunities for funding to make relevant GCC data available to open source. • Encourage parish and town councils to identify and monitor perceived freight issues through a 'Lorry Watch' system.	No	The policy promotes management of the freight routes, including distribution of information and monitoring. None of the proposals will directly lead to development.

Policy	Policy proposals	LSE?	Justification
Policy LTP PD 3.3 – Driver Facilities	GCC will provide facilities for drivers to rest. These will be provided at suitable locations on or near the primary route corridors used by HGV traffic. GCC will do this by implementing the following policy proposals: • Work with District Councils, Highway England and Parish and Town Councils to encourage the designation and provision of off-road freight parking facilities, in line with paragraph 107 of the NPPF. • Ensure lay-bys are maintained to provide suitable facilities, including a maintained road surface, removal of low hanging vegetation and street lighting. • Ensure the availability of up to date journey routing information for drivers.	Yes	There is scope for development under this policy through the provision of off-road freight parking facilities. Depending on the location and scale of development, and operational changes in traffic/ air quality, new off-road freight parking facilities could have a LSE on nearby European sites. The schemes within the Connecting Places Strategies are the realisation of the 'development' promoted by this policy. Potential for LSE will be considered in more detail within each of the six Connecting Places Strategies (see B2 below).
Policy LTP PD 3.4 – Driving Better Practice	GCC as part of the development management process and network management, will support improved codes of practice across the construction and logistics industry and require the production of Construction Management Plans (CMP) for strategic development sites and planned events, in order to minimise the impact on the surrounding community. GCC will do this by implementing the following policy proposals: • Work with district councils to ensure that new development is appropriately connected to the existing transport network. • Support and work in partnership with communities in identifying local transport needs and solutions through Neighbourhood Plans. • Ensure any additional freight movements associated with development and planned events are identified and managed through the Highways Development Management process and Network Management. This may include restricting construction / delivery vehicle access to specific times where an employment development is likely to generate significant freight movements. • Provide specific advisory guidance on CMPs within Gloucestershire. • Support uptake of new codes of practice and promote schemes such as FORS, CLOCs and Driving for Better Business.	No	None of the proposals under this policy will directly lead to development. The content of this policy is aimed at promoting better practice within the construction and logistics industry.
Policy LTP PD 3.5 – Managing deliveries in urban or other sensitive locations	GCC will encourage local communities, Chamber of Commerce, Town and Parish Councils to consider the role of freight within their Neighbourhood or Town Centre Plans in order to minimise the impact of domestic deliveries in urban or other sensitive locations and of wasted delivery miles due to failed deliveries. GCC will do this by implementing the following policy proposals: • Provide specific advisory guidance for local communities to consider the development of Last Mile Delivery Policy and route identification as part of the Neighbourhood/Local Plans process. • Provide specific advisory guidance for the development of voluntary Quiet Delivery Service scheme as part of the Neighbourhood/Local Plans process. • Promote and encourage low carbon bike delivery in urban centres, particularly where vehicle delivery restrictions are in force. • Support ultra-low emission vehicles for last mile deliveries.	No	Policy LTP PD 3.5 will not directly result in development as it relates to management of deliveries and the provision of guidance.
Policy LTP PD 3.6 – Rail and Water Freight	While recognising the limitations for existing and potential trans modal freight facilities within the county, GCC encourages the transfer of goods to nonhighway means of transit for freight travelling through the county. GCC will do this by implementing the following policy proposal. • Supporting suitable third party promoted schemes for increased use of rail or water (sea or canal) to transfer freight, where a valid business case and funding proposal can be provided.	Yes	Policy LTP PD 3.6 could result in development of a rail or water freight scheme. Depending on the location and scale of development, new rail or water freight facilities could have a LSE on nearby European sites. However, development will only occur if a third party with a valid business case and funding proposal promote the scheme i.e. it is not represented by a scheme under the Connecting Places Strategies.
Policy Document 4 - Highways			
Policy LTP PD 4.1 – Gloucestershire's Highway Network	GCC will maintain a functioning highway network that supports Gloucestershire's transport network by ensuring the safe and expeditious movement of highway users. GCC will do this by implementing the following policy proposals: • Work in partnership with Highways England to maintain the safe and expeditious movement of traffic when using the Strategic Road Network, by seeking value for money improvements to network pinch points to enhance network efficiency. • Develop MRN routes in line with guidelines and available funding, to ensure the objectives for the network are achieved. This includes close liaison with neighbouring authorities. • Maintain and, where feasible, improve the highway network for all non-motorised highway users prioritising the integration of transport modes. • Reduce the risk of conflict for all highway users by complying with national Government guidance and legislation, including the use of mobility scooters on the footpath. • Increase the use of technology and social media (Intelligent Transport Systems) to increase awareness of delays on the highway network, ensuring highway users are informed in advance or during their journey. • Reduce pressure on the local road network by promoting alternative sustainable travel choices through the Thinktravel programme.	No	None of the proposals under this policy will directly lead to development. The policy seeks to maintain a functioning highway network.

Policy	Policy proposals	LSE?	Justification
	• Apply the Link and Place highway spectrum when prioritising investment decisions and during discussions with local communities when producing their Neighbourhood Plans. • Lobby Government to pursue opportunities for the decriminalisation of the enforcement for moving traffic offences, regulated under the Traffic Management Act. • Ensure walking and cycling routes are safe and form a continuous accessible network accessing town centres, residential areas, employment areas, and routes to schools. • Follow green infrastructure principles in the design, maintenance and operation of highway asset as set out in the green infrastructure pledge as well as meeting Building with Nature standards. • Preserve and enhance the geodiversity of the highway asset wherever practicable. • Under the Highways Act 1980, any developer or scheme promoters, that delivers highway infrastructure to be adopted by GCC, must fully comply with the Council's Enhanced Materials Policy (Manual for Gloucestershire Streets - MfGS) and Commuted Sums Policy, whereby appropriate materials are specified and the full costs of implementation and future maintenance are factored in to the scheme budget.		
Policy LTP PD 4.2 – Highways Network Resilience	GCC will provide a resilient highway network that can withstand unforeseen events, including extreme weather events and long term changes to the climate. GCC will do this by implementing the following policy proposals: • Take due regard for the strategic risk of climate change in line with Corporate Risk Management Strategy, Gloucestershire Climate Change Strategy, Local Adaptation Advisory Panel (LAAP) England, Severe Weather Impacts Monitoring (SWIM) and UK Climate Impacts Programme (UKCIP) to better manage highway network resilience. • Identify the most vulnerable parts of the transport network and develop contingency plans to ensure a functioning network during unplanned events. • Disseminate network information during times of extreme weather so people are informed and aware about the travel choices they make. • Regularly review winter maintenance and vegetation clearance procedures and policies and in line with the Highways Biodiversity Guidance for Gloucestershire (or subsequent guidance) and the Green Infrastructure Pledge • Continue to deliver highway and flood alleviation schemes which reduce the risk of highway closures on class one and two routes. • Continue to work with specialist bodies, such as the Environment Agency and Highways England, our partners and communities, to try and ensure that the highway network and the communities, trade and commerce that it serves, are better protected in terms of flood risk resilience including green and blue infrastructure measures to change impermeable surfaces connected with the highways and verges to help reduce (primarily surface water) flood risk in communities. • Work in partnership with district councils, the Environment Agency, GFirst LEP, Homes England, Highways England, DfT and any other necessary government bodies, to seek investment in the county's transport network as funding opportunities arise to address highway network flood risk and build in long term resilience. • Continue working jointly with the Environment Agency to build evidence of the effects of flood risk and climate change on highway network infrastructure in order to develop a pipeline of schemes. • Explore opportunities for sharing data and intelligence to build an Integrated Environment Mapping Tool or similar, to draw together evidence of environmental constraints and opportunities to help target resources. • Continue to work with partner organisations at a sub-national level to resolve issues that arise on the network outside of the county. • Continue to seek funding for larger scale improvements to provide an alternative where routes resilience is compromised by the lack of any suitable adjoining network. • Promote energy saving, water conservation, improvements in surface water run-off and provision of SuDS, in both new highway schemes and retrofitting of existing schemes (where opportunities arise), recycling and use of sustainable materials in the construction and operation of transport projects. • Under the Highways Act 1980, any developer or scheme promoters, that delivers highway infrastructure to be adopted by GCC, must fully comply with the Council's Enhanced Materials Policy (Manual for Gloucestershire Streets - MfGS) and Commuted Sums Policy, whereby appropriate materials are specified and the full costs of implementation and future maintenance are factored in to the scheme budget. • Developers are required to submit through planning, Delivery and Servicing Plans and where appropriate, Construction Management Plans to; manage site traffic, and to reduce carbon emissions and other pollutants.	Yes	This policy promotes highway and flood alleviation schemes, larger scale improvements and retrofitted sustainable drainage schemes (SuDS), which may result in construction impacts on European site depending on the scale and location of the resulting schemes. The schemes within the Connecting Places Strategies are the realisation of the 'development' promoted by this policy. Potential for LSE will be considered in more detail within each of the six Connecting Places Strategies (see B2 below).
Policy LTP PD 4.3 – Highway Maintenance	GCC will manage the local highway asset management in line with the Highways Asset Management Framework and other guidance or policies such as the Code of Practice for Well Managed Highway Infrastructure. GCC will do this by implementing the following policy proposals: • To deliver fit for purpose highway asset. • To deliver over £150m of investment in highways including additional investment in structural maintenance to reduce the maintenance backlog. • To work with GCC's Highways Maintenance supplier to deliver the works and services outlined in the Highways Asset Management Framework.	No	The policy outlines the approach to the maintenance and repair of the existing network and does not promote or detail any potential development.

