

A30 Chiverton to Carland Cross TR010026

7.3 MITIGATION ROUTE MAP

Planning Act 2008

APFP Regulation 5(2)(q)
Infrastructure Planning (Applications: Prescribed
Forms and Procedure) Regulations 2009

Volume 7

August 2018

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Applications: Prescribed Forms and
Procedure) Regulations 2009**

**A30 Chiverton to Carland Cross
Development Consent Order 201[x]**

7.3 MITIGATION ROUTE MAP

Regulation Number:	Regulation 5(2)(q)
Planning Inspectorate Scheme Reference	TR010026
Application Document Reference	7.3
Author:	A30 Chiverton to Carland Cross Project Team, Highways England

Version	Date	Status of Version
Rev: C01	22/08/18	Application Issue

Table of Contents

	Pages
1 Introduction	1
2 Mitigation Route Map	2
Table of Tables	
Table 2-1 Mitigation Route Map	2

1 Introduction

- 1.1.1 This Mitigation Route Map has been prepared to accompany an application by Highways England (the Applicant) for a Development Consent Order (DCO) under section 37 of the Planning Act 2008 (the Act) for the construction of an 8.7-mile dual carriageway between Chiverton and Carland Cross in Cornwall; this is known as the A30 Chiverton to Carland Cross (the scheme). The scheme falls wholly within the administrative boundary of Cornwall Council.
- 1.1.2 This Mitigation Route Map is to be read alongside the Record of Environmental Actions and Commitments (REAC), within the Outline CEMP (Volume 6 Document Reference 6.4, ES Appendix 16.1).
- 1.1.3 This Mitigation Route Map is not proposed to have any formal status, but is submitted to help both the Examining Authority and interested parties understand how and where mitigation relied on by the Environmental Statement (ES) is to be secured. It is proposed that this document is kept 'live' by updating it throughout the examination process to ensure it captures all relevant issues, providing certainty that the DCO and ES are consistent.
- 1.1.4 This Mitigation Route Map has been prepared in order to demonstrate that all necessary environmental controls and mitigation measures for the scheme have been identified and secured. The purpose of this document is to:
- provide an audit trail of the controls and mitigation measures on which the Environmental Statement (ES), including related assessment documents, relies to avoid, reduce and/or offset impacts of the Scheme (columns (3) and (4) of the table); and
 - set out the way in which they have been, or will be, translated into clear and enforceable controls (Column (6)); either via Development Consent Order (DCO) Requirements, development consent obligations or other consent regimes.
- 1.1.5 The Mitigation Route Map is structured as follows:
- Column (1) provides the item number for individual issue identified, corresponding to the reference within the REAC;
 - Column (2) gives the source chapter from within the ES, and any additional documents referenced;
 - Column (3) provides an overview of the issue(s) identified;
 - Column (4) gives the detail of the measure or mitigation set out in the ES or associated document;
 - Column (5): gives the relevant timing or 'trigger' for when an identified mitigation or measure should be in place; and
 - Column (6): refers to the relevant securing mechanism(s).
- 1.1.6 The structure of the Mitigation Route Map follows that of the topic chapters of the Environmental Statement (Volume 6, Document Reference 6.2), with a corresponding referencing system.

2 Mitigation Route Map

2.1.1 The Mitigation Route Map is set out in Table 2-1.

Table 2-1 Mitigation Route Map

Ref.	Source	Issue	Mitigation or measure to prevent, reduce, offset and minimise impacts	Trigger P = Pre-construction C = Construction O = Operation A = All	Securing mechanism
Air Quality					
AQ1	Chapter 5	Dust, odour and exhaust emissions during construction works.	Manage dust, odour and exhaust emissions during the construction works in accordance with the best practicable means (BPM).	P, C	Outline CEMP, Annex L Outline Air Quality Management Plan
AQ2	Chapter 5	Amount of construction vehicles used.	Plan construction routes and works to limit the number of vehicles needed, and limit the numbers passing receptors and use existing roads.	P, C	Outline CEMP, Annex L Outline Air Quality Management Plan
Cultural Heritage					
CH1	Chapter 6	Impact on directly affected archaeological deposits.	Archaeological deposits that will be impacted directly by the proposed scheme are preserved by record, to a level commensurate with their importance. Produce and implement a Written Scheme of Investigation (WSI) for the scheme in areas of archaeological interest. This must be prepared in consultation with the relevant planning authority and the local highway authority, agreed with Cornwall Council and submitted to	P, C	Draft DCO, Requirement 9

