

# A417 Missing Link DCO

## Local Impact Report

Gloucestershire County Council, Cotswold District Council,  
Tewkesbury Borough Council

14 December 2021



# Notice

This document and its contents have been prepared and are intended solely as information for Gloucestershire County Council, Cotswold District Council, Tewkesbury Borough Council and use in relation to the A417 Missing Link DCO Examination.

SNC-Lavalin assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.


## Document history

Document title: Local Impact Report

Document reference: A417ML.LIR

Revision	Purpose description	Date
1.0	Deadline 1 Submission	14/12/2021

## Client signoff

Client	Gloucestershire County Council, Cotswold District Council, Tewkesbury Borough Council
Project	A417 Missing Link DCO
Job number	5206450
Client signature/date	

# Contents

Chapter	Page
<b>1. Introduction</b>	<b>4</b>
1.1. Terms of reference	4
<b>2. The Scheme Context</b>	<b>5</b>
2.1. Description of the area	5
2.2. Need for the Scheme	5
2.3. Statutory Development Plan	6
<b>3. Review of Impacts</b>	<b>7</b>
3.1. Traffic, Transport and Highways	7
3.2. Air Quality	9
3.3. Cultural Heritage	10
3.4. Landscape and Visual Effects	12
3.5. Biodiversity	13
3.6. Geology and Soils	14
3.7. Material Assets and Waste	15
3.8. Noise and Vibration	16
3.9. Population and Human Health	17
3.10. Water Environment	19
3.11. Climate Change	20
3.12. Draft Development Consent Order	21

# 1. Introduction

## 1.1. Terms of reference

- 1.1.1. This report comprises the Local Impact Report (LIR) of Gloucestershire County Council (GCC), Cotswold District Council (CDC) and Tewkesbury Borough Council (TBC). GCC, CDC and TBC are referred to throughout this report as the 'Joint Councils', are the host authorities for the National Highways (NH) A417 Missing Link Development Consent Order (DCO) referred to as 'the Scheme'.
- 1.1.2. The LIR intends to provide the Examining Authority (ExA) with the Joint Councils' understanding of the site, surrounding area, relevant local issues, planning policies and how the Scheme positively and adversely impacts this context. The review of impacts highlights the key issues arising from the Scheme, the relative importance of these impacts, and the extent to which the applicant's draft DCO (dDCO) adequately addresses them.
- 1.1.3. The LIR presents a broad view of the impacts on the local area. In producing the LIR the Joint Councils have not sought the views of local interest groups as to any particular matters that should be reflected in the report.
- 1.1.4. While the LIR mentions the key issues, it does not provide the detail of the Joint Councils' positions on the merits of the application. This detail is presented in the Joint Councils' Written Representation and responses provided to the ExA's Written Questions at Deadline 1. The Joint Councils matters agreed and outstanding with NH are detailed in Appendix A of the Statement of Commonality [APP-419].

## 2. The Scheme Context

### 2.1. Description of the area

- 2.1.1. The Scheme sits in a predominantly rural area. The existing carriageway passes through agricultural land and in proximity to areas of woodland, as does the proposed new alignment. Nearby settlements include the villages of Birdlip, Cowley, Cockleford and Coberley. The National Star College is an important community facility in the area and lies partly within the Scheme. Residential properties are scattered throughout the area surrounding the Scheme, as are businesses including farm holdings, Birdlip Radio Station, Crickley Hill Tractors, Rushwood Kennels, the Golden Heart Inn and the Air Balloon Public House.
- 2.1.2. The entire Scheme is situated within the Cotswolds Area of Outstanding Natural Beauty (AONB). The AONB is designated for its outstanding landscape value, which is characterised by low-lying vales, steep escarpment, high wold and valleys. The Scheme lies predominantly in the high wold. Among its key qualities are its dark night skies. Part of the Scheme is located within the Barrow Wake unit of the Crickley Hill and Barrow Wake Site of Special Scientific Interest (SSSI), and part of the SSSI is also designated Common Land.
- 2.1.3. The Birdlip Air Quality Management Area (AQMA) is situated within the boundary of the Scheme and includes within it, residential properties at the Air Balloon Roundabout.
- 2.1.4. There are four Noise Important Areas (NIA) that are adjacent to the A417 west of the Air Balloon Roundabout at Air Balloon Cottages, Crickley Court, Fernbank and Woodside House. There are two NIAs located on the A417 north of Cowley Roundabout at Castle Hill Cottage and on the A436 near National Star College, at Laurel Cottage and Lychett Cottage.
- 2.1.5. The Crickley Hill Country Park is situated immediately west of the Air Balloon roundabout at the northern extent of the Scheme. Passing through the landscape, crossing the A417 and located within the boundary of the Scheme are the Cotswold Way National Trail and the Gloucestershire Way long distance footpath, along with a network of public rights of way. This network is well used by locals and tourists visiting the AONB, local viewpoints and the Crickley Hill Country Park. The paths interact with and connect to local highways and the existing A417.

### 2.2. Need for the Scheme

- 2.2.1. The need for this Scheme has been apparent for many years. The A417 is an essential part of the County's transport network. It provides a strategic link between the M4 at Swindon and the M5 at Gloucester and is essential for the movement of people and goods within and through Gloucestershire and the surrounding regions.
- 2.2.2. This section of the A417 has a very poor safety record. The Joint Councils is aware of 8 fatal and 18 serious personal injury collisions during the five-year period between 2016 and 2021. There was a fatality on this route as recently as October 2021. The Scheme is needed to address and reduce the risk of serious and fatal accidents.
- 2.2.3. The Scheme would dual the only remaining single carriageway section of the A417, in doing so this would remove the bottleneck for strategic traffic travelling between the M5 and M4 which causes congestion for users of the road and causes rat running through local communities. It is considered that local communities would experience improved safety on local roads through a reduction in strategic traffic taking alternative routes to avoid delays on the A417.
- 2.2.4. NH has set out a detailed description of the need for the Scheme in 7.1 Case for the Scheme [APP-417].

## 2.3. Statutory Development Plan

2.3.1. Given that the Scheme is a Nationally Significant Infrastructure Project (NSIP), the National Planning Policy Framework (NPPF) has the status of a material consideration in planning terms. Development plans are prepared under the NPPF, and National Policy Statement for National Networks recognises the relevance of the development plan to NSIPs.

2.3.2. The relevant Development Plans covering the Scheme are introduced below.

### Cotswold District Council

2.3.3. The Local Plan for Cotswold District comprises the Local Plan 2011 to 2031 (adopted 3 August 2018). A partial update to the Local Plan is in the early stages of consideration. Adoption of the updated plan is expected in Autumn 2023.