Policy	Policy proposals	LSE?	Justification
	• To inspect and repair the highway network in line with the county's Highway Safety Inspection Policy, in order to ensure it is in a safe condition. • To ensure that street works undertaken on the local network by third parties are completed to a high standard minimising congestion and ensuring safety for pedestrians and cyclists and people with limited mobility and that the quality of such works is monitored, with the third parties being required to take corrective action as necessary. • To promote alternative sustainable travel choices through the Thinktravel programme during highway maintenance works. • To manage the street lighting network to minimise environmental impact without compromising on road safety and personal security. • To manage the traffic signal network to minimise congestion and to prioritise the movement of buses and cyclists through phased traffic signals. • To ensure road signage is maintained in with the Highways Asset Management Framework. To review the provision of street furniture and signing and manage the local highway asset in line with the Highways Asset Management Framework, ensuring that street clutter is minimised. • To minimise the impact of highway work on the surrounding landscape and ensure where new highway structures are required they need to be sympathetic to their surroundings including bridges, fencing and walling. • To comply with the Highways Biodiversity Guidance for Gloucestershire or subsequent guidance. • To enhance and restore the wildlife function of highway verges by continuing to work in partnership with Gloucestershire Wildlife Trust (GWT) through GCC's Conservation Road Verges Site Register to ensure that all road verges receive appropriate conservation management as part of highways maintenance and related schemes. • Under the Highways Act 1980, any developer or scheme promoters, that delivers highway infrastructure to be adopted by GCC, must fully comply with the Council's Enhanced Materials Policy (Manual for Gloucestershire Streets - MfGS) and Commuted Sums Policy, whereby appropriate materials are specified and the full costs of implementation and future maintenance are factored in to the scheme budget.		
Policy LTP PD 4.4 – Road Safety	GCC will contribute to improved safety, security and health by reducing the risk of death, injury or illness arising from transport, working with partners to improve personal safety perceptions and the promotion of transport that contributes to good health and wellbeing. GCC will do this by implementing the following policy proposals: • To ensure all new highway schemes that are delivered by the Local Highway Authority, developers or scheme promoters are designed using the principles of Manual for Gloucestershire Streets. • To deliver a co-ordinated approach to road safety with partners that include proactive highway design guidance, delivery of reactive engineering solutions to highway issues, provide evidence to support engineering, education and enforcement activities. • The targeting of young drivers, motorcyclists, distraction and alcohol and drug related driving in education programmes. • To support communities to deliver local speed campaigns through the local policing teams. • To introduce speed limits in accordance with the current national guidelines and prioritise them based on available evidence, including 20mph zones. • To consider the needs of all road users, including pedestrians and cyclists, when amending highway speeds to ensure safety, functionality and consistency are not compromised. • To work with developers and transport scheme promoters to consider, when designing new schemes, factors which influence the success of routes and facilities in terms of their use and function, such as layout, visibility, gradient, lighting, natural surveillance, integration and signing.	No	The policy outlines the approach to road safety and does not promote or is likely to result in development.
Policy LTP PD 4.5 – On-street Car Parking	GCC will work in partnership with transport operators, neighbouring traffic authorities and district councils, parish and town councils, to ensure that parking policies in each area support the local economy and maintain the safe and expeditious movement of traffic on the road network. GCC will do this by implementing the following policy proposals: • Operate the civil enforcement parking operation as a partnership with affected residents, businesses and visitors. • Coordinate off-street parking enforcement management to ensure a comprehensive and complementary approach. Allocate parking permits or waivers with clear conditions of use, based on transparent and consistent principles, to give priority in accordance with the defined hierarchy of parking enforcement. • Maximise the potential of information technology systems to support an effective and efficient parking management operation. • To approach the use of discretion objectively and in accordance with legislation. GCC will publish policies on the 'exercise of discretion'. For the latest information and guidance refer to the county council website www.gloucestershire.gov.uk/parking. • Work with district councils to manage vehicle parking and discourage commuter parking in town and city centres. This will be through the application of supply and pricing mechanisms, and the encouragement of the use of public transport, flexible working patterns, Strategic Interchange Hubs and active travel modes. • Establish informal parking board meetings with district councils on a project by project basis. • Developers are required to fully comply with Manual for Gloucestershire Streets (MfGS) and the county's Technical Specifications in respect to provision for car parking, taking account of exemplar design for on-street parking. • Align with the ULEV Strategy and Climate Change Strategy.	No	Policy relates to management of current on-street parking and promotion of alternatives. It does not result in development directly or indirectly.

Policy	Policy proposals	LSE?	Justification
Policy Document 5 - Rail			
Policy LTP PD 5.1 – Rail Infrastructure Improvements	GCC will engage with the rail industry to ensure that Gloucestershire is well placed to take advantage of the wider rail infrastructure improvements, including route electrification, HS2 at Birmingham, MetroWest, western access to Heathrow Airport and CrossRail at Reading. Potential enhancements will need to be considered through Network Rail's Continuing Modular Strategic Planning process which has highlighted the Bristol to Birmingham corridor as a potential candidate in conjunction with the Western Gateway Sub National Transport Body's priorities. GCC will do this by implementing the following policy proposals: • Work in partnership with district and borough councils, neighbouring authorities, Local Enterprise Partnership, Highways England, Network Rail Train Operating Companies and Department for Transport to encourage investment in the county's transport network, as funding opportunities arise. Furthermore, to work with all interested parties to support transport improvements in line with delivery of the LEP's Strategic Economic Plan and Local Industrial Strategy. • Support the case for further electrification, including Swindon to Kemble and the Bristol to Birmingham mainline. • Work in partnership with GFirst, West of England authorities, West of England Combined Authority and Great Western Railway to develop and fund, the extension of the enhanced MetroWest Bristol - Yate service to Gloucester and potentially beyond to Worcester. • Work in partnership with Worcestershire and Oxfordshire County Councils, the rail industry and other stakeholders to improve infrastructure in order to increase services and reduce journey times on the North Cotswold line as set out by the North Cotswold Line Task Force. • Work with Train Operating Companies and Network Rail to define and understand the infrastructure requirements needed to meet increased demand across the County network. • Provide appropriate evidence to support the transport and economic case for track (including electrification through Gloucestershire), signal and station capacity enhancements, as part of Network Rail's Continuous Modular Strategic Planning (CMSP). • GCC continues to look at the most suitable location for a new station south of Gloucester in conjunction with a range of partners. Given the limited capacity between Gloucester and Bristol the location for a new station(s) will need to be able help meet the long term strategic growth over the next thirty years. Third party proposals for an additional new station south of Gloucester will need to be accompanied by a robust business case. • Only support the re-opening of railway lines where a robust business case can be provided by the scheme promoter. • Support heritage railway lines (Gloucestershire Warwickshire Railway,Dean Forest Railway and Berkeley Railway) and their contributions to tourism. • Protect the freight line at Sharpness for future use. • Support in partnership with local planning authorities, Network Rail, rail freight operators and the private sector opportunities for last mile rail parcel freight hubs to help reduce carbon emissions. • Secure contributions from developers towards priorities and schemes contained within the Local Transport Plan, where those priorities and schemes satisfy the tests of the Community Infrastructure Levy (Amendment) Regulations 2015 (or any subsequent legislation). • Work with Tewkesbury Borough Council and other stakeholders to deliver the recommendations of the Ashchurch for Tewkesbury Rail Strategy for service enhancements and station improvements. • Work with partners to identify infrastructure enhancements on the Birmingham to Bristol mainline to deliver timetable and connectivity improvements for residents, businesses and visitors to the Gloucestershire. These may include some of the following: o Dynamic/passing loops south of Gloucester and at Ashchurch o Junction improvements at Abbotswood, Standish and Westerleigh o Signalling improvements in the Gloucester area o Cheltenham station capacity improvements o Electrification between Bristol Parkway and Bromsgrove o Gauge enhancements for freight traffic between Birmingham and Bristol to W12 standard. o Four tracking between Standish Junction and Cheltenham	Yes	Supports and promotes development via improvement of the network, including electrification and station capacity enhancement; specifically a new station south of Gloucester. Depending on the scale and location of works, these schemes may have an LSE on European sites. The schemes within the Connecting Places Strategies are the realisation of the 'development' promoted by this policy. Potential for LSE will be considered in more detail within each of the six Connecting Places Strategies (see B2 below).
Policy LTP PD 5.2 – Rail Service Capacity Improvements	GCC will engage with the rail industry to ensure that Gloucestershire benefits from improved local and longer distance rail services to London, Bristol, Birmingham, Cardiff, Oxford and Worcester. GCC will do this by implementing the following policy proposals: • Respond to rail franchise and timetable consultations to ensure that Gloucestershire is well connected to the national rail network, with competitively timed local services. • Contribute to and influence the debates surrounding medium to long-term developments, such as MetroWest and HS2, ensuring that Gloucestershire's needs and contribution are expressed. • Work with Transport for West Midlands to explore potential service improvements between Gloucester/Cheltenham, Worcester and Birmingham.	Yes	This policy may lead to development through the re-instatement of rail links, connectivity improvement and station development. The schemes within the Connecting Places Strategies are the realisation of the 'development' promoted by this policy. Potential for LSE will be considered in more detail within each of the six Connecting Places Strategies (see B2 below).