Ref.	Source	Issue	Mitigation or measure to prevent, reduce, offset and minimise impacts	Trigger P = Pre-construction C = Construction O = Operation A = All	Securing mechanism
			and approved in writing by the Secretary of State.		
CH2	Chapter 6	Potential damage to milestones during construction.	Produce procedures to record, protect, remove and reinstate Grade II Listed milestones (NHLE no. 1140923 and 139483).	A	Outline CEMP, Annex J Milestone Protection Management Plan
Landscape					
L1	Chapter 7 Figure 7.6	Potential negative effects on biodiversity and the character of the landscape.	Protect and retain valued existing vegetation and other landscape features (in particular; trees, woodland, hedgerows and Cornish hedgerows) wherever possible.	C	Draft DCO, Requirement 5 Outline CEMP, Annex I Outline Arboricultural Method Statement and Tree Protection Plan ES Figure 7.6, Environmental Master Plans
L2	Chapter 7 Figure 7.6	Disturbed landscape around the scheme not required for the permanent works.	Following completion of sections of the scheme and associated environmental mitigation, to reinstate disturbed land not required for the permanent works, to its current condition.	C	Draft DCO, Requirement 5 ES Figure 7.6, Environmental Master Plans
L3	Chapter 7 Figure 7.6	Impact of the scheme on visual amenity and the character of the landscape.	Implementation of mitigation measures shown on Environmental Masterplans in the earliest available planting season following construction of relevant sections of the scheme.	C, O	Draft DCO, Requirement 5 Draft DCO, Requirement 6 ES Figure 7.6, Environmental Master Plans
L4	Chapter 7 Figure 7.6	Implementation of mitigation methods in accordance with the specification.	Maintenance aftercare of proposed reinstatement and mitigation planting	C, O	Draft DCO, Requirement 6

Ref.	Source	Issue	Mitigation or measure to prevent, reduce, offset and minimise impacts	Trigger P = Pre-construction C = Construction O = Operation A = All	Securing mechanism
			and seeding for 24 months following construction.		ES Figure 7.6, Environmental Master Plans
L5	Chapter 7	Ensuring the soft estate continues to thrive and fulfil designed mitigation effect.	Management of the proposed soft estate in accordance with a 5-year landscape management plan.	O	Draft DCO, Requirement 5 Draft DCO, Requirement 6
L6	Chapter 7	Light spill during construction.	Production of a construction stage lighting strategy to limit the use of construction lighting and ensure all essential lighting is specified and designed to reduce light spill.	C	Outline CEMP, Annex E: Outline Ecological Management Plan
Ecology and Nature Conservation					
NC1	Chapter 8	Pollution of statutory (SAC, SSSI) and non-statutory designated (CWS, CRVI) sites. Pollution effects from construction activities on areas of retained Priority Habitats (Section 41 NERC Act) and other notable habitats including broadleaved woodland, hedgerows, Cornish hedgerows, heathlands, grasslands (Site 7).	Standard best practice pollution prevention and control measures must be adhered to at all times during construction including CIRIA C532: Control of Water Pollution from Construction Sites, CIRIA Environmental Good Practice on Site.	A	Outline CEMP, Annex H Outline Pollution Prevention and Control Plan
NC2	Chapter 8	Protection of retained areas of Priority Habitats/notable habitats including broadleaved woodland, hedgerows, Cornish	Existing trees, woodlands, hedgerows and Cornish hedgerows to be retained, must be protected during construction with protective fencing where necessary in accordance with BS5837:2012.	P, C	Outline CEMP, Annex I Outline Arboricultural Method Statement and Tree Protection Plan