### Tewkesbury Borough Council

2.3.4. The Local Plan for Tewkesbury Borough comprises the Gloucester, Cheltenham and Tewkesbury Joint Core Strategy 2011 – 2031 (adopted December 2017) and saved policies of the Tewkesbury Borough Plan 2011.

2.3.5. A review of the Joint Core Strategy (JCS) is currently in the early stages of development.

2.3.6. Consultation on the main modifications to the Tewkesbury Borough Plan commenced in November 2021 and expires on 4th January 2022.

### Gloucestershire County Council

2.3.7. The Minerals Local Plan for Gloucestershire 2018 – 2032 (adopted March 2020) establishes the local policy framework underpinning the provision of minerals in the county. This plan forms part of the statutory development plan for Cotswold District and Tewkesbury Borough. It intends to ensure that mineral resources in the county are well managed into the future. The Plan includes delivery policies for reducing demand for primary minerals, safeguarding mineral resources and allocating areas for future aggregate working.

2.3.8. The Gloucestershire Waste Core Strategy 2012 – 2027 (adopted November 2012) explains the approach to planning for waste management in the county, it provides certainty for local people and businesses regarding where and where new waste facilities will be built. Appendix 1 of the Waste Core Strategy identifies those Waste Local Plan policies which are saved. The Waste Core Strategy and saved policies form part of the statutory development plan for Cotswold District and Tewkesbury Borough.

2.3.9. In addition to these Statutory Development Plans, GCC published the Gloucestershire Local Transport Plan (LTP) 2020-2041. Whilst it is not a Development Plan, it has materiality as a statutory plan. The LTP sets out the strategic transport vision to 2041 and the overarching policies, which support the spatial Connecting Places Strategies (CPS), and Transport Schemes. The LTP is structured around the six CPS areas. Each areas CPS sets out priority schemes. Section 4.5.17 states that *“the A417 Missing Link remains a strategic, [priority] scheme for the South Cotswolds CPS and its implementation will resolve congestion and safety constraints”*.

## 3. Review of Impacts

### 3.1. Traffic, Transport and Highways

#### Policies

##### Gloucestershire policies

- 3.1.1. The Local Transport Plan 2020-2041 policy CPS4 – *South Cotswold* identifies the A417 Missing Link Scheme as a key strategic scheme for the South Cotswold area and that its implementation will resolve congestion and safety constraints.

##### Cotswold policies

- 3.1.2. Cotswold District Local Plan Policy INF3 Sustainable Transport outlines that development should assist with the delivery of the objectives of the Local Transport Plan, in particular through provision, enhancement, and promotion of safe and recognisable connections to existing pedestrian and cycling networks. The policy requires proposals give priority to pedestrians and cyclists and consider the needs of people with disabilities.
- 3.1.3. Policy INF4 expects new development to integrate well with the existing transport network, avoid community severance and minimise conflict between motorised and non-motorised traffic modes.

##### Tewkesbury policies

- 3.1.4. Emerging policies TRAC1 and TRAC2 require pedestrian connectivity and cycling infrastructure to be a fundamental consideration for new major developments. These active travel routes should be accessible, safe, convenient, proportionate to the scale of the development and prioritised over motorised vehicles.

#### Impacts

##### Operational impacts

- 3.1.5. The Scheme proposes a reduced gradient and introduction of a crawler lane on Crickley Hill, grade-separated crossings for the Cotswold Way National Trail and Gloucestershire Way long distance footpath as well as a new grade-separated junction at Shab Hill. These design interventions would provide substantial improvements to highway safety, addressing the poor safety record of the existing road. The highway safety benefits would also be felt on the surrounding local highway network, as the dualling of the only remaining single carriageway section of the A417 would likely reduce the prevalence of rat running through local communities and the use of local roads by strategic traffic seeking to avoid delays on the A417.
- 3.1.6. The Joint Councils recognise that the proposed junctions have been designed to accommodate the future traffic levels forecasted by NH.
- 3.1.7. NH traffic modelling shows that the operational scheme would result in increases in traffic on the local highway network; specifically, Leckhampton Hill, Gloucester Road at Stratton, the B4070 south of Birdlip and the unclassified road leading to Brimpsfield.

##### Illumination of the highway

- 3.1.8. NH does not propose to install street lighting along the main carriageway. It is recognised by the Joint Councils that this decision would help to protect the special qualities of the Cotswolds AONB, including dark skies, without unacceptably compromising road safety.

- 3.1.9. The Scheme would introduce four new junctions. The Scheme design does not include street lighting at these junctions. This is a departure from British Standards<sup>1</sup>, which require illumination of 'conflict zones' in the interests of highway safety. On balance, the Joint Councils accept that the proposed Cowley Junction, Shab Hill Junction and Barrow Wake Roundabout would not be lit. The relatively low levels of traffic using these junctions during night-time would be unlikely to present a highway safety case which overrides the benefits to the AONB.
- 3.1.10. In contrast, the proposed Ullenwood Junction, which would replace the existing Air Balloon Roundabout, would carry higher volumes of traffic between the A436, Leckhampton Hill and the proposed A417 (via the new A436 Link Road). It would be used by Gloucester to Oxford traffic as well as traffic heading to Cheltenham. The existing Air Balloon Roundabout is a known accident hotspot due to a combination of high traffic volumes, high speed that traffic enters the junction and the complexity of its layout. The existing junction is lit in the interests of highway safety. The proposed Ullenwood Junction would carry a similar volume and speed of traffic and the proposal not to illuminate the junction would exacerbate the risk of accidents during night-time hours.
- 3.1.11. Recognising the need to balance highway safety concerns and protect the Cotswold AONB, GCC has agreed with NH to not light the proposed junction on a trial basis; however, the below ground infrastructure required for a future lighting scheme should be installed by NH as part of the Scheme so that it may install lighting without delay if the highway safety case arises in the future. NH has agreed to this and the details should be submitted into Examination and secured in the DCO.

#### Construction impacts

- 3.1.12. During the construction phase, the existing A417 would remain open and would operate with temporary speed limits in place. During tie-in works at either end of the Scheme, contra-flow traffic management is proposed on the existing dual carriageway sections tying into the Scheme. Closures of slip roads on and off the A417 and full carriageway closures would be required to facilitate elements of the construction phase.
- 3.1.13. During these periods there is potential for traffic on the A417 and A436 to divert onto local roads in an attempt to avoid delays caused by construction activities and traffic management. The A435 provides an alternate route between the A436 and A417. A series of narrow single-track roads with no passing places connect the A435 with the A417 at various points along the route. A key concern for local communities is that these lanes could be used by vehicles attempting to avoid delays, leading to traffic levels that exceed the capacity of these roads and creating congestion and road safety issues.