Policy	Policy proposals	LSE?	Justification
	• Work with partners (including developers) to facilitate improvements in service provision for Ashchurch for Tewkesbury as set out in its rail strategy. • Work with the rail industry, local authorities and other stakeholders to consider the reinstatement of the rail link between Honeybourne and Stratford on Avon, as well as other suitable railway line reinstatements. • Work with partners (including developers) to deliver a more frequent service at Lydney. In parallel, work with G-First, Transport for Wales, Monmouthshire County Council and the rail industry to define and agree long-term options for the provision of enhanced Birmingham-Gloucester-Cardiff services. Also to improve connectivity between Lydney, Chepstow and the wider Bristol area through enhanced timetabling at Severn Tunnel Junction to allow for easier and more frequent interchanges and or a direct service. • Work with Great Western Railway and Network Rail to identify the most effective approach to station development and stopping patterns on the Bristol - Gloucester route, including the development of the existing Cam and Dursley station and the potential for a new rail station south of Gloucester. • Work with and support Gloucestershire Community Rail Partnership; to increase passenger numbers, to improve access to stations and improve station facilities.		
Policy LTP PD 5.3 – Railway Stations Improvements	GCC will engage with delivery partners to maximise the desirability, demand and customer experience of using railway stations within Gloucestershire. Station facilities need to meet existing and forecasted demand by providing safe and secure facilities for pedestrians, cyclists, bus users and car users. GCC will do this by implementing the following policy proposals: • Work in partnership with district councils, the Local Enterprise Partnership, Highways England, Transport for Wales and Department for Transport to seek investment in the county's transport network as funding opportunities arise. • Ensure each railway station has a clear plan for its development in the short, medium and long term, linked to development proposals in the area and rail service improvements. • Work with Train Operating Companies and Network Rail to encourage ongoing investment in station facilities to improve the experience of travelling within the county. Improvements include improved passenger waiting facilities, installing electric vehicle charging points, increasing cycle racks, car parking, access improvements, links to walking and cycle networks and providing real time passenger information for onward journeys. • Promote connectivity to rail stations by active travel modes supported through Thinktravel and where bus services access railway stations ensure that timings complement each other to encourage interchange between transport modes. • Encourage the use of innovative design to enhance the aesthetic appeal and desirability of using public transport facilities. In addition to operation and safety issues GCC welcomes designs which complement and where possible enhance the natural, built and historic environment.	Yes	Encourages investment in the network, promotes station development and connectivity to rail stations and therefore could lead to development. The schemes within the Connecting Places Strategies are the realisation of the 'development' promoted by this policy. Potential for LSE will be considered in more detail within each of the six Connecting Places Strategies (see B2 below).
Policy Document 6 - Walking			
Policy LTP PD 6.1 – Gloucestershire's Pedestrian Network	GCC will work with interested parties to provide a safe, reliable and efficient highway environment that encourages walking, and provides pedestrian links to connect communities, employment and services. GCC will do this by implementing the following policy proposals: • Promote Gloucestershire's pedestrian network through Thinktravel. • Improve walking routes between and within settlements by working with delivery partners, other agencies, the community and stakeholders to remove barriers to walking, and consolidate walking networks. • Prioritise investment in urban centres, around public transport hubs and new developments in line with LCWIP guidance. • Support the delivery of Local Cycling and Walking Infrastructure Plan (LCWIP) and the upgrade and improvement of routes where they connect to local footway networks or could offer convenient routes for local trips. • Recognise the role and function of the existing quiet lane network and seek to expand this where possible to provide safe walking routes. • Work in partnership with communities in identifying local transport needs and solutions (such as through Parish and Neighbourhood Plans). • Work with district and borough councils to ensure that new development is well connected to the existing transport network. • All walking infrastructure provided within the county will be in designed in accordance with Manual for Gloucestershire Streets (MfGS) and to ensure all schemes on the local highway network will be subject to appropriate context reports and audits (including road safety, non-motorised users, walking, cycling and quality audits including Building with Nature standards) before design approval. • Encourage developers to consider the inclusion of playable space and informal play opportunities in new development and encourage the engagement of children and the local community in the design process, to ensure streets are created where children feel safe to play and where walking and cycling is encouraged and supported through street design and development layout. • Ensure that where possible development sites connect to LCWIP desire lines. • Developers are required to make an assessment of the needs of all pedestrian/mobility users/cyclists in line with government Road User Hierarchy within and associated with their development. And to, substantially improve connectivity and permeability of the county's pedestrian network and meet improved design standards and audits; for example MfGS, LCWIP and other Context Reports and best practice, as well as addressing the needs of those with mobility impairments.	No	Although this policy supports the upgrade and improvement of walking routes, none of the proposals are considered likely to lead to development specifically.

Policy	Policy proposals	LSE?	Justification
	• Under the Highways Act 1980, any developer or scheme promoter, that delivers highway infrastructure to be adopted by GCC, must fully comply with the Council's Enhanced Materials Policy (Manual for Gloucestershire Streets - MfGS) and Commuted Sums Policy, whereby appropriate materials are specified and the full costs of implementation and future maintenance are factored in to the scheme budget.		
Policy LTP PD 6.2 – Rights of Way	GCC will support the Rights of Way and Countryside Access Improvement Plan in identifying and seeking to support measures to improve safety, accessibility and the quality of the experience for walkers, horse riders, carriage drivers and cyclists where there is an identified need. GCC will do this by implementing the following policy proposals: • Integrate pedestrian, cycle and horse riding routes into the road network to promote a cohesive path network and, where a route has to cross a busy road, provide a safe crossing point. • Maintain verges for horse riders and walkers, where it is safe to do so to provide links between sections of the public rights of way network. • Consider the traffic implications on any existing pedestrian, cycle or horse riding paths or road crossing points where new development is planned. • Encourage people away from busy routes, where traffic flows or speeds cannot reasonably be reduced, by agreeing measures to safeguard quieter routes and improve accessibility to and within green space, rural and inter-urban settlements. • Encourage the use of the rights-of-way network for utility journeys, particularly in the urban fringe and between some villages. • Support the exploration and development of the wider network of route opportunities which may successfully dovetail with the rights of way network to provide a coherent safe network. • Reduce the number of outstanding applications for Definitive Map Modification Orders (DMMOs) ahead of the 2026 Countryside and Right of Way Act deadline. • Support the Rights of Way and Countryside Access Improvement Plan. • Recommend the use of designated walking routes and quietways which provide a safe and an attractive alternative. • Ensure developers from the outset assess the needs of all pedestrians, mobility users, cyclists and horse-riders, within their development design and any associated improvements, ensure desire lines, connectivity and permeability across the site and its boundaries to existing and newly created PRoW from neighbouring areas are considered and included. • Under the Highways Act 1980, any developer or scheme promoter, that delivers highway infrastructure to be adopted by GCC, must fully comply with the Council's Enhanced Materials Policy (Manual for Gloucestershire Streets - MfGS) and Commuted Sums Policy, whereby appropriate materials are specified and the full costs of implementation and future maintenance are factored in to the scheme budget.	No	One proposal to 'integrate pedestrian, cycle and horse riding routes with the road network' and 'provide a safe crossing point' may result in development. The work associated with such a scheme, however, is likely to be small-scale with relatively localised impacts and located within an existing travel corridor; it is not considered likely to result in an LSE on a European site.
Policy LTP PD 6.3 – Pedestrian Asset Management	GCC will manage pedestrian infrastructure in line with the Highways Asset Management Framework and other guidance or policies such as the Code of Practice for Well Managed Highways Infrastructure. GCC will do this by implementing the following policy proposals: • Manage the street lighting network to minimise environmental impact without compromising on road safety and personal security. • Review the provision of street furniture and signing as part of the design process for all maintenance and improvement schemes to ensure that street clutter is minimised. • Continue to deliver the GCC 'Highways Local Initiative' and the highways 'Big Community Offer' to prioritise the delivery of highway services that deliver pedestrian improvement measures for the community. • Under the Highways Act 1980, any developer or scheme promoter, that delivers highway infrastructure to be adopted by GCC, must fully comply with the Council's Enhanced Materials Policy (Manual for Gloucestershire Streets - MfGS) and Commuted Sums Policy, whereby appropriate materials are specified and the full costs of implementation and future maintenance are factored in to the scheme budget, to limit the long term burden on pedestrian highway asset. • Regularly review the winter maintenance and vegetation clearance procedures and policies and in line with the Highways Biodiversity Guidance for Gloucestershire (or subsequent guidance) and the Green Infrastructure Pledge. • Deliver footway maintenance works outlined in the Highways Asset Management Framework. • All local highway network schemes will be subject to appropriate context reports and audits. • Work with partners to maximise investment in the county's pedestrian, cycle and rights of way networks as funding opportunities arise. This will include working in partnership with, the Local Enterprise Partnership, District Councils, Parish and Town Councils, developers, land owners, Sustrans, Highways England and Department for Transport. • Ensure development sites contribute towards the improvement of LCWIP desire lines.	No	None of the proposals under this policy will directly lead to development. The policy seeks to manage the pedestrian infrastructure.
Policy LTP PD 6.4 – Pedestrian Safety	GCC will contribute towards improved safety, security, health by reducing the risk of death, injury or illness arising from transport by working with partners to improve personal safety perceptions of using the transport network services and promote the use of transport to contribute to enjoyment and psychological wellbeing. GCC will do this by implementing the following policy proposals: • Ensure a co-ordinated approach to Thinktravel and road safety with partners; that includes proactive highway design guidance, delivery of reactive engineering solutions to highway issues, delivery of educational or campaign materials and support to assist in the monitoring and enforcement of traffic regulations.	No	None of the proposals under this policy will directly lead to development. The policy seeks to improve transportation safety.

Policy	Policy proposals	LSE?	Justification
	• Deliver a collaborative approach to road safety with partners that include proactive highway design guidance, delivery of reactive engineering solutions to highway issues, provide evidence to support engineering, education and enforcement activities. • Work in collaboration with Gloucestershire Police, agencies and campaign groups to target young drivers, motorcyclists, distraction, alcohol and drug related driving in education programmes. • Encourage greater availability of local (community based) and national training programmes for mobility scooter users. • Support communities to deliver local speed campaigns through the Safer Community Teams. • Introduce speed limits in accordance with the current national guidelines and prioritise them based on available evidence, including 20mph zones. • Reduce the rate of pedestrian casualties within Gloucestershire by providing an environment that reduces both actual and perceived risk to personal safety. The choice to walk and cycle is strongly influenced by the urban setting, for example in terms of available infrastructure, aesthetics and perceived safety. • Deliver footway maintenance works outlined in the Highways Asset Management Framework. • Work with developers and transport scheme promoters to consider, when designing new schemes, factors which influence the success of routes and facilities in terms of their use and function, such as gradient, lighting, natural surveillance, integration and signing. • Recommend the use of designated walking routes to provide attractive and safe alternatives to routes carrying high volumes of motorised traffic. • Ensure children, young people and adults are equipped with knowledge, skills and training to become more confident pedestrians. • Support communities to deliver local speed campaigns through the Safer Community Teams. • Investigate community based vehicle restriction zones that will benefit communities and protect vulnerable highway users from a safety and health perspective.		

C.2. Strategy Screening

Sector	Type of Scheme	CPS Location	Description	LSE?	Justification
Highways	New Highway Links	• CPS1 Central Severn Vale • CPS2 Forest of Dean • CPS4 South Cotswold • CPS5 Stroud • CPS6 Tewkesbury	New road infrastructure, including new roads, new roundabouts, viaducts or major junction works. May or may not link existing roads.	Yes	May lead to direct loss, disturbance or fragmentation, which may affect designated features of European sites (habitats or species). Changes in air quality, water quality, hydrological linkages, INNS and recreational pressure can also result from development depending on the scale, location and type. All schemes will need to be screened individually.
	Highway Infrastructure Improvements	• CPS1 Central Severn Vale • CPS2 Forest of Dean • CPS3 North Cotswold • CPS4 South Cotswold • CPS5 Stroud • CPS6 Tewkesbury	Improvements to existing road infrastructure such as removing pinch points, signalisation, left turn lanes, capacity improvements, works to roundabouts, optimising junction operation etc.	Yes	May lead to direct loss, disturbance or fragmentation, which may affect designated features of European sites (habitats or species). Changes in air quality, water quality, hydrological linkages, INNS and recreational pressure can also result from development depending on the scale, location and type. All schemes will need to be screened individually.
Public Transport Rail	New Rail Links	• CPS5 Stroud	Only one new rail link is proposed; Gloucester – Stonehouse (new railway station south of Gloucester, north of Bristol)	Yes	May lead to direct loss, disturbance or fragmentation, which may affect designated features of European sites (habitats or species). Changes in air quality, water quality, hydrological linkages, INNS and recreational pressure can also result from development depending on the scale, location and type. This scheme will need to be screened in more detail along with the other CPS schemes.
	Rail Infrastructure Improvements	• CPS1 Central Severn Vale • CPS2 Forest of Dean • CPS3 North Cotswold • CPS4 South Cotswold • CPS5 Stroud	Rail infrastructure improvements may comprise signal upgrades, station enhancement, improved track capacity, electrification, changes to level crossings etc.	Yes	May lead to direct loss, disturbance or fragmentation, which may affect designated features of European sites (habitats or species). Changes in air quality, water quality, hydrological linkages, INNS and recreational pressure can also result from development depending on the scale, location and type.