Ref.	Source	Issue	Mitigation or measure to prevent, reduce, offset and minimise impacts	Trigger P = Pre-construction C = Construction O = Operation A = All	Securing mechanism
		hedgerows, heathlands, grasslands.			
NC3	Chapter 8	Prevention of the spread of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) including Japanese knotweed, Himalayan balsam and giant hogweed.	Pre-construction survey of all areas within construction footprint to identify the location of any invasive species. A Method Statement for preventing the spread of any invasive species will be produced at Detailed Design stage and included within the CEMP. Implementation to be undertaken through site set up and provision of Toolbox Talks.	P, C	Outline CEMP, Annex D Outline Invasive Species Management Plan
NC4	Chapter 8	Construction stage impacts on bats and compliance with protected species licenses.	Pre-construction surveys must be carried out to verify the location, status and characterisation of previously identified bat roosts and to identify any new bat roosts within the construction footprint and a 50 metre radius of the construction footprint.	P, C	Draft DCO, Requirement 10 Outline CEMP, Annex E Outline Ecological Management Plan
NC5	Chapter 8	Construction stage impacts on otters.	Pre-construction surveys to check for any new breeding sites or resting places of otter 500m along all water courses either side of the alignment and all other suitable habitat within a 50 metres radius of the construction footprint.	P, C	Outline CEMP, Annex E Outline Ecological Management Plan
NC6	Chapter 8	Construction stage impacts on breeding birds.	Site clearance activities should be timed to avoid the bird breeding season (March to August inclusive), where possible.	P, C	Outline CEMP, Annex E Outline Ecological Management Plan

Ref.	Source	Issue	Mitigation or measure to prevent, reduce, offset and minimise impacts	Trigger P = Pre-construction C = Construction O = Operation A = All	Securing mechanism
NC7	Chapter 8	Construction stage impacts on fish.	A detailed method statement for the protection of fish populations during installation of the culverts (and other construction activities affecting the watercourses) will be drawn up at the detailed design stage.	P, C	Outline CEMP, Annex E Outline Ecological Management Plan
NC8	Chapter 8	Construction stage impacts on terrestrial invertebrates.	A detailed method statement for the potential translocation of the heathlands will be drawn up at the detailed design stage. The timing of any such translocation will consider the preservation of non-mobile species in the heathland.	P, C	Outline CEMP, Annex N Outline Method Statement for the Translocation of Heathland
NC9	Chapter 8	Construction stage impacts on reptiles.	The reptile mitigation will be determined at detailed design stage. Habitat manipulation and creation strategies will be prioritised over exclusion fencing and translocation strategies.	P, C	Outline CEMP, Annex E Outline Ecological Management Plan
NC10	Chapter 8	Construction stage impacts on badgers.	Pre-construction surveys to check location and status of known badger setts and to check for any new setts within construction footprint and within a 50m radius of the construction footprint.	P, C	Outline CEMP, Annex E Outline Ecological Management Plan
NC11	Chapter 8	Construction stage impacts on other Section 41 Species of Principle Importance.	Method statements will be drawn up at the detailed design stage comprising a series of mitigation measures including timing of works, to prevent adverse impacts on Section 41 species.	P, C	Outline CEMP, Annex E Outline Ecological Management Plan
Geology and Soils					

Ref.	Source	Issue	Mitigation or measure to prevent, reduce, offset and minimise impacts	Trigger P = Pre-construction C = Construction O = Operation A = All	Securing mechanism
GS1	Chapter 9	Construction stage impacts on site end-user, construction workers, soils and controlled waters.	Mitigation measures will be implemented to reduce the impacts of construction activities within areas of potentially contaminated land or unexpected contamination in line with current best practice.	P, C	Draft DCO, Requirement 8 Outline CEMP, Annex B Outline Site Waste Management Plan
GS2	Chapter 9	Construction stage impacts upon the handling, re-use and removal of materials from site.	Implementation of the Materials Management Plan (MMP).	P, C	Outline CEMP, Annex C Outline Materials Management Plan
GS3	Chapter 9	Construction stage environmental contamination.	Prevent contamination being introduced into the environment and prevent existing contamination being mobilised or pathways to contamination being present during operation.	P, C	Draft DCO, Requirement 8 Outline CEMP, Annex B Outline Site Waste Management Plan
GS4	Chapter 9	Impact of existing mining features on carriageway or earthworks stability.	Carry out additional investigation/studies of mining area based on the results of surface geophysical studies.	P, C	Draft DCO, Article 22
Materials					
M1	Chapter 10	Construction stage waste ending up off site or in landfill, potentially reducing waste management infrastructure capacity in the region.	Materials will be sorted/processed and where necessary treated (through for example, sorting and drying onsite) and the materials disposed of or reused as appropriate for the particular waste stream at offsite facilities.	C	Outline CEMP, Annex B Outline Site Waste Management Plan
M2	Chapter 10	Construction stage waste sent to waste management facilities, potentially	To reuse onsite waste arisings as far as is reasonably practicable and where suitable.	C	Outline CEMP, Annex B Outline Site Waste Management Plan