### Adequacy of the draft DCO / Mitigation

#### Operational impacts

- 3.1.14. The Proposed Development would fulfil LTP policy CPS4, by creating a safer, less congested and more efficient strategic link between the M4 and M5 through Gloucestershire. The introduction of grade-separated crossings over the carriageway for the public rights of way and national trail accords with Cotswold Local Plan Policies INF3 and INF4 and Tewkesbury Local Plan emerging policies TRAC1 and TRAC2.
- 3.1.15. NH should provide more information to demonstrate how the impacts associated with the traffic increases on the local road network can be mitigated and how these measures would be secured and implemented. The DCO should secure a mechanism for funding local highway authority schemes to address the identified traffic increases.

---

<sup>1</sup> BS/EN 5849 and BS/EN 13201.



### Illumination of the highway

- 3.1.16. The local highway authority considers that the DCO should secure the provision of the necessary below-ground infrastructure required for a future lighting scheme at the Ullenwood Junction; so that if it is proved to be needed on highway safety grounds in the future the remaining above ground infrastructure (columns and lanterns) could be installed by NH without delay.
- 3.1.17. Given the potential for the lighting scheme to be required in the future, the Joint Councils consider that the design should be developed and informed by environmental assessment and submitted into Examination in order to ensure that any residual effects on the landscape and protected species are acceptable.

### Construction impacts

- 3.1.18. The Construction Traffic Management Plan (CTMP) to be secured by Schedule 2 Requirement 3 of the DCO will detail the traffic management measures to be employed during construction. The existing A417 between the Air Balloon Roundabout and Cowley Lane Roundabout would remain open to traffic, with reduced speeds during day-time hours and contraflow lanes at the dual carriageway sections. These overarching measures are deemed to be acceptable. The CTMP describes the specific works which would require the closure of this section of A417. The list of works is considered appropriate, and the Joint Councils have no concerns about the durations proposed. Strategic diversions would be in place during road closures; the CTMP will need to, amongst other measures, set out the details of temporary signage to be installed along the A435 to deter traffic from using High Cross and the lanes through Cowley and Stockwell to access the A417/A435.

## 3.2. Air Quality

### Policies

#### Cotswold policies

- 3.2.1. District Local Plan Policy EN15 states developments will not be permitted if the air pollution generated will result in an unacceptable risk to public health or safety, the natural environment, or the amenity of existing land uses.

#### Tewkesbury policies

- 3.2.2. JCS policy SD14 expects developments to avoid unacceptable levels of air pollution affecting environmental quality and human health impacts.

### Impacts

- 3.2.3. The principal impacts on air quality are associated with traffic emissions during construction and operation. The potential increases in traffic around the Air Balloon AQMA, specifically around the Air Balloon Cottages and properties in Cowley, is of concern to local communities as shown in the relevant representations. Following review of Chapter 5 in the Environmental Statement (ES) [APP-036], concerns of air quality impacts for the Air Balloon Cottages, during construction, are shared by the Joint Councils. However, the Joint Councils are satisfied that during operation there should not be any significant adverse effects on air quality at human health receptors.
- 3.2.4. The Joint Councils are concerned that the anticipated increase in nitrogen deposition from vehicle emissions during operation will result in a significant adverse effect on Ullen Wood, an Ancient Woodland, and retained veteran trees.
- 3.2.5. The Scheme will support the flow of HGVs up Crickley Hill and remove the bottleneck at Air Balloon Roundabout, both interventions are anticipated to improve air quality within the Birdlip AQMA.

## Adequacy of the draft DCO / Mitigation

- 3.2.6. The Joint Councils have advised NH through the Statement of Common Ground (SoCG) (submitted at Deadline 1 by NH) that additional mitigation options to alleviate adverse effects on the air quality at Air Balloon Cottages are required during construction. In this regard, Cotswold Local Plan policy EN15 is not met. Within the borough of Tewkesbury, the Scheme is compliant with JCS policy SD14. The mitigation should be secured in the Environment Management Plan (EMP).
- 3.2.7. At Ullen Wood, compensatory measures have been agreed with Natural England and NH has a commitment under Schedule 2 Requirement 3 of the dDCO [APP-022] to prepare and implement a Woodland Management Plan to mitigate air quality impacts on ecology. However, the Joint Councils consider that additional monitoring at Ullen Wood is necessary during operation and that this should include pre-operation monitoring to confirm the baseline, and during the construction phase to identify any further issues that may arise.
- 3.2.8. Schedule 2 Requirement 3 of the dDCO [APP-022] requires an EMP to be prepared. The EMP will need to set out mitigation potentially required for the air quality effects arising from construction if monitoring identifies increased particulate matter and dust.

## 3.3. Cultural Heritage

### Policies

#### Cotswold policies

- 3.3.1. Cotswolds District Local Plan Policies EN1 and EN4 seek to protect, conserve, and enhance existing historic and natural environmental assets. These policies expect proposals to take into account these assets and their settings, visual quality and local distinctiveness to enhance, restore and better manage the landscape.
- 3.3.2. EN10 emphasises development proposals must sustain and enhance the significance of important designated heritage assets, with development permitted depending on the importance of the asset, the scale of harm and the nature and level of public benefit.
- 3.3.3. Policies EN11 and EN12 set out the design considerations development proposals must adhere to if the development were to have an impact on a Conservation Area and its setting, and on non-designated heritage assets.

#### Tewkesbury policies

- 3.3.4. Emerging policy HER2 states development will not be permitted if it adversely affects and results in the significant loss of historic fabric.
- 3.3.5. JCS policy SD8 requires development to make a positive contribution to local character and distinctiveness and give regard to valued and distinctive elements of the historic environment. The policy seeks to conserve designated and undesignated heritage assets and their settings as appropriate to their significance.

### Impacts

#### Archaeology

- 3.3.6. The principal heritage concern relates to the potential for impacts on archaeology. The area has very high archaeological sensitivity which has not been adequately assessed by the ES.

### Designated heritage assets

- 3.3.7. The setting of the Emma's Grove scheduled monument would be altered by the Scheme, as would the setting of the scheduled monument of Leckhampton hillfort and Grade II listed Shab Hill Barn. In addition, both heritage assets would be affected by noise impacts during operation.

### Non-designated heritage resources

- 3.3.8. The Air Balloon Public House is a non-designated heritage resource, it would be demolished to facilitate the Scheme.