Sector	Type of Scheme	CPS Location	Description	LSE?	Justification
		• CPS6 Tewkesbury			All schemes will need to be screened individually.
Public Transport - Bus	New Bus Infrastructure	• CPS1 Central Severn Vale • CPS2 Forest of Dean • CPS5 Stroud	New bus infrastructure mostly comprises new strategic interchange hubs.	Yes	May lead to direct loss, disturbance or fragmentation, which may affect designated features of European sites (habitats or species). Changes in air quality, water quality, hydrological linkages, INNS and recreational pressure can also result from development depending on the scale, location and type. All schemes will need to be screened individually.
	Bus Infrastructure Improvements	• CPS1 Central Severn Vale • CPS2 Forest of Dean • CPS5 Stroud	Likely to be of relatively low impact being located at existing stations and interchanges, and comprising typically signage, bus stops and bus advantage improvements.	Yes	May lead to direct loss, disturbance or fragmentation, which may affect designated features of European sites (habitats or species). Changes in air quality, water quality, hydrological linkages, INNS and recreational pressure can also result from development depending on the scale, location and type. All schemes will need to be screened individually.
Pedestrian / Cycleways		• CPS1 Central Severn Vale • CPS2 Forest of Dean • CPS3 North Cotswold • CPS4 South Cotswold • CPS5 Stroud • CPS6 Tewkesbury	Likely to be relatively low impact schemes focussed on existing pedestrian and cycle routes. New routes and extensions may require construction land take. Note that the eight scheme priorities introduced to the LTP following consultation in January – March 2020 all fall within this Sector.	Yes	May lead to direct loss, disturbance or fragmentation, which may affect designated features of European sites (habitats or species). Changes in air quality, water quality, hydrological linkages, INNS and recreational pressure can also result from development depending on the scale, location and type. All schemes will need to be screened individually.

Appendix D. Appropriate Assessment Tables

These matrices present the results of the strategic level appropriate assessment undertaken for the actions where Likely Significant Effects could not be ruled out.

Where relevant, mitigation measures to reduce or prevent effects are included.

They are set out in accordance with the Planning Inspectorate Advice Note 10 Site Integrity Matrices.

Matrix key:

✓ = High risk of having an impact and therefore adverse effects on site integrity cannot be excluded

X = Low risk of having an impact and therefore adverse effects on site integrity are unlikely

Where effects are not relevant to a particular feature, or have been excluded at screening stage, the matrix cell has been greyed out (and an explanation is provided as to why the effect is not relevant)

C = Construction

O = Operation

Decommissioning has been excluded as any development/ construction will be retained for the foreseeable future or the actions do not have a decommissioning stage.

D.1. Cotswold Beechwoods SAC

Name of European site and designation	Cotswold Beechwoods SAC															
EU Code	UK0013658															
Distance to site (km)	Located within the LTP Area															
European site features	**Adverse effect on integrity**															
Effect	Habitat loss and fragmentation		Species disturbance (visual and acoustic)		Changes in terrestrial water quality		Changes to air quality		Changes to surface and groundwater hydrology		Introduction of INNS		Recreational pressure		In-combination assesment	
Stage of development	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
9130 Asperulo-Fagetum beech forests	a×	a×	b	b	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×
6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (*important orchid sites)	a×	a×	b	b	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×

Evidence supporting conclusions:

a: The broad geographical context of the schemes provided within the LTP indicate that none of the schemes fall within the SAC and therefore habitat loss and fragmentation are considered unlikely to have an adverse effect on integrity during construction. Impacts, if any, will be reduced/ negligible during operation.
b: Habitats are not sensitive to visual and acoustic disturbance; therefore, no pathway exists.
c: There are no obvious hydrological links to the SAC and the interest features are not reliant on terrestrial water habitats. The risk to integrity is considered to be low. The risk is considered to be greater for construction and less for operation.
d: Effects on vegetation and freshwater from emissions of NOx, acidic compounds and particulates during construction and operation could not be excluded at this stage without modelling at a project-level; without further details impacts cannot be quantified. The impact would be direct through air quality impacts on habitats.
e: Excavations and earthworks during construction have the potential to change both surface water and groundwater hydrodynamics. Permanent changes to surface water and groundwater hydrology due to the presence of buildings, foundations, roads and other infrastructure would be expected during the operational phase. As a result, the integrity of the SAC could be adversely affected but the risk is considered to be low unless a scheme of a size capable of making these changes is located in proximity to the SAC.
f: Any development has the potential to result in the spread of INNS. The implementation of Biosecurity Risk Assessments and Method Statements to cover all activities is a well-established mitigation measure which should ensure no adverse effects on the integrity of the SAC. The risk is reduced during operation due to less groundwork and other operations that could potentially introduce/ spread INNS.
g: Improved access to European sites can increase the recreation pressure on the site. Although unlikely to affect the integrity of the SAC, there is scope for an increase in recreation through the implementation of schemes within the LTP.
h: The potential for in-combination effects with a range of possible plans and projects is acknowledged. However, as adverse effects can only be assessed at the relevant stage to the extent possible on the basis of the precision of the plan/ project, it is considered that a meaningful in-combination assessment at individual European site level is not possible within this report.

D.2. Dixton Wood SAC

Name of European site and designation	Dixton Wood SAC															
EU Code	UK0030135															
Distance to site (km)	Located within the LTP Area															
European site features	**Adverse effect on integrity**															
Effect	Habitat loss and fragmentation		Species disturbance (visual and acoustic)		Changes in terrestrial water quality		Changes to air quality		Changes to surface and groundwater hydrology		Introduction of INNS		Recreational pressure		In-combination assesment	
Stage of development	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
1079 Violet click beetle	a×	a×	b	b	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×

Evidence supporting conclusions:

a: The broad geographical context of the schemes provided within the LTP indicate that none of the schemes fall within the SAC and therefore habitat loss and fragmentation are considered unlikely to have an adverse effect on integrity during construction. Impacts, if any, will be reduced/ negligible during operation.
b: Invertebrates are not sensitive to visual and acoustic disturbance; therefore, no pathway exists.
c: There are no obviously hydrological links to the SAC and the interest feature is not reliant on terrestrial water habitats. The risk to integrity is considered to be low.
d: Effects on vegetation and freshwater from emissions of NOx, acidic compounds and particulates during construction and operation could not be excluded at this stage without modelling at a project-level; without further details impacts cannot be quantified. The impact on the violet click beetle would be indirect through air quality impacts on habitats.
e: Excavations and earthworks during construction have the potential to change both surface water and groundwater hydrodynamics. Permanent changes to surface water and groundwater hydrology due to the presence of roads and other infrastructure would be expected during the operational phase. As a result, the integrity of the SAC could be adversely affected but the risk is considered to be low unless a scheme of a size capable of making these changes is located in proximity to the SAC.
f: Any development has the potential to result in the spread of INNS. The implementation of Biosecurity Risk Assessments and Method Statements to cover all activities is a well-established mitigation measure which should ensure no adverse effects on the integrity of the SAC. The risk is reduced during operation due to less groundwork and other operations that could potentially introduce/ spread INNS. As there are no schemes proposed within or immediately adjacent to the SAC, this risk is further reduced.
g: Improved access to European sites can increase the recreation pressure on the site. Although unlikely to affect the integrity of the SAC, there is scope for an increase in recreation through the implementation of schemes within the LTP.
h: The potential for in-combination effects with a range of possible plans and projects is possible. However, as adverse effects can only be assessed at the relevant stage to the extent possible on the basis of the precision of the plan/ project, it is considered that a meaningful in-combination assessment at individual European site level is not possible within this report.

D.3. River Wye SAC

Name of European site and designation	River Wye SAC															
EU Code	UK0012642															
Distance to site (km)	Located within the LTP Area															
European site features	**Adverse effect on integrity**															
Effect	Habitat loss and fragmentation		Species disturbance (visual and acoustic)		Changes in terrestrial water quality		Changes to air quality		Changes to surface and groundwater hydrology		Introduction of INNS		Recreational pressure		In-combination assesment	
Stage of development	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
3260 Water courses of plain to montane levels with the Ranunculion fluitanis and Callitichio-Batrachion vegetation	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
7140 Transition mires and quaking bogs	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1092 White-clawed crayfish	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1095 Sea lamprey	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1096 Brook lamprey	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1099 River lamprey	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1103 Twaite shad	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1106 Atlantic salmon	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1163 Bullhead	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1355 Otter	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1102 Allis shad	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×

Evidence supporting conclusions:

a: The broad geographical context of the schemes provided within the LTP indicate that none of the schemes fall within the SAC and therefore habitat loss and fragmentation are considered unlikely to have an adverse effect on integrity during construction. Impacts, if any, will be reduced/ negligible during operation.
b: Habitats are not sensitive to visual and acoustic disturbance; therefore, no pathway exists.
c: The fish/crayfish species of the SAC are likely to be sensitive to some noise and vibration immediately adjacent to the SAC, whilst otter is more prone to visual and disturbance caused by works. Both can be mitigated and neither are likely to have adverse effects on integrity. Operational impacts are likely to be lower/negligible, depending on the scheme type.
d: There is potential for hydrological links to the SAC from various schemes, depending on their location. The interest features are heavily reliant on terrestrial water features and therefore, there is scope for impacts. The risk is considered to be greater for construction than for operation.
e: Effects on vegetation and freshwater from emissions of NOx, acidic compounds and particulates during construction and operation could not be excluded at this stage without modelling at a project-level; without further details impacts cannot be quantified. The impact would be direct through air quality impacts on habitats and water quality.
f: Excavations and earthworks during construction have the potential to change both surface water and groundwater hydrodynamics. Permanent changes to surface water and groundwater hydrology due to the presence of roads and other infrastructure would be expected during the operational phase. As a result, the integrity of

the SAC could be adversely affected but the risk is considered to be low unless a scheme of a size capable of making these changes is located in proximity to the SAC.
g: Any development has the potential to result in the spread of INNS. The implementation of Biosecurity Risk Assessments and Method Statements to cover all activities is a well-established mitigation measure which should ensure no adverse effects on the integrity of the SAC. The risk is reduced during operation due to less groundwork and other operations that could potentially introduce/ spread INNS.
h: Improved access to European sites can increase the recreation pressure on the site. Although unlikely to affect the integrity of the SAC, there is scope for an increase in recreation through the implementation of schemes within the LTP.
i: The potential for in-combination effects with a range of possible plans and projects is acknowledged. However, as adverse effects can only be assessed at the relevant stage to the extent possible on the basis of the precision of the plan/ project, it is considered that a meaningful in-combination assessment at individual European site level is not possible within this report.