Ref.	Source	Issue	Mitigation or measure to prevent, reduce, offset and minimise impacts	Trigger P = Pre-construction C = Construction O = Operation A = All	Securing mechanism
		impacting upon the local road network.			Outline CEMP, Annex C Outline Materials Management Plan
M3	Chapter 10	Construction vehicle impacts upon the road network.	Use of the haul road and temporary network of local roads for the transport of materials.	C	Draft DCO, Requirement 11 ES Appendix 2.1, Draft Traffic Management Plan
Noise and Vibration					
NV1	Chapter 11	Significant construction noise and vibration effects and minimise adverse impact arising from construction works.	Implement best practicable means at all times in order to control noise and vibration from the works.	P, C	Outline CEMP, Annex K Outline Noise and Vibration Management Plan
NV2	Chapter 11	Significant construction noise and vibration effects and minimise adverse impact arising from construction works.	Implement noise insulation/temporary rehousing policy where not practicable to mitigate airborne noise, or reduce exposure to levels that are tolerable during certain intensive construction phases.	P, C	Outline CEMP, Annex K Outline Noise and Vibration Management Plan
NV3	Chapter 11	Significant construction noise and vibration effects and adequacy of control measures.	Implement noise and vibration monitoring during construction works to ensure mitigation controls are effective and exposure levels are acceptable.	C	Outline CEMP, Annex K Outline Noise and Vibration Management Plan
NV4	Chapter 11	Significant operational noise effects and minimise adverse impact arising from the operation of the scheme.	Noise mitigation measures incorporated into the design of the scheme to control operational noise impacts.	O	Draft DCO, Requirement 5 Draft DCO, Requirement 6 Draft DCO, Requirement 12

Ref.	Source	Issue	Mitigation or measure to prevent, reduce, offset and minimise impacts	Trigger P = Pre-construction C = Construction O = Operation A = All	Securing mechanism
					ES Figure 7.6, Environmental Master Plans
NV5	Chapter 11	Noise and vibration during construction within Section 61 of the Control of Pollution Act 1974.	Manage noise and vibration during construction within Section 61 of the Control of Pollution Act 1974.	C	Draft DCO, Article 43 Outline CEMP, Annex K Outline Noise and Vibration Management Plan
People and Communities					
PC1	Chapter 12 Appendix 16.1 Annex M Public Rights of Way Management Plan	PRoW and WCH user safety and accessibility (during both construction and operation).	Implement a hierarchy of mitigation in relation to PRoW and WCH routes both during construction and operation (as detailed in Section 3.3 of Annex M Public Rights of Way Management Plan).	A	Outline CEMP, Annex M Public Rights of Way Management Plan
PC2	Chapter 12 Appendix 2.1, Draft Traffic Management Plan	Maintaining access to existing tourism, private property and business receptors during construction.	Provision of temporary alternative access arrangements in agreement with the receptor.	C	Draft DCO, Requirement 11 Appendix 2.1, Draft Traffic Management Plan
PC3	Chapter 12	Long term impacts of temporary works such as construction compounds.	Ensure land required for temporary works (e.g. construction compounds) is returned to its original use and condition (as a minimum).	C	Draft DCO, Article 33(4) Draft DCO, Requirement 5
PC4	Chapter 12	Impacts on soil quality.	In areas of land which would be temporarily used, soils should be managed in accordance with DEFRA (2009) Construction Code of Practice for the sustainable use of soils on construction sites.	P	Outline CEMP, Annex C Outline Materials Management Plan