## Adequacy of the draft DCO / Mitigation

### Archaeology

- 3.3.9. The trial trenching and geoarchaeology prospection and deposit modelling undertaken to date is considered inadequate in terms of coverage and methodology considering the scale of the Scheme and the historic significance of the landscape. At least twice the current percentage of trenching (1% sample) should be undertaken within an archaeological landscape of this sensitivity, scale, complexity and sensitivity. The methodology utilised by NH was also inadequate in terms of geoarchaeological prospection and deposit modelling of areas of colluvium and complicated areas of landslip. In addition, there are concerns that the methodology of assessment and field survey utilised in support of the ES was inappropriate for early detection of potentially significant, but ephemeral, earlier prehistoric and early medieval archaeology.
- 3.3.10. There is therefore a high risk of unexpected and significant archaeological discoveries coming to light during construction which will add considerable programme time and cost risk to the Scheme.
- 3.3.11. The EMP and Detailed Archaeological Mitigation Strategy will need to provide certainty that adequate additional assessment and evaluation work is undertaken in order to inform any final archaeological mitigation design for the Scheme. This should be incorporated into the design-stage EMP (the version submitted into Examination) as archaeological investigations are expected to commence before Schedule 2 Requirement 3 has been discharged.

### Assessment methodology

- 3.3.12. The methodology used for the assessment of historic landscape characterisation (HLC) in Chapter 6 of the ES [APP-037], fails to be driven by a landscape-led approach as it uses a broad brush HLC. It would be more appropriate to consider the holistic understanding of how landscape has developed over time. The assessment draws on Gloucestershire's HLC, and the division into massive land parcels means that the assessment fails to dissect the landscape at a suitably finer grain.
- 3.3.13. Full details of the Joint Councils views on the assessment methodology are provided in the SoCG [APP-419], the Joint Councils Written Representation submitted at Deadline 1 and will also be detailed by National Trust in their Deadline 1 submission.

### Designated heritage assets

- 3.3.14. The Joint Councils would direct the ExA to the advice of Historic England in relation to the potential setting effects on designated heritage assets and the maintenance of the Emma's Grove Scheduled Monument.

### Non-designated heritage resources

- 3.3.15. The Air Balloon Public House has been assessed in Chapter 6 Cultural Heritage of the 2020 PEI Report and ES. It is agreed that to mitigate the demolition of the Air Balloon Public House, the building would be subject to Level 3 recording prior to and during its demolition, according to the standards set out in Historic England's guide Understanding Historic Buildings. It is noted that this is

to be secured under Schedule 2 Requirement 3 of the dDCO.

## 3.4. Landscape and Visual Effects

### Policies

#### Cotswold policies

- 3.4.1. Cotswolds Local Plan Policy EN1 sets out how new development should promote the protection, conservation and enhancement of the historic and natural environment. EN4 outlines that proposals are expected to take account and enhance the landscape and historical landscape character, visual quality, and local distinctiveness.
- 3.4.2. Policy EN5 states that *“major development will not be permitted within the Cotswolds AONB unless it satisfies the exceptions set out in National Policy and Guidance.”*
- 3.4.3. Policy EN7 outlines that veteran trees, trees, hedgerows and woodlands of high landscape, amenity, ecological or historical value should be conserved and enhanced, with any losses mitigated.
- 3.4.4. Policy INF7 requires development proposals to protect and enhance the existing green infrastructure provision and/or deliver new green infrastructure, designed in accordance with the principles of the Cotswolds Design Code.

#### Tewkesbury policies

- 3.4.5. Emerging Local Plan policy LAN2 expects development to be appropriate to and integrated into the landscape setting through sensitive design, siting, and landscaping. The expectation of this policy is for development to conserve and where possible enhance landscape character.
- 3.4.6. Emerging Local Plan policy NAT3 requires proposals to protect, provide and enhance green infrastructure, and requires new green infrastructure to be designed in accordance with the ‘Building with Nature’ standards.

### Impacts

- 3.4.7. The principal concern is that the Scheme is located entirely in the Cotswolds AONB and that the introduction of a dual carriageway into this landscape will, without appropriate mitigation, result in a range of adverse changes to the character and special qualities of the AONB during construction and operation.
- 3.4.8. The introduction of new infrastructure, associated cuttings, embankments and drainage basins as well as changes to the field patterns and vegetation will result in significant residual adverse effects on the escarpment and high wold landscape character types and on walkers along the Cotswold Way National Trail and visitors to Crickley Hill and Barrow Wake.

### Adequacy of the draft DCO / Mitigation

- 3.4.9. The Joint Councils support the landscape-led approach taken by NH and recognise that the collaboration undertaken with key stakeholders to develop a design which has the landscape, its characteristics and special qualities as the primary consideration reflects the expectations of Cotswold Local Plan policy EN1. With regard to policy EN5, the Joint Councils are satisfied that the national policy exceptions for development in the AONB are well detailed in Chapter 7 of the Case for the Scheme [APP-417].
- 3.4.10. The proposed Gloucestershire Way Bridge would deliver new green infrastructure as expected by Cotswold Local Plan policy INF7 and Tewkesbury Borough Plan policy NAT3.

- 3.4.11. Schedule 2 Requirement 3 of the dDCO [APP-022] secures the delivery of a Landscape and Ecological Management Plan in line with the commitments made in the EMP [APP-317]. The EMP includes the appropriate measures necessary to minimise impacts on landscape and visual receptors as far as possible.
- 3.4.12. Approval of details of the design and external appearance of the proposed bridges across the A417 should be secured by a Requirement in the dDCO. This is not currently the case. Approval by Secretary of State should follow consultation with the relevant planning authority and local highway authority. This is essential to ensure that this landscape-led Scheme delivers a high quality of design which is reflective of its context.

## 3.5. Biodiversity

### Policies

#### Cotswold policies

- 3.5.1. Cotswolds District Local Plan Policy EN8 concerns the conservation and enhancement of biodiversity and geodiversity. The policy outlines that proposals which result in adverse impacts such as habitat fragmentation, loss of ecological connectivity, and the loss or deterioration of irreplaceable habitats or resources will not be permitted.
- 3.5.2. Policy EN9 does not support development which would have an adverse effect on nationally designated nature conservation sites without evidence of benefits which clearly outweigh the impact on the designations special features.

#### Tewkesbury policies

- 3.5.3. Emerging policy NAT1 seeks to conserve, restore, and enhance biodiversity. It requires developments to deliver a biodiversity net gain across local and landscape scales, and mitigations to be implemented “proportionate to the status of affected habitats or species and individual importance as a part of a wider network”.