D.4. Rodborough Common SAC

Name of European site and designation	Rodborough Common SAC															
EU Code	UK0012826															
Distance to site (km)	Located within the LTP Area															
European site features	**Adverse effect on integrity**															
Effect	Habitat loss and fragmentation		Species disturbance (visual and acoustic)		Changes in terrestrial water quality		Changes to air quality		Changes to surface and groundwater hydrology		Introduction of INNS		Recreational pressure		In-combination assesment	
Stage of development	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (*important orchid sites)	a×	a×	b	b	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×

Evidence supporting conclusions:

a: The broad geographical context of the schemes provided within the LTP indicate that none of the schemes fall within the SAC and therefore habitat loss and fragmentation are considered unlikely to have an adverse effect on integrity during construction. Impacts, if any, will be reduced/ negligible during operation.
b: Habitats are not sensitive to visual and acoustic disturbance; therefore, no pathway exists.
c: There are no obviously hydrological links to the SAC and the interest features are not reliant on terrestrial water habitats. The risk to integrity is considered to be low. The risk is considered to be greater for construction and less for operation.
d: Effects on vegetation and freshwater from emissions of NOx, acidic compounds and particulates during construction and operation could not be excluded at this stage without modelling at a project-level; without further details impacts cannot be quantified. The impact would be direct through air quality impacts on habitats.
e: Excavations and earthworks during construction have the potential to change both surface water and groundwater hydrodynamics. Permanent changes to surface water and groundwater hydrology due to the presence of roads and other infrastructure would be expected during the operational phase. As a result, the integrity of the SAC could be adversely affected but the risk is considered to be low unless a scheme of a size capable of making these changes is located in proximity to the site.

f: Any development has the potential to result in the spread of INNS. The implementation of Biosecurity Risk Assessments and Method Statements to cover all activities is a well-established mitigation measure which should ensure no adverse effects on the integrity of the SAC. The risk is reduced during operation due to less groundwork and other operations that could potentially introduce/ spread INNS.
g: Improved access to European sites can increase the recreation pressure on the site. Although unlikely to affect the integrity of the SAC, there is scope for an increase in recreation through the implementation of schemes within the LTP.
h: The potential for in-combination effects with a range of possible plans and projects is acknowledged. However, as adverse effects can only be assessed at the relevant stage to the extent possible on the basis of the precision of the plan/ project, it is considered that a meaningful in-combination assessment at individual European site level is not possible within this report.

D.5. Severn Estuary SAC

Name of European site and designation	Severn Estuary SAC															
EU Code	UK0013030															
Distance to site (km)	Located within the LTP Area															
European site features	**Adverse effect on integrity**															
Effect	Habitat loss and fragmentation		Species disturbance (visual and acoustic)		Changes in terrestrial water quality		Changes to air quality		Changes to surface and groundwater hydrology		Introduction of INNS		Recreational pressure		In-combination assesment	
Stage of development	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
1110 Sandbanks which are slightly covered by sea water all the time	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1130 Estuaries	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1140 Mudflats and sandflats not covered by sea water at low tide	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1170 Reefs	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1310 Salicornia and other annuals colonizing mud and sand	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1320 Spartina swards (*Spartinion maritimae*)	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
2110 Embryonic shifting dunes	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1102 Allis shad	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1103 Twaite shad	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1099 River lamprey	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1095 Sea lamprey	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×

Evidence supporting conclusions:

a: The broad geographical context of the schemes provided within the LTP indicate that none of the schemes fall within the SAC and therefore habitat loss and fragmentation are considered unlikely to have an adverse effect on integrity during construction. Impacts, if any, will be reduced/ negligible during operation.

b: Habitats are not sensitive to visual and acoustic disturbance; therefore, no pathway exists.
c: The fish species of the SAC are likely to be sensitive to some noise and vibration immediately adjacent to the SAC. Both can be mitigated and neither are likely to have adverse effects on integrity. Operational impacts are likely to be lower/negligible, depending on the scheme type.
d: There is potential for hydrological links to the SAC from various schemes, depending on their location. The interest features are heavily reliant on terrestrial/estuarine water features and therefore, there is scope for impacts. The risk is considered to be greater for construction than for operation.
e: Effects on vegetation and freshwater from emissions of NOx, acidic compounds and particulates during construction and operation could not be excluded at this stage without modelling at a project-level; without further details impacts cannot be quantified. The impact would be direct through air quality impacts on habitats and water quality.
f: Excavations and earthworks during construction have the potential to change both surface water and groundwater hydrodynamics. Permanent changes to surface water and groundwater hydrology due to the presence of roads and other infrastructure would be expected during the operational phase. As a result, the integrity of the SAC could be adversely affected but the risk is considered to be low unless a scheme of a size capable of making these changes is located in proximity to the SAC.
g: Any development has the potential to result in the spread of INNS. The implementation of Biosecurity Risk Assessments and Method Statements to cover all activities is a well-established mitigation measure which should ensure no adverse effects on the integrity of the SAC. The risk is reduced during operation due to less groundwork and other operations that could potentially introduce/ spread INNS.
h: Improved access to European sites can increase the recreation pressure on the site. Although unlikely to affect the integrity of the SAC, there is scope for an increase in recreation through the implementation of schemes within the LTP.
i: The potential for in-combination effects with a range of possible plans and projects is acknowledged. However, as adverse effects can only be assessed at the relevant stage to the extent possible on the basis of the precision of the plan/ project, it is considered that a meaningful in-combination assessment at individual European site level is not possible within this report.

D.6. Severn Estuary SPA

Name of European site and designation	Severn Estuary SPA															
EU Code	UK9015022															
Distance to site (km)	Located within the LTP Area															
European site features	**Adverse effect on integrity**															
Effect	Habitat loss and fragmentation		Species disturbance (visual and acoustic)		Changes in terrestrial water quality		Changes to air quality		Changes to surface and groundwater hydrology		Introduction of INNS		Recreational pressure		In-combination assesment	
Stage of development	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
A051 Gadwall	a×	a×	b×	b×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×
A394 Greater white-fronted goose	a×	a×	b×	b×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×
A672 Dunlin	a×	a×	b×	b×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×
A037 Tundra swan	a×	a×	b×	b×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×
A048 Common shelduck	a×	a×	b×	b×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×
A162 Common redshank	a×	a×	b×	b×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×
Waterfowl assemblage	a×	a×	b×	b×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×

Evidence supporting conclusions:

a: The broad geographical context of the schemes provided within the LTP indicate that none of the schemes fall within the SPA and therefore habitat loss and fragmentation are considered unlikely to have an adverse effect on integrity during construction. Impacts, if any, will be reduced/ negligible during operation.
b: Birds are sensitive to disturbance, both visual and acoustic, and could be affected particularly during construction. The impact of disturbance on birds is dependent on the species (some are more sensitive than others), the time of year (in winter birds already stressed by cold temperatures are impacted upon more by disturbance events) and time of day (birds pushed inshore at high-tide have fewer loafing/ roosting options). Operational disturbance is considered unlikely to result in an adverse effect on SPA integrity; as it tends to comprise a more regular lower level of disturbance e.g. road noise, to which birds may become habituated.
c: There is potential for hydrological links to the SPA from various schemes, depending on their location. The interest features are heavily reliant on terrestrial/estuarine water features and therefore, there is scope for impacts. The risk is considered to be greater for construction than for operation.
d: Effects on vegetation and freshwater from emissions of NOx, acidic compounds and particulates during construction and operation could not be excluded at this stage without modelling at a project-level; without further details impacts cannot be quantified. The impact would be direct through air quality impacts on habitats and water quality.
e: Excavations and earthworks during construction have the potential to change both surface water and groundwater hydrodynamics. Permanent changes to surface water and groundwater hydrology due to the presence of roads and other infrastructure would be expected during the operational phase. As a result, the integrity of the SPA could be adversely affected but the risk is considered to be low unless a scheme of a size capable of making these changes is located in proximity to the site.
f: Any development has the potential to result in the spread of INNS. The implementation of Biosecurity Risk Assessments and Method Statements to cover all activities is a well-established mitigation measure which should ensure no adverse effects on the integrity of the SPA. The risk is reduced during operation due to less groundwork and other operations that could potentially introduce/ spread INNS.
g: Improved access to European sites can increase the recreation pressure on the site. Although unlikely to affect the integrity of the SPA, there is scope for an increase in recreation through the implementation of schemes within the LTP.
h: The potential for in-combination effects with a range of possible plans and projects is acknowledged. However, as adverse effects can only be assessed at the relevant stage to the extent possible on the basis of the precision of the plan/ project, it is considered that a meaningful in-combination assessment at individual European site level is not possible within this report.