Ref.	Source	Issue	Mitigation or measure to prevent, reduce, offset and minimise impacts	Trigger P = Pre-construction C = Construction O = Operation A = All	Securing mechanism
PC5	Chapter 12	Indirect effects on amenity relating to noise, dust and visual impacts associated with construction works, including the movement of construction vehicles.	Considerate construction management.	P, C	Outline CEMP, Annex K Outline Noise and Vibration Management Plan Outline CEMP, Annex L Outline Air Quality Management Plan ES Appendix 2.1, Draft Traffic Management Plan
PC6	Chapter 12	Potential disruption to the operation of bus services.	Early consultation with bus operators and provision of advance travel information.	C, O	ES Appendix 2.1, Draft Traffic Management Plan
PC7	Chapter 12	Reduced accessibility from the A30 (e.g. at Chybucca).	Discuss and agree as appropriate the need for/provision of additional signage along the proposed scheme and its junctions to tourism and business receptors.	O	Draft DCO, Requirement 12 Legal agreement with Cornwall Council
PC8	Chapter 12	Loss of open space land as part of the scheme.	Provision of replacement open space land to the east of Carland Cross Junction as shown on the Special Category Land Plan – Vol 2, Doc Ref 2.3.	C, O	Draft DCO, Article 38 Special Category Land Plan
Road Drainage and the Water Environment					
RDWE1	Chapter 13	Barriers to fish passage and sediment transportation through the channel network.	The detailed design of new culverts shall ensure that: <ul style="list-style-type: none"> The base of the culvert is set >150mm below the existing bed of the watercourse with structures attached to the base of the culvert (e.g. wooden batons) 	P, C	Draft DCO, Requirement 13 Outline CEMP, Annex G Outline Ground and Surface Water Management Plan

Ref.	Source	Issue	Mitigation or measure to prevent, reduce, offset and minimise impacts	Trigger P = Pre-construction C = Construction O = Operation A = All	Securing mechanism
			<p>to retain sediment within the full length of the culvert.</p> <ul style="list-style-type: none"> Scour protection at the inlet or outlet uses bioengineering methods wherever practicable to maximise habitat potential; and A geomorphologist is consulted during the detailed design of these structures. 		
RDWE2	Chapter 13	Scour in existing watercourses and subsequent damage to river habitats.	<p>The design of any new outfalls shall ensure that:</p> <ul style="list-style-type: none"> The headwall structure is set back from or flush with the channel profile and does not protrude into the channel; The outfall is angled to direct flow at an angle no greater than 60 degrees from the existing flow direction in the watercourse; Any scour protection surrounding the outfall headwall uses bioengineering methods wherever practicable to maximise habitat potential; and A geomorphologist is consulted during the detailed design of these structures. 	P, C	<p>Draft DCO, Requirement 13</p> <p>Outline CEMP, Annex G Outline Ground and Surface Water Management Plan</p>
RDWE3	Chapter 13	Permanent and temporary impacts upon existing private water supplies.	Where the potential for impacts to private water supplies remains unclear, a detailed assessment of groundwater levels and flows shall	A	Draft DCO, Requirement 12

Ref.	Source	Issue	Mitigation or measure to prevent, reduce, offset and minimise impacts	Trigger P = Pre-construction C = Construction O = Operation A = All	Securing mechanism
			be undertaken during detailed design to fully understand the potential impact upon each feature of interest. Where, following this assessment, the potential for impact remains unclear or is certain, a new private water supply (e.g. a borehole) will be established following discussion with the landowner.		
RDWE4	Chapter 13	Impacts to, or loss of, ponds with detriment to existing water users and wider ecology.	Detailed assessment and monitoring of pond recharge mechanisms to be undertaken during detailed design. Any impacted ponds to re-profiled to maintain their ecological and resource value.	P, C	Draft DCO, Requirement 12
Climate Change					
CC1	Chapter 14	Extreme weather impacts upon construction.	Ensure climate change resilience planning for extreme weather events is undertaken during construction.	C	Outline CEMP, Annex G Outline Ground and Surface Water Management Plan
De-trunking					
D1	Statement of Common Ground with Cornwall Council	De-trunking of the existing A30.	Funding for the de-trunking measures to be secured through planning obligations.	P, C	Legal agreement with Cornwall Council

If you need help accessing this or any other Highways England information, please call **0300 123 5000** and we will help you.