### Impacts

- 3.5.4. The principal concern for biodiversity is that the Scheme will result in loss and disturbance of habitats which will, in turn result in severance and fragmentation of ecological connectivity. This will include effects on designated sites and habitats that support protected species.
- 3.5.5. The Scheme will result in the loss of a small area of calcareous grassland from Crickley Hill and Barrow Wake Site of SSSI, 17 hectares of semi-natural broadleaved woodland priority habitat, species rich neutral grassland priority habitat, species rich hedgerow and cause temporary disruption to bat foraging and commuting features and barn owl foraging habitat. In addition, during operation the Ullen Wood Local Wildlife Site and Ancient Woodland would be impacted as a result of nitrogen deposition caused by vehicle emissions.
- 3.5.6. The ES Chapter 8 [APP-039] recognises Emma's Grove as having national value because it is semi-natural broad-leaved woodland. However, there are several ancient woodland indicator species present at Emma's Grove.
- 3.5.7. Meanwhile, significant benefits on biodiversity would arise through the creation of approximately 75 hectares of new calcareous grassland habitat, including within the SSSI over the footprint of the existing A417 carriageway and planting of 24 hectares of new broadleaved woodland.
- 3.5.8. The Joint Councils accept that at the time of submission, there was no legislative requirement on NH to deliver Biodiversity Net Gain (BNG); however, it is noted by the Joint Councils that NH has its own policies on achieving BNG. Further, NH advised during pre-application discussions that it would use the DEFRA Biodiversity Metric 2.0 or 3.0 to calculate the performance of the proposed

development, but this has not materialised.

## Adequacy of the draft DCO / Mitigation

- 3.5.9. The Joint Councils consider that the scope and detail of the ecology survey methods undertaken by NH appear to be appropriate although it is recognised that some survey work remains incomplete due to land access issues.
- 3.5.10. The loss of part of Emma's Grove is considered unavoidable; however, further information is requested from NH to justify that it is not ancient woodland.
- 3.5.11. Where habitat loss is proposed it is recognised as to be unavoidable in the context of delivering the Scheme. The Joint Councils support the mitigation and enhancement measures that have been incorporated into the EMP [APP-317], Landscape and Ecological Management Plan [APP-321] and the Environmental Masterplan [APP-166 to APP-192] and which will be secured by Schedule 2 Requirements 3 and 5 of the dDCO [APP-022].
- 3.5.12. The Local Transport Plan policy PD0.2 commits GCC to working with partners to achieve BNG. Emerging policy NAT1 in the Tewkesbury Local Plan will require developments in the borough to deliver a biodiversity net gain across local and landscape scales. The Joint Councils consider the Scheme should as a whole be targeting a neutral or better biodiversity net gain score calculated using the biodiversity metric. Any commitments made to the achievement of BNG through the Scheme must be clearly set out by NH and secured through the dDCO [APP-022] or other legal agreement.

## 3.6. Geology and Soils

### Policies

#### Cotswold policies

- 3.6.1. Cotswolds Local Plan Policy EN1 concerns the protection, conservation and enhancement of the natural environment and this includes seeking to protect and improve soil and water quality.
- 3.6.2. Policy EN15 seeks to ensure that potential contamination is suitably investigated and states that proposals must "*not result in an unacceptable risk to public health or safety, the natural environment, or the amenity existing uses*" through pollution of land, ground water and surface water.

#### Tewkesbury policies

- 3.6.3. JCS policy SD14 states that development should not create or exacerbate conditions that could impact on human health or cause health inequality and must cause no unacceptable levels of water or soil pollution.
- 3.6.4. Emerging Borough Plan Policy NAT1 states the importance of geological conservation and the requirement to protect and mitigate development impacts.

### Impacts

- 3.6.5. The impacts on soils principally concern the loss of Class 3a best and most versatile agricultural land and Class 3b agricultural land. The Joint Councils recognise that the loss of this agricultural land is unavoidable in order to deliver the Scheme. There is also potential for impacts on soils as a result of construction.
- 3.6.6. The Joint Councils have not identified any key local impacts on geology.

## Adequacy of the draft DCO / Mitigation

- 3.6.7. Agricultural land that would be used on a temporary basis during construction will be reinstated and post-construction monitoring will ensure soils are reinstated to the same agricultural condition as was in existence prior to construction. Monitoring will also occur in areas of proposed calcareous grassland and woodland creation to ensure soil is of an appropriate condition to support the establishment of the proposed mitigations. The Joint Councils support the mitigation measures that are outlined in the EMP [APP-317] including the provision for a Soils Management Plan to be prepared prior to construction which is secured under Schedule 2 Requirement 3 of the dDCO [APP-022].

## 3.7. Material Assets and Waste

### Policies

#### Gloucestershire policies

- 3.7.1. Waste Core Strategy Policy WCS2 states that all development must incorporate the principles of waste minimisation and re-use. Major development proposals are expected to submit statements setting out how waste will be minimised and managed.

#### Tewkesbury policies

- 3.7.2. JCS policy SD3 expects developments to demonstrate how waste is minimised through design and how waste from construction will be managed and minimised in waste minimisation strategies.

### Impacts

- 3.7.3. The Joint Councils consider that the design of the Scheme has been developed with efforts made to reduce the volume of surplus material. Between pre-application consultation periods in 2019 and 2020, the gradient of Crickley Hill was reduced from 10% to 8%. This has significantly reduced the volume of surplus materials associated with the Scheme. There are, however, concerns regarding the assessment in Chapter 10 of the ES [APP-041] in relation to surplus material generated from highway construction. NH has not included the volume of material currently known to be surplus to the cut/fill balance in the waste assessment.
- 3.7.4. The Joint Councils agree with the assessment that the impacts during construction and operation will be slight and not significant.

## Adequacy of the draft DCO / Mitigation

- 3.7.5. The Joint Councils consider that the surplus material identified must be included in the environmental assessment in Chapter 10 of the ES [APP-041] in order to evaluate the worst case scenario. This is on the basis that there are currently no plans for the reuse of surplus material on site. This is despite NH intention to maximise the use of site won materials through the re-use, recycling and recovery of site won materials. A first iteration of the Materials Management Plan [APP-332] has been produced as Annex E to the EMP [APP-017] which is secured under Schedule 2 Requirement 3 of the dDCO [APP-022].
- 3.7.6. A first iteration of the Site Waste Management Plan [APP-325] which embeds the principles of the waste hierarchy also forms Annex H of the EMP [APP-317]; and is therefore secured by Schedule 2 Requirement 3 of the dDCO [APP-022].