D.7. Severn Estuary Ramsar site

Name of European site and designation	Severn Estuary Ramsar site															
EU Code	UK11081															
Distance to site (km)	Located within the LTP Area															
European site features	**Adverse effect on integrity**															
Effect	Habitat loss and fragmentation		Species disturbance (visual and acoustic)		Changes in terrestrial water quality		Changes to air quality		Changes to surface and groundwater hydrology		Introduction of INNS		Recreational pressure		In-combination assesment	
Stage of development	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
Ramsar criterion 1:																
H1110 Sandbanks which are slightly covered by sea water all the time	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
H1130 Estuaries	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
H1140 Mudflats and sandflats not covered by seawater at low tide	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
H1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
Ramsar criterion 3 - due to unusual estuarine communities, reduced diversity and high productivity	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
Ramsar criterion 4 - This site is important for the run of migratory fish between sea and river via estuary. Species include Salmon *Salmo salar* , sea trout *S. trutta* , sea lamprey *Petromyzon marinus* , river lamprey *Lampetra fluviatilis* , allis shad *Alosa alosa* , twaite shad *A. fallax* , and eel *Anguilla anguilla* . It is also of particular importance for migratory birds during spring and autumn.	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
Ramsar criterion 8 - The fish of the whole estuarine and river system is one of the most diverse in Britain, with over 110 species recorded. Salmon *Salmo salar* , sea trout *S. trutta* , sea lamprey *Petromyzon marinus* , river lamprey *Lampetra fluviatilis* , allis shad *Alosa alosa* , twaite shad *A. fallax* , and eel A*nguilla anguilla* use the Severn Estuary as a key migration route to their spawning grounds in the many tributaries that flow into the estuary. The site is important as a feeding and nursery ground for many fish species particularly allis shad and twaite shad which feed on mysid shrimps in the salt wedge.	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×

Ramsar criterion 5 - assemblages of international importance. Species with peak counts in winter.	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
Ramsar criterion 6 - species/populations ocurring at levels of international importance: Tundra swan, Greater white-fronted goose,,Common shelduck, Gadwall, Dunlin, Common redshank, Lesser black-backed gull, Ringed plover, Eurasina teal, Northern pintail.	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×

Evidence supporting conclusions:

a: The broad geographical context of the schemes provided within the LTP indicate that none of the schemes fall within the Ramsar site and therefore habitat loss and fragmentation are considered unlikely to have an adverse effect on integrity during construction. Impacts, if any, will be reduced/ negligible during operation.
b: Habitats are not sensitive to visual and acoustic disturbance; therefore, no pathway exists.
c: The fish/crayfish species of the Ramsar site are likely to be sensitive to some noise and vibration immediately adjacent to the Ramsar site, whilst otter is more prone to visual and disturbance caused by works. Both can be mitigated and neither are likely to have adverse effects on integrity. Operational impacts are likely to be lower/negligible, depending on the scheme type.
d: There is potential for hydrological links to the Ramsar site from various schemes, depending on their location. The interest features are heavily reliant on terrestrial water features and therefore, there is scope for impacts. The risk is considered to be greater for construction than for operation.
e: Effects on vegetation and freshwater from emissions of NOx, acidic compounds and particulates during construction and operation could not be excluded at this stage without modelling at a project-level; without further details impacts cannot be quantified. The impact would be direct through air quality impacts on habitats and water quality.
f: Excavations and earthworks during construction have the potential to change both surface water and groundwater hydrodynamics. Permanent changes to surface water and groundwater hydrology due to the presence of roads and other infrastructure would be expected during the operational phase. As a result, the integrity of the Ramsar site could be adversely affected but the risk is considered to be low unless a scheme of a size capable of making these changes is located in proximity to the site.
g: Any development has the potential to result in the spread of INNS. The implementation of Biosecurity Risk Assessments and Method Statements to cover all activities is a well-established mitigation measure which should ensure no adverse effects on the integrity of the Ramsar site. The risk is reduced during operation due to less groundwork and other operations that could potentially introduce/ spread INNS.
h: Improved access to European sites can increase the recreation pressure on the site. Although unlikely to affect the integrity of the Ramsar site, there is scope for an increase in recreation through the implementation of schemes within the LTP.
i: The potential for in-combination effects with a range of possible plans and projects is acknowledged. However, as adverse effects can only be assessed at the relevant stage to the extent possible on the basis of the precision of the plan/ project, it is considered that a meaningful in-combination assessment at individual European site level is not possible within this report.

D.8. Walmore Common SPA

Name of European site and designation	Walmore Common SPA															
EU Code	UK9007051															
Distance to site (km)	Located within the LTP Area															
European site features	**Adverse effect on integrity**															
Effect	Habitat loss and fragmentation		Species disturbance (visual and acoustic)		Changes in terrestrial water quality		Changes to air quality		Changes to surface and groundwater hydrology		Introduction of INNS		Recreational pressure		In-combination assesment	
Stage of development	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
A037 Tundra swan	a×	a×	b×	b×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×

Evidence supporting conclusions:

a: The broad geographical context of the schemes provided within the LTP indicate that none of the schemes fall within the SPA and therefore habitat loss and fragmentation are considered unlikely to have an adverse effect on integrity during construction. Impacts, if any, will be reduced/ negligible during operation.
b: Birds are sensitive to disturbance, both visual and acoustic, and could be affected particularly during construction. The impact of disturbance on birds is dependent on the species (some are more sensitive than others), the time of year (in winter birds already stressed by cold temperatures are impacted upon more by disturbance events) and time of day (birds pushed inshore at high-tide have fewer loafing/ roosting options). Operational disturbance is considered unlikely to result in an adverse effect on SPA integrity; as it tends to comprise a more regular lower level of disturbance e.g. road noise, to which birds may become habituated.
c: Although the SPA has a network of drains and is within 500 m of the River Severn, the potential for hydrological links to the SPA from various schemes is low. The interest features are not reliant on terrestrial/estuarine water features and therefore, the scope for impacts is reduced.
d: Effects on vegetation and freshwater from emissions of NOx, acidic compounds and particulates during construction and operation could not be excluded at this stage without modelling at a project-level; without further details impacts cannot be quantified. The impact would be direct through air quality impacts on habitats.
e: Excavations and earthworks during construction have the potential to change both surface water and groundwater hydrodynamics. Permanent changes to surface water and groundwater hydrology due to the presence of roads and other infrastructure would be expected during the operational phase. As a result, the integrity of the SPA could be adversely affected but the risk is considered to be low unless a scheme of a size capable of making these changes is located in proximity to the site.
f: Any development has the potential to result in the spread of INNS. The implementation of Biosecurity Risk Assessments and Method Statements to cover all activities is a well-established mitigation measure which should ensure no adverse effects on the integrity of the SPA. The risk is reduced during operation due to less groundwork and other operations that could potentially introduce/ spread INNS.
g: Improved access to European sites can increase the recreation pressure on the site. Although unlikely to affect the integrity of the SPA, there is scope for an increase in recreation through the implementation of schemes within the LTP.
h: The potential for in-combination effects with a range of possible plans and projects is acknowledged. However, as adverse effects can only be assessed at the relevant stage to the extent possible on the basis of the precision of the plan/ project, it is considered that a meaningful in-combination assessment at individual European site level is not possible within this report.

D.9. Walmore Common Ramsar site

Name of European site and designation	Walmore Common Ramsar site															
EU Code	UK11076															
Distance to site (km)	Located within the LTP Area															
European site features	**Adverse effect on integrity**															
Effect	Habitat loss and fragmentation		Species disturbance (visual and acoustic)		Changes in terrestrial water quality		Changes to air quality		Changes to surface and groundwater hydrology		Introduction of INNS		Recreational pressure		In-combination assesment	
Stage of development	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
Ramsar criterion 6 - species/populations ocurring at levels of international importance: Tundra swan	a×	a×	b×	b×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×

Evidence supporting conclusions:

a: The broad geographical context of the schemes provided within the LTP indicate that none of the schemes fall within the Ramsar site and therefore habitat loss and fragmentation are considered unlikely to have an adverse effect on integrity during construction. Impacts, if any, will be reduced/ negligible during operation.
b: Birds are sensitive to disturbance, both visual and acoustic, and could be affected particularly during construction. The impact of disturbance on birds is dependent on the species (some are more sensitive than others), the time of year (in winter birds already stressed by cold temperatures are impacted upon more by disturbance events) and time of day (birds pushed inshore at high-tide have fewer loafing/ roosting options). Operational disturbance is considered unlikely to result in an adverse effect on SPA integrity; as it tends to comprise a more regular lower level of disturbance e.g. road noise, to which birds may become habituated.
c: Although the Ramsar site has a network of drains and is within 500 m of the River Severn, the potential for hydrological links to the Ramsar site from various schemes is low. The interest features are not reliant on terrestrial/estuarine water features and therefore, the scope for impacts is reduced.
d: Effects on vegetation and freshwater from emissions of NOx, acidic compounds and particulates during construction and operation could not be excluded at this stage without modelling at a project-level; without further details impacts cannot be quantified. The impact would be direct through air quality impacts on habitats.
e: Excavations and earthworks during construction have the potential to change both surface water and groundwater hydrodynamics. Permanent changes to surface water and groundwater hydrology due to the presence of roads and other infrastructure would be expected during the operational phase. As a result, the integrity of the Ramsar site could be adversely affected but the risk is considered to be low unless a scheme of a size capable of making these changes is located in proximity to the site.
f: Any development has the potential to result in the spread of INNS. The implementation of Biosecurity Risk Assessments and Method Statements to cover all activities is a well-established mitigation measure which should ensure no adverse effects on the integrity of the Ramsar site. The risk is reduced during operation due to less groundwork and other operations that could potentially introduce/ spread INNS.
g: Improved access to European sites can increase the recreation pressure on the site. Although unlikely to affect the integrity of the Ramsar site, there is scope for an increase in recreation through the implementation of schemes within the LTP.
h: The potential for in-combination effects with a range of possible plans and projects is acknowledged. However, as adverse effects can only be assessed at the relevant stage to the extent possible on the basis of the precision of the plan/ project, it is considered that a meaningful in-combination assessment at individual European site level is not possible within this report.

D.10. Wye Valley & Forest of Dean Bat Sites SAC

Name of European site and designation	Wye Valley & Forest of Dean Bat Sites SAC															
EU Code	UK0014794															
Distance to site (km)	Located within the LTP Area															
European site features	**Adverse effect on integrity**															
Effect	Habitat loss and fragmentation		Species disturbance (visual and acoustic)		Changes in terrestrial water quality		Changes to air quality		Changes to surface and groundwater hydrology		Introduction of INNS		Recreational pressure		In-combination assesment	
Stage of development	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
1304 Greater horseshoe bat	a×	a×	b×	b×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×
1323 Bechstein's bat	a×	a×	b×	b×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×
1303 Lesser horseshoe bat	a×	a×	b×	b×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×

Evidence supporting conclusions:

a: The broad geographical context of the schemes provided within the LTP indicate that none of the schemes fall within the SAC and therefore habitat loss and fragmentation are considered unlikely to have an adverse effect on integrity during construction. Impacts, if any, will be reduced/ negligible during operation.
b: Bats are sensitive to disturbance, both visual and acoustic, and could be affected particularly during construction. The impact of disturbance on bats is dependent on the time of year (whether bats are breeding/ using maternity roosts) and time of day (roosting during the day, active dusk-dawn). Operational disturbance is considered unlikely to result in an adverse effect on SAC integrity; but this can only be concluded with more detailed information about each scheme.
c: There are no obviously hydrological links to the SAC and the interest features are not reliant on terrestrial water habitats. The risk to integrity is considered to be low. The risk is considered to be greater for construction and less for operation.
d: Effects on vegetation and freshwater from emissions of NOx, acidic compounds and particulates during construction and operation could not be excluded at this stage without modelling at a project-level; without further details impacts cannot be quantified. The impact would be direct through air quality impacts on habitats.
e: Excavations and earthworks during construction have the potential to change both surface water and groundwater hydrodynamics. Permanent changes to surface water and groundwater hydrology due to the presence of roads and other infrastructure would be expected during the operational phase. As a result, the integrity of the SAC could be adversely affected but the risk is considered to be low unless a scheme of a size capable of making these changes is located in proximity to the site.
f: Any development has the potential to result in the spread of INNS. The implementation of Biosecurity Risk Assessments and Method Statements to cover all activities is a well-established mitigation measure which should ensure no adverse effects on the integrity of the SAC. The risk is reduced during operation due to less groundwork and other operations that could potentially introduce/ spread INNS.
g: Improved access to European sites can increase the recreation pressure on the site. Although unlikely to affect the integrity of the SAC, there is scope for an increase in recreation through the implementation of schemes within the LTP.
h: The potential for in-combination effects with a range of possible plans and projects is acknowledged. However, as adverse effects can only be assessed at the relevant stage to the extent possible on the basis of the precision of the plan/ project, it is considered that a meaningful in-combination assessment at individual European site level is not possible within this report.

D.11. Wye Valley Woodlands SAC

Name of European site and designation	Wye Valley Woodlands SAC															
EU Code	UK0012727															
Distance to site (km)	Located within the LTP Area															
European site features	**Adverse effect on integrity**															
Effect	Habitat loss and fragmentation		Species disturbance (visual and acoustic)		Changes in terrestrial water quality		Changes to air quality		Changes to surface and groundwater hydrology		Introduction of INNS		Recreational pressure		In-combination assesment	
Stage of development	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
9130 Asperulo-Fagetum beech forests	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
9180 Tilio-Acerion forests of slopes, screes and ravines * Priority feature	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
91J0 Taxus baccata woods of the British Isles *Priority feature	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1303 Lesser horseshoe bat	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×

Evidence supporting conclusions:

a: The broad geographical context of the schemes provided within the LTP indicate that none of the schemes fall within the SAC and therefore habitat loss and fragmentation are considered unlikely to have an adverse effect on integrity during construction. Impacts, if any, will be reduced/ negligible during operation.
b: Habitats are not sensitive to visual and acoustic disturbance; therefore, no pathway exists.
c: Bats are sensitive to disturbance, both visual and acoustic, and could be affected particularly during construction. The impact of disturbance on bats is dependent on the time of year (whether bats are breeding/ using maternity roosts), time of day (roosting during the day, active dusk-dawn) and the proximity to habitats used by bats within and outside the SAC. Operational disturbance is considered unlikely to result in an adverse effect on SAC integrity; but this can only be concluded with more detailed information about each scheme.
d: There are no obviously hydrological links to the SAC and the interest features are not reliant on terrestrial water habitats. The risk to integrity is considered to be low. The risk is considered to be greater for construction and less for operation.
e: Effects on vegetation and freshwater from emissions of NOx, acidic compounds and particulates during construction and operation could not be excluded at this stage without modelling at a project-level; without further details impacts cannot be quantified. The impact would be direct through air quality impacts on habitats.
f: Excavations and earthworks during construction have the potential to change both surface water and groundwater hydrodynamics. Permanent changes to surface water and groundwater hydrology due to the presence of roads and other infrastructure would be expected during the operational phase. As a result, the integrity of the SAC could be adversely affected but the risk is considered to be low unless a scheme of a size capable of making these changes is located in proximity to the site.
g: Any development has the potential to result in the spread of INNS. The implementation of Biosecurity Risk Assessments and Method Statements to cover all activities is a well-established mitigation measure which should ensure no adverse effects on the integrity of the SAC. The risk is reduced during operation due to less groundwork and other operations that could potentially introduce/ spread INNS.
h: Improved access to European sites can increase the recreation pressure on the site. Although unlikely to affect the integrity of the SAC, there is scope for an increase in recreation through the implementation of schemes within the LTP.

i: The potential for in-combination effects with a range of possible plans and projects is acknowledged. However, as adverse effects can only be assessed at the relevant stage to the extent possible on the basis of the precision of the plan/ project, it is considered that a meaningful in-combination assessment at individual European site level is not possible within this report.

D.12. Avon Gorge Woodlands SAC

Name of European site and designation	Avon Gorge Woodlands SAC															
EU Code	UK0012734															
Distance to site (km)	Located within 13 km of the LTP Area															
European site features	**Adverse effect on integrity**															
Effect	Habitat loss and fragmentation		Species disturbance (visual and acoustic)		Changes in terrestrial water quality		Changes to air quality		Changes to surface and groundwater hydrology		Introduction of INNS		Recreational pressure		In-combination assesment	
Stage of development	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
9180 Tilio-Acerion forests of slopes, screes and ravines *Priority feature	a×	a×	b	b	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×
6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (*important orchid sites)	a×	a×	b	b	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×

Evidence supporting conclusions:

a: The broad geographical context of the schemes provided within the LTP indicate that none of the schemes fall within the SAC and therefore habitat loss and fragmentation are considered unlikely to have an adverse effect on integrity during construction. Impacts, if any, will be reduced/ negligible during operation.
b: Habitats are not sensitive to visual and acoustic disturbance; therefore, no pathway exists.
c: Although the SAC straddles the River Avon, the potential for hydrological links to the SAC from various schemes is low, particularly given its location 13 km outside the LTP area. The interest features are not reliant on terrestrial water features and therefore, the scope for impacts is reduced.
d: Effects on vegetation and freshwater from emissions of NOx, acidic compounds and particulates during construction and operation could not be excluded at this stage without modelling at a project-level; without further details impacts cannot be quantified. The impact would be direct through air quality impacts on habitats.
e: Excavations and earthworks during construction have the potential to change both surface water and groundwater hydrodynamics. Permanent changes to surface water and groundwater hydrology due to the presence of buildings, foundations, roads and other infrastructure would be expected during the operational phase. As a result, the integrity of the SAC could be adversely affected but the risk is considered to be low unless a scheme of a size capable of making these changes is located in proximity to the SAC.
f: Any development has the potential to result in the spread of INNS. The implementation of Biosecurity Risk Assessments and Method Statements to cover all activities is a well-established mitigation measure which should ensure no adverse effects on the integrity of the SAC. The risk is reduced during operation due to less groundwork and other operations that could potentially introduce/ spread INNS.
g: Improved access to European sites can increase the recreation pressure on the site. Although unlikely to affect the integrity of the SAC, there is scope for an increase in recreation through the implementation of schemes within the LTP.

h: The potential for in-combination effects with a range of possible plans and projects is acknowledged. However, as adverse effects can only be assessed at the relevant stage to the extent possible on the basis of the precision of the plan/ project, it is considered that a meaningful in-combination assessment at individual European site level is not possible within this report.

D.13. Bredon Hill SAC

Name of European site and designation	Bredon Hill SAC															
EU Code	UK0012587															
Distance to site (km)	Located within 1.6 km of the LTP Area															
European site features	**Adverse effect on integrity**															
Effect	Habitat loss and fragmentation		Species disturbance (visual and acoustic)		Changes in terrestrial water quality		Changes to air quality		Changes to surface and groundwater hydrology		Introduction of INNS		Recreational pressure		In-combination assesment	
Stage of development	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
1079 Violet click beetle	a×	a×	b	b	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×

Evidence supporting conclusions:

a: The broad geographical context of the schemes provided within the LTP indicate that none of the schemes fall within the SAC and therefore habitat loss and fragmentation are considered unlikely to have an adverse effect on integrity during construction. Impacts, if any, will be reduced/ negligible during operation.
b: Invertebrates are not sensitive to visual and acoustic disturbance; therefore, no pathway exists.
c: There are no obviously hydrological links to the SAC and the interest feature is not reliant on terrestrial water habitats. The risk to integrity is considered to be low.
d: Effects on vegetation and freshwater from emissions of NOx, acidic compounds and particulates during construction and operation could not be excluded at this stage without modelling at a project-level; without further details impacts cannot be quantified. The impact on the violet click beetle would be indirect through air quality impacts on habitats.
e: Excavations and earthworks during construction have the potential to change both surface water and groundwater hydrodynamics. Permanent changes to surface water and groundwater hydrology due to the presence of roads and other infrastructure would be expected during the operational phase. As a result, the integrity of the SAC could be adversely affected but the risk is considered to be low unless a scheme of a size capable of making these changes is located in proximity to the SAC.
f: Any development has the potential to result in the spread of INNS. The implementation of Biosecurity Risk Assessments and Method Statements to cover all activities is a well-established mitigation measure which should ensure no adverse effects on the integrity of the SAC. The risk is reduced during operation due to less groundwork and other operations that could potentially introduce/ spread INNS. As there are no schemes proposed within or immediately adjacent to the SAC, this risk is further reduced.
g: Improved access to European sites can increase the recreation pressure on the site. Although unlikely to affect the integrity of the SAC, there is scope for an increase in recreation through the implementation of schemes within the LTP.
h: The potential for in-combination effects with a range of possible plans and projects is possible. However, as adverse effects can only be assessed at the relevant stage to the extent possible on the basis of the precision of the plan/ project, it is considered that a meaningful in-combination assessment at individual European site level is not possible within this report.