## 3.8. Noise and Vibration

### Policies

#### Gloucestershire policies

- 3.8.1. Local Transport Plan Policy LTP PD0.2 sets out the County Councils intention to work with the District Councils to improve levels of noise through adoption of the latest good design practices. It also requires developers to prepare assessments which determine if their scheme would create noise in excess of the thresholds as advised by Government and if these effects are effectively mitigated.

#### Cotswold policies

- 3.8.2. Cotswolds Local Plan Policy EN15 and INF3 concern pollution, and in relation to noise pollution state that developments must not generate an unacceptable level of noise or vibration which could risk public health or safety, the natural environment, or the amenity of existing land uses.

#### Tewkesbury policies

- 3.8.3. JCS policy SD14 sets out that no new development may result in unacceptable levels of noise pollution.

### Issues and Impacts

#### Construction impacts

- 3.8.4. Noise impacts associated with the construction of the Scheme will affect residential properties and non-residential receptors; the works would be temporary and predominantly during daytime, with noise control measures set out in the EMP. The effects on the local area are not considered to be a key issue.

#### Operational impacts

- 3.8.5. The Scheme would move the A417 away from Birdlip. It is recognised that this would likely have beneficial noise effects for receptors in Birdlip.
- 3.8.6. In contrast, properties at Crickley Hill which are located above the Brockworth Bypass and properties in proximity to the proposed Shab Hill Junction would likely experience significant adverse noise effects as a result of the operational Scheme.
- 3.8.7. Some concern has been raised by residents of Cowley that the proposed alignment of the dual carriageway would increase noise levels for receptors in the village however, the Joint Councils recognise that the assessment of noise effects set out in Chapter 11 of the ES [APP-042] is robust and follows Design Manual for Roads and Bridges (DMRB) guidance, it has not identified any likely significant adverse effects on receptors located in Cowley.
- 3.8.8. The Joint Councils are also aware that according to Chapter 11 of the ES [APP-042], significant adverse noise effects are anticipated for five residential properties along Leckhampton Hill and 12 residential properties on Gloucester Road at Stratton. These effects would arise due to the increased use of the roads once the Scheme is implemented. The Joint Councils have met with NH to discuss these issues and identify the appropriate mitigation to reduce the impacts. Marginal noise increases of approximately 1 decibel (dBA) are predicted for these properties, and significant adverse effects are assessed due to existing high levels of noise associated with existing traffic levels on these roads. It is noted by the Joint Councils, that the Institute of Environmental Management and Assessment *Guidelines for Noise Impact Assessment* considers a 1 dBA increase in noise levels to be perceptible only under laboratory conditions. As such the increase would likely be indiscernible.



## Adequacy of the draft DCO / Mitigation

### Construction impacts

- 3.8.9. Chapter 11 of the ES [APP-042] and the EMP [APP-017] outline the mitigation measures to reduce noise impacts and make reference to a Noise and Vibration Management Plan which will be prepared by the Contractor which is secured by Schedule 2 Requirement 3 and 13 of the dDCO [APP-022]. The Joint Councils welcome these approaches.

### Operational impacts

- 3.8.10. Chapter 11 of the ES [APP-042] makes reference to the provision of hard and soft landscape barriers shown on the Environmental Masterplan [APP-166 to APP- 192], including planting, embankments and dry-stone walls. Schedule 2 Requirement 5 and Requirement 13 of the dDCO [APP-022] would secure the submission of details of planted or vegetation noise barriers, dry-stone walls and low noise surfacing for approval following consultation with prescribed consultees.
- 3.8.11. ES Chapter 11 [APP-042] paragraph 11.12.17 states that noise insulation measures would be offered to the 17 properties along Leckhampton Hill and Gloucester Road at Stratton. The Joint Councils have met with NH to discuss mitigation measures. Options considered included physical barriers, low-noise surfacing and speed limit reduction however, none of these measures were deemed appropriate in these instances. Given that the 1dBA increase at these properties would likely be indiscernible from existing noise levels, the provision of noise insulation to the affected properties, as proposed in the ES and secured under Requirement 3, is considered appropriate.

## 3.9. Population and Human Health

### Policies

#### Gloucestershire policies

- 3.9.1. LTP policy PD2.3 establishes the Council's intentions regarding safe active travel. This includes a commitment to working with developers to ensure opportunities for cycling are identified and exploited.
- 3.9.2. LTP policy PD6.1 sets out the intention to provide an inclusive, safe, reliable and efficient environment for walking and that the County Council will seek opportunities for this by working with delivery partners and developers to ensure opportunities are seized and new infrastructure is designed in accordance with Manual for Gloucestershire Streets.
- 3.9.3. LTP policy 6.2 seeks improvements to safety accessibility and quality of experience for users of rights of way. It requires active travel routes to be integrated into the road network to promote a cohesive path network and safe crossing points of busy roads.

#### Cotswold policies

- 3.9.4. Cotswolds District Local Plan Policy EN15 states that development should not result in any unacceptable risk to public health or safety or the amenity of existing land uses.
- 3.9.5. Policy INF3 supports development proposals which create, enhance or promote safe connections to existing networks, prioritises pedestrians and cycles and considers those with disabilities.
- 3.9.6. Policy INF4 seeks to ensure that development is well integrated with the existing transport network; creates safe, suitable, and accessible routes for pedestrians, cyclists, and motor vehicles without generating severe traffic congestion; and has regard to the Manual for Gloucestershire Streets.

### Tewkesbury policies

- 3.9.7. JCS policy INF1 requires development proposals to ensure safe connections for all modes to the transport network and to design active travel connections so as to encourage their potential use.
- 3.9.8. Emerging Borough Plan policy HEA1 requires new major developments to be designed in accordance with 'Active Design' principles, and to consider the potential impacts on health.
- 3.9.9. Emerging Borough Plan policy COM1 seeks to protect existing community assets.
- 3.9.10. Emerging Borough Plan policy TRAC1 sets out the intent to protect existing pedestrian networks and seek out opportunities to extend and enhance them.
- 3.9.11. Emerging Borough Plan policy TRAC2 describes how cycle infrastructure is expected to form a fundamental consideration in a design-led process for new major development proposals.

## Impacts

### Construction impacts

- 3.9.12. The Joint Councils recognise that a detailed options assessment has been undertaken and that the alignment proposed is the best available option. By necessity the majority of the land required for the Scheme is undeveloped land in agricultural use and the impact of the Scheme would include the permanent loss of agricultural holdings as well as temporary and permanent fragmentation of agricultural land. The Councils acknowledge that this is unavoidable. In addition, several private properties and businesses would be lost to enable the Scheme to be constructed.
- 3.9.13. The Scheme would require land within the Birdlip Quarry. The Quarry is categorised as 'dormant'. It has not been operational for many years and it could not be re-worked without an application to review the existing conditions. However, this situation could change in the future.
- 3.9.14. The likely remaining mineral reserves in Birdlip Quarry are not included in the mineral planning authority's aggregate landbank calculations for the county, which means that local mineral supplies and the assessment of future requirements is not reliant on Birdlip Quarry reopening in the future.

### Operational impacts

- 3.9.15. One of the key issues for the local area is how the Scheme design would avoid creating new severance impacts and address the severing effect that the existing A417 inflicts on the Public Right of Way (PRoW) network. The Scheme design includes bridge crossings for the Cotswold Way National Trail and the Gloucestershire Way long distance footpath as well as several grade-separated crossings for walkers, cyclists and horse riders along the proposed carriageway. This would remove existing unsafe crossing points of the A417 carriageway and in doing so the Scheme would enhance safety and the user experience for users of the PRoW network while also reducing impacts of severance for users and local communities.
- 3.9.16. In addition, the Scheme would repurpose the existing A417 to create a new restricted byway connecting the Cotswold Way National Trail with existing PRoW as far as the Golden Heart Inn. Overall, the Scheme would improve accessibility between local communities, Barrow Wake and Crickley Hill Country Park for walkers, cyclists and horse riders. These improvements would be some of the most significant local impacts arising from the Scheme.
- 3.9.17. The required land-take at Birdlip Quarry to construct the Scheme does not appear to risk sterilising the entire likely remaining reserve; however, an assessment of this may need to be carried out by NH to confirm if this is the case.

## Adequacy of the draft DCO / Mitigation

### Construction impacts

- 3.9.18. The Joint Councils recognise that the compensation for loss of private property would be dealt with through discussion between NH and the landowners or through compulsory acquisition.
- 3.9.19. There is no acquisition of County Council land or property which would impact the local community or the Councils ability to deliver its functions.

### Operational impacts

- 3.9.20. The Scheme would deliver significant enhancements to the network of PRoW, Cotswold Way National Trail and Gloucestershire Way long distance footpath. Cotswold Local Plan policies EN15, INF3, INF4 and JCS policy ENF1 are addressed in this regard. As are emerging Borough Plan policies TRAC1 and TRAC2.
- 3.9.21. NH has made a commitment to agree the design details of new sections of PRoW and permissive paths to be created, including surface treatments, signage and fencing with the local highway authority; however, there appears to be no securing mechanism in the dDCO [APP-022] for any such arrangements relating to the structures required to carry paths over the A417. The Joint Councils recommend the dDCO include a requirement on NH to consult with prescribed consultees prior to submission for written approval from the Secretary of State of the details of design of new sections of PRoW and permissive path, including any structures required to carry those ways across the A417 carriageway.
- 3.9.22. Notwithstanding this, the measures, procedures and arrangements that are set out in the PRoW Management Plan [APP-323] (Annex F of the EMP [APP-317]) and secured by Schedule 2 Requirement 3 of the dDCO [APP-022] are appropriate and adhere to local policies.

## 3.10. Water Environment

### Policies

#### Cotswold policies

- 3.10.1. Cotswold District Local Plan Policy INF8 considers impacts of development on water quality and seeks to ensure developments do not pollute groundwater sources or cause the deterioration of water quality.
- 3.10.2. Policy EN14 states that developments must not increase the risk of flooding or impact the safety of occupiers on site or elsewhere. Flood risk should be minimised by undertaking a flood risk assessment, incorporating sustainable drainage systems and other flood mitigation measures within the development's design.
- 3.10.3. EN15 seeks to ensure that development will not result in an unacceptable risk to public health or safety, the natural environment or the amenity of existing land uses through the pollution of surface water or groundwater sources.

#### Tewkesbury policies

- 3.10.4. Emerging Borough Plan policy NAT2 seeks developments to recreate more natural conditions and new habitats along watercourses.
- 3.10.5. Emerging policy ENV2 sets out the principles developments must adhere to, including to avoid and manage the risk of flooding to and from a new development.

## Impacts

- 3.10.6. The principal concerns for the impacts on the water environment are associated with the construction phase including impacts on surface and groundwater quality, the impact of flooding and impacts on the watercourses as a result of their realignment. The assessment concludes that there will be a temporary adverse significant effect on hydro morphology due to the realignment of the tributary of Norman's Brook.
- 3.10.7. There will be no significant impacts on flood risk and the Water Framework Directive (WFD) compliance assessment concludes that the Scheme would not result in a change in status of any WFD quality elements or prevent any water bodies from reaching 'Good' status in the future.

## Adequacy of the draft DCO / Mitigation

- 3.10.8. The Joint Councils support the mitigation and enhancement measures that have been incorporated into the Scheme to reduce the effects on the water environment that are outlined in the EMP [APP-017] including the Ground and Surface Water Management Plan [APP-324] that are secured by Requirement 3 of the dDCO [APP-022].
- 3.10.9. The applicant has produced a Flood Risk Assessment [APP-399] and a WFD compliance assessment [APP-398] which the Joint Councils are satisfied complies with local policies. It is expected that additional, more detailed flood modelling of the proposed scheme will be undertaken to support the next stage. Development of the flood model should be done in conjunction with dialogue with GCC to agree key model parameters, hydrological methodology and schematisation.
- 3.10.10. As detailed in the Joint Councils Written Representation, as submitted at Deadline 1, the details of watercourse designs have been informally agreed; however, the design details have not been included within the application and so would not be secured in the DCO. The Joint Councils cannot agree to the disapplication of the Land Drainage Act consent process (a prescribed consent) unless this detail is included in the application or a Requirement for approval of details is secured in the DCO. Article 3(1)(f) should be removed or alternatively, and in accordance with the Explanatory Memorandum to the dDCO, Protective Provisions are agreed with the Joint Councils.

## 3.11. Climate Change

### Policies

#### Gloucestershire policies

- 3.11.1. LTP policy PD0.1 sets out the intention of GCC to work with partners to reduce transport carbon emissions by addressing travel demand, promoting the use of sustainable travel modes and the update of ultra-low emission vehicles. This includes a commitment to work the NH to seek investment in sustainable transport and active travel infrastructure.

#### Cotswold policies

- 3.11.2. Cotswolds District Local Plan Policy EN1 refers to new development having to protect and conserve the natural environment by addressing climate change. Policy EN14 concerns the management of flood risk and states that the design and layout of development proposals should mitigate the adverse impacts of flooding and climate change.
- 3.11.3. Policy EN7 states that where trees, hedgerows or woodlands are affected by development proposals, compensatory planting is required and should consider as appropriate the potential for new or extended woodland to assist carbon storage.