D.14. North Meadow & Clattinger Farm SAC

Name of European site and designation	North Meadow & Clattinger Farm SAC															
EU Code	UK0016372															
Distance to site (km)	Located within 0 km of the LTP Area (adjacent to the county boundary)															
European site features	**Adverse effect on integrity**															
Effect	Habitat loss and fragmentation		Species disturbance (visual and acoustic)		Changes in terrestrial water quality		Changes to air quality		Changes to surface and groundwater hydrology		Introduction of INNS		Recreational pressure		In-combination assesment	
Stage of development	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
6510 Lowland hay meadows (*Alopecurus pratensis, Sanguisorba officinalis*)	a×	a×	b	b	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×

Evidence supporting conclusions:

a: The broad geographical context of the schemes provided within the LTP indicate that none of the schemes fall within the SAC and therefore habitat loss and fragmentation are considered unlikely to have an adverse effect on integrity during construction. Impacts, if any, will be reduced/ negligible during operation.
b: Habitats are not sensitive to visual and acoustic disturbance; therefore, no pathway exists.
c: There are no obviously hydrological links to the SAC and the interest feature is not reliant on terrestrial water habitats. The risk to integrity is considered to be low.
d: Effects on vegetation and freshwater from emissions of NOx, acidic compounds and particulates during construction and operation could not be excluded at this stage without modelling at a project-level; without further details impacts cannot be quantified. The impact would be direct through air quality impacts on habitats.
e: Excavations and earthworks during construction have the potential to change both surface water and groundwater hydrodynamics. Permanent changes to surface water and groundwater hydrology due to the presence of buildings, foundations, roads and other infrastructure would be expected during the operational phase. As a result, the integrity of the SAC could be adversely affected but the risk is considered to be low unless a scheme of a size capable of making these changes is located in proximity to the SAC.
f: Any development has the potential to result in the spread of INNS. The implementation of Biosecurity Risk Assessments and Method Statements to cover all activities is a well-established mitigation measure which should ensure no adverse effects on the integrity of the SAC. The risk is reduced during operation due to less groundwork and other operations that could potentially introduce/ spread INNS.
g: Improved access to European sites can increase the recreation pressure on the site. Although unlikely to affect the integrity of the SAC, there is scope for an increase in recreation through the implementation of schemes within the LTP.
h: The potential for in-combination effects with a range of possible plans and projects is acknowledged. However, as adverse effects can only be assessed at the relevant stage to the extent possible on the basis of the precision of the plan/ project, it is considered that a meaningful in-combination assessment at individual European site level is not possible within this report.

D.15. River Usk/ Afon Wysg SAC

Name of European site and designation	River Usk/ Afon Wysg SAC															
EU Code	UK0013007															
Distance to site (km)	Located within 14 km of the LTP Area															
European site features	**Adverse effect on integrity**															
Effect	Habitat loss and fragmentation		Species disturbance (visual and acoustic)		Changes in terrestrial water quality		Changes to air quality		Changes to surface and groundwater hydrology		Introduction of INNS		Recreational pressure		In-combination assesment	
Stage of development	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
3260 Water courses of plain to montane levels with the Ranunculion fluitanis and Callitichio-Batrachion vegetation	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1095 Sea lamprey	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1096 Brook lamprey	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1099 River lamprey	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1103 Twaite shad	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1106 Atlantic salmon	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1163 Bullhead	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1355 Otter	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1102 Allis shad	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×

Evidence supporting conclusions:

a: The broad geographical context of the schemes provided within the LTP indicate that none of the schemes fall within the SAC and therefore habitat loss and fragmentation are considered unlikely to have an adverse effect on integrity during construction. Impacts, if any, will be reduced/ negligible during operation.
b: Habitats are not sensitive to visual and acoustic disturbance; therefore, no pathway exists.
c: The fish/crayfish species of the SAC are likely to be sensitive to some noise and vibration immediately adjacent to the SAC, whilst otter is more prone to visual and disturbance caused by works. Both can be mitigated and neither are likely to have adverse effects on integrity. Operational impacts are likely to be lower/negligible, depending on the scheme type.
d: There is potential for hydrological links to the SAC from various schemes, depending on their location. The interest features are heavily reliant on terrestrial water features and therefore, there is scope for impacts. The risk is considered to be greater for construction than for operation.
e: Effects on vegetation and freshwater from emissions of NOx, acidic compounds and particulates during construction and operation could not be excluded at this stage without modelling at a project-level; without further details impacts cannot be quantified. The impact would be direct through air quality impacts on habitats and water quality.
f: Excavations and earthworks during construction have the potential to change both surface water and groundwater hydrodynamics. Permanent changes to surface water and groundwater hydrology due to the presence of roads and other infrastructure would be expected during the operational phase. As a result, the integrity of the SAC could be adversely affected but the risk is considered to be low unless a scheme of a size capable of making these changes is located in proximity to the SAC.

g: Any development has the potential to result in the spread of INNS. The implementation of Biosecurity Risk Assessments and Method Statements to cover all activities is a well-established mitigation measure which should ensure no adverse effects on the integrity of the SAC. The risk is reduced during operation due to less groundwork and other operations that could potentially introduce/ spread INNS.
h: Improved access to European sites can increase the recreation pressure on the site. Although unlikely to affect the integrity of the SAC, there is scope for an increase in recreation through the implementation of schemes within the LTP.
i: The potential for in-combination effects with a range of possible plans and projects is acknowledged. However, as adverse effects can only be assessed at the relevant stage to the extent possible on the basis of the precision of the plan/ project, it is considered that a meaningful in-combination assessment at individual European site level is not possible within this report.

D.16. Bath and Bradford-upon-Avon Bats SAC

Name of European site and designation	Bath and Bradford-upon-Avon Bats SAC															
EU Code	UK0012584															
Distance to site (km)	Located within 17 km of the LTP Area															
European site features	**Adverse effect on integrity**															
Effect	Habitat loss and fragmentation		Species disturbance (visual and acoustic)		Changes in terrestrial water quality		Changes to air quality		Changes to surface and groundwater hydrology		Introduction of INNS		Recreational pressure		In-combination assesment	
Stage of development	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
1304 Greater horseshoe bat	a×	a×	b×	b×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×
1323 Bechstein's bat	a×	a×	b×	b×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×
1303 Lesser horseshoe bat	a×	a×	b×	b×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×

Evidence supporting conclusions:

a: The broad geographical context of the schemes provided within the LTP indicate that none of the schemes fall within the SAC and therefore habitat loss and fragmentation are considered unlikely to have an adverse effect on integrity during construction. Impacts, if any, will be reduced/ negligible during operation.
b: Bats are sensitive to disturbance, both visual and acoustic, and could be affected particularly during construction. The impact of disturbance on bats is dependent on the time of year (whether bats are breeding/ using maternity roosts) and time of day (roosting during the day, active dusk-dawn). Operational disturbance is considered unlikely to result in an adverse effect on SAC integrity; but this can only be concluded with more detailed information about each scheme.
c: There are no obviously hydrological links to the SAC and the interest features are not reliant on terrestrial water habitats. The risk to integrity is considered to be low. The risk is considered to be greater for construction and less for operation.
d: Effects on vegetation and freshwater from emissions of NOx, acidic compounds and particulates during construction and operation could not be excluded at this stage without modelling at a project-level; without further details impacts cannot be quantified. The impact would be direct through air quality impacts on habitats.
e: Excavations and earthworks during construction have the potential to change both surface water and groundwater hydrodynamics. Permanent changes to surface water and groundwater hydrology due to the presence of roads and other infrastructure would be expected during the operational phase. As a result, the integrity of the SAC could be adversely affected but the risk is considered to be low unless a scheme of a size capable of making these changes is located in proximity to the site.

f: Any development has the potential to result in the spread of INNS. The implementation of Biosecurity Risk Assessments and Method Statements to cover all activities is a well-established mitigation measure which should ensure no adverse effects on the integrity of the SAC. The risk is reduced during operation due to less groundwork and other operations that could potentially introduce/ spread INNS.
g: Improved access to European sites can increase the recreation pressure on the site. Although unlikely to affect the integrity of the SAC, there is scope for an increase in recreation through the implementation of schemes within the LTP.
h: The potential for in-combination effects with a range of possible plans and projects is acknowledged. However, as adverse effects can only be assessed at the relevant stage to the extent possible on the basis of the precision of the plan/ project, it is considered that a meaningful in-combination assessment at individual European site level is not possible within this report.

D.17. North Somerset and Mendip Bats SAC

Name of European site and designation	North Somerset and Mendip Bats SAC															
EU Code	UK0030052															
Distance to site (km)	Located within 25 km of the LTP Area															
European site features	**Adverse effect on integrity**															
Effect	Habitat loss and fragmentation		Species disturbance (visual and acoustic)		Changes in terrestrial water quality		Changes to air quality		Changes to surface and groundwater hydrology		Introduction of INNS		Recreational pressure		In-combination assesment	
Stage of development	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (*important orchid sites)	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
9180 Tilio-Acerion forests of slopes, screes and ravines *Priority feature	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
8310 Caves not open to the public	a×	a×	b	b	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1303 Lesser horseshoe bat	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×
1304 Greater horseshoe bat	a×	a×	c×	c×	d×	d×	e×	e×	f×	f×	g×	g×	h×	h×	i×	i×

Evidence supporting conclusions:

a: The broad geographical context of the schemes provided within the LTP indicate that none of the schemes fall within the SAC and therefore habitat loss and fragmentation are considered unlikely to have an adverse effect on integrity during construction. Impacts, if any, will be reduced/ negligible during operation.
b: Habitats are not sensitive to visual and acoustic disturbance; therefore, no pathway exists.
c: Bats are sensitive to disturbance, both visual and acoustic, and could be affected particularly during construction. The impact of disturbance on bats is dependent on the time of year (whether bats are breeding/ using maternity roosts), time of day (roosting during the day, active dusk-dawn) and the proximity to habitats used by bats within and outside the SAC. Operational disturbance is considered unlikely to result in an adverse effect on SAC integrity; but this can only be concluded with more detailed information about each scheme.
d: There are no obviously hydrological links to the SAC and the interest features are not reliant on terrestrial water habitats. The risk to integrity is considered to be low. The risk is considered to be greater for construction and less for operation.

e: Effects on vegetation and freshwater from emissions of NOx, acidic compounds and particulates during construction and operation could not be excluded at this stage without modelling at a project-level; without further details impacts cannot be quantified. The impact would be direct through air quality impacts on habitats.
f: Excavations and earthworks during construction have the potential to change both surface water and groundwater hydrodynamics. Permanent changes to surface water and groundwater hydrology due to the presence of roads and other infrastructure would be expected during the operational phase. As a result, the integrity of the SAC could be adversely affected but the risk is considered to be low unless a scheme of a size capable of making these changes is located in proximity to the site.
g: Any development has the potential to result in the spread of INNS. The implementation of Biosecurity Risk Assessments and Method Statements to cover all activities is a well-established mitigation measure which should ensure no adverse effects on the integrity of the SAC. The risk is reduced during operation due to less groundwork and other operations that could potentially introduce/ spread INNS.
h: Improved access to European sites can increase the recreation pressure on the site. Although unlikely to affect the integrity of the SAC, there is scope for an increase in recreation through the implementation of schemes within the LTP.
i: The potential for in-combination effects with a range of possible plans and projects is acknowledged. However, as adverse effects can only be assessed at the relevant stage to the extent possible on the basis of the precision of the plan/ project, it is considered that a meaningful in-combination assessment at individual European site level is not possible within this report.

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