#### Tewkesbury policies

- 3.11.4. JCS policy SD3 states that applications for major developments should submit energy statements

that indicate methods for calculating annual carbon dioxide emissions.

## Impacts

- 3.11.5. The Scheme will result in greenhouse gas emissions during the construction and operational phases however, the assessment of effects in Chapter 14 of the ES [APP-045] concludes that this impact is not considered to be significant based on evidence that in isolation the Scheme would not have a material impact on the ability of UK Government to meet its carbon reduction targets.
- 3.11.6. New assets and infrastructure designed as part of the Scheme are likely to be affected by climate change however, robust design and relevant mitigation measures will be incorporated and therefore, no significant effects will occur (as outlined in Chapter 14 of the ES [APP-045]).

## Adequacy of the draft DCO / Mitigation

- 3.11.7. The Joint Councils consider that more evidence should be provided to prove that the operational energy consumption of the Scheme has a negligible difference from the existing A417 and therefore can be scoped out of the assessment presented in Chapter 14 of the ES [APP-045]. Although the Joint Councils agree that the level of emissions associated with maintaining the operational Scheme is likely to be low and therefore unlikely to have a significant impact on the findings set out in Chapter 14 of the ES, assessing energy consumption associated with the maintenance of the asset once operational is a requirement of DMRB LA114 and so should be included in the methodology.
- 3.11.8. The Joint Councils would expect to see more mitigation implemented as part of the Scheme to mitigate carbon emissions that will be emitted by the Scheme during construction than those outlined in the EMP [APP-317] which is secured by Requirement 3 of the dDCO [APP-022]. The Joint Councils believe that NH should be more ambitious and innovative in its approach to implementing or funding carbon mitigation measures, even if they do not undertake the mitigation measures themselves. For example, GCC has an ambitious 'Million Trees Challenge' as part of its Climate Strategy to plant a million trees by 2030. Additionally, in the emerging GCC Climate Strategy 2<sup>nd</sup> Annual Report due to be published imminently, renewable energy generation and electric vehicle charging infrastructure will be identified as priority actions for carbon reduction. Furthermore, NH has its commitment to plant three million trees on or near its land by 2030 (Net Zero Highways Plan published in July 2021).
- 3.11.9. The Joint Councils agree that a full quantitative assessment of any proposed carbon mitigation measures is not required by NH but that a qualitative assessment for each proposed measure should be undertaken to evidence that the proposed measures would provide a significant carbon reduction by 2045 (Net Zero target year for GCC).

## 3.12. Draft Development Consent Order

- 3.12.1. In the LIR, the Joint Councils have made some recommendations for changes to the dDCO [APP-022]. These are summarised in this section, along with further comments on the dDCO. The Joint Councils detailed review of the dDCO is presented in the Written Representations submitted at Deadline 1.

### Article 3 - Disapplication of Land Drainage Act

- 3.12.2. In relation to Article 3(1)(f) of the dDCO and the disapplication of Land Drainage Act, the application does not include the design details of watercourse crossings as discussed and agreed informally during pre-application consultation. Without this detail within the dDCO there is no means to secure the designs of watercourse crossings in the DCO. The Joint Councils cannot agree to the disapplication of the Land Drainage Act consent process (a prescribed consent) unless a new Requirement stipulating the submission of design of watercourse crossings for approval, or in accordance with the Explanatory Memorandum to the dDCO, Protective Provisions should be agreed with the Joint Councils.

### Consultation on the discharge of Requirements

- 3.12.3. Schedule 2 Requirements 4 and 15 set out the proposed process for consulting on and seeking approval for details secured by Requirements. The Joint Councils require greater involvement in the consultation process prior to the discharge of Requirements to ensure details submitted for approval are acceptable to the local area. While prescribed consultees would be consulted prior to submission of applications, the Joint Councils would require provision for:
- The Joint Councils to be named as prescribed consultees in relation to all relevant DCO Requirements;
  - An appropriate minimum consultation period included under dDCO Requirement 4 for consultation with prescribed consultees prior to the submission of details to the Secretary of State;
  - An appropriate consultation period during the determination period where the Secretary of State seeks comment from prescribed consultees; and
  - A requirement for an appropriate consultation period for prescribed consultees in the event that NH submits any new or altered details to the Secretary of State during the determination period.

### Detailed design

- 3.12.4. Schedule 2 Requirement 11 of the dDCO does not include a Requirement for approval of detailed design by the Secretary of State following consultation with the Joint Councils. This is on the basis that the detailed design would be in accordance with the preliminary design shown on Works Plans [AS-038] and General Arrangement Plans [AS-040]. The plans do not include sufficient detail, and in the cases of the bridges across the A417 including those carrying the Cotswold Way National Trail and Gloucestershire Way long distance footpath, no detail is provided. As this is a landscaped Scheme and standards of design must be high, Requirements for approval of detailed design by the Secretary of State, following consultation with the Joint Councils, is necessary.

### Environmental Management Plan

- 3.12.5. The EMP secured under Schedule 2 Requirement 3 of the dDCO contains construction-related mitigation measures and these are generally acceptable. Requirement 3 also requires NH to consult the Joint Councils on the final contents of the EMP prior to approval by the Secretary of State and in advance of development commencing. This is welcomed. Updates to the EMP to reflect inadequacies highlighted in the LIR should include:
- Mitigation to alleviate air quality impacts on Air Balloon Cottages during construction;
  - Monitoring of nitrogen dioxide at Air Balloon Cottages pre and post operation;
  - Carrying out of additional monitoring at Ullen Wood Ancient Woodland and the veteran trees VT13, VT21, VT42 and VT98 throughout construction and include details in the EMP [APP-317] so that it is secured through Schedule 2 Requirement 3 of the dDCO;
  - Carry out of monitoring at Ullen Wood Ancient Woodland and the veteran trees VT13, VT21, VT42 and VT98 prior to operation to confirm the baseline and carry out further monitoring at these locations during operation. Monitoring and any necessary remedial work should be secured in the dDCO via Requirement, with the relevant authority consulted prior to approval; and
  - Details of temporary signage to be installed along the A435 to deter traffic from using High Cross and the lanes through Cowley and Stockwell to access the A417/A435. This should be included in the CTMP.

Planning and Environmental Consenting  
The Hub  
500 Park Avenue  
Aztec West  
Bristol  
BS32 4RZ

