

A12 Chelmsford to A120 widening scheme

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8.2 Statement of Common Ground with the Environment Agency

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Statement of Common Ground with the Environment Agency

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STATEMENT OF COMMON GROUND

This Statement of Common Ground has been prepared and agreed by (1) National Highways Company Limited and (2) the Environment Agency.

Signed...  ...

Philip Davie
Project Manager
on behalf of National Highways
Date: 09/06/23

Signed..... 

Jo Firth
Sustainable Places Team Leader East Anglia area on behalf of [Environment Agency]
Date: 08/06/23

For the submission of the Statement of Common Ground for Deadline 6, between **National Highways** and the **Environment Agency**, updates have been made in the following sections of the document.

Location	Update made
Record of Engagement	There have been three SoCG meetings to discuss matters further since Deadline 4.
Agreed issues	The following topics have been agreed since Deadline 4: F6, F12, F15, F17, F19, F20, F36, F37, F38, S5, S6 and S15.
New items	None

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CONTENTS

1 Introduction 1

1.1 Purpose of this document 1

1.2 Parties to this Statement of Common Ground..... 1

1.3 Terminology 2

2 Record of engagement 2

3 Issues raised 9

3.1 Biodiversity and ecology matters 9

3.2 Flood risk matters 17

3.3 Contaminated land matters 34

3.4 Groundwater resources matters..... 38

3.5 Surface water and water resources matters..... 46

3.6 Waste matters..... 56

3.7 Draft DCO and legal matters..... 58

Acronyms 65

LIST OF TABLES

Table 2.1 Record of engagement 2

Table 3.1 Biodiversity and ecology matters 9

Table 3.2 Flood risk matters 17

Table 3.3 Contaminated land matters 34

Table 3.4 Groundwater resources matters..... 38

Table 3.5 Surface water matters..... 46

Table 3.6 Waste matters..... 56

Table 3.7 DCO and legal matters 58

1 Introduction

1.1 Purpose of this document

- 1.1.1 This Statement of Common Ground (SoCG) has been prepared in respect of the proposed A12 Chelmsford to A120 widening scheme (the Application) made by National Highways Company Limited (National Highways) to the Secretary of State for Transport (Secretary of State) for a Development Consent Order (the Order) under section 37 of the Planning Act 2008 (PA 2008).
- 1.1.2 This SoCG does not seek to replicate information which is available elsewhere within the Application documents. All documents are available in the deposit locations and/or on the Planning Inspectorate website.
- 1.1.3 The SoCG has been produced to confirm to the Examining Authority where agreement has been reached between the parties to it, and where agreement has not (yet) been reached and still under discussion, and disagreement. SoCGs are an established means in the planning process of allowing all parties to identify and so focus on specific issues that may need to be addressed during the Examination.

1.2 Parties to this Statement of Common Ground

- 1.2.1 This SoCG has been prepared by (1) National Highways (NH) as the Applicant and (2) the Environment Agency (EA).
- 1.2.2 National Highways became the Government-owned Strategic Highways Company on 1 April 2015. It is the highway authority in England for the strategic road network and has the necessary powers and duties to operate, manage, maintain, and enhance the network. Regulatory powers remain with the Secretary of State. The legislation establishing National Highways made provision for all legal rights and obligations of the Highways Agency, including in respect of the Application, to be conferred upon or assumed by National Highways.
- 1.2.3 The EA is a non-departmental public body, established in 1996 and sponsored by the United Kingdom government's Department for Environment, Food and Rural Affairs (Defra), with responsibilities relating to the protection and enhancement of the environment in England (and until 2013 also Wales). The EA is the principal flood risk management operating authority. It has permissive power (but not the legal obligation) to manage flood risk from designated Main Rivers and the sea. Other responsibilities of the EA include regulating major industry and waste, treatment of contaminated land, water quality and resources, fisheries, inland river, estuary and harbour navigations and conservation and ecology.
- 1.2.4 The EA is a prescribed consultee for the Application under Sections 42(1)(a) and 56(2)(a) of the PA 2008.
- 1.2.5 Collectively National Highways and the EA are referred to as 'the parties'.

1.3 Terminology

1.3.1 In Section 3: Issues, of this SoCG, the following terminology is used:

- 'Agreed' indicates where the issue has been resolved
- 'Agreed in principle' indicates where the path to resolution of an issue is agreed by both parties but demonstration of compliance is outstanding
- 'Under discussion' indicates where these points will be the subject of on-going discussion wherever possible to resolve, or refine, the extent of disagreement between the parties
- 'Not agreed' indicates a final position

1.3.2 It can be taken that any matters not specifically referred to in Section 3: Issues, of this SoCG are not of material interest or relevance to the EA and therefore have not been the subject of any discussion between the parties. As such, those matters can be read as agreed, only to the extent that they are either not of material interest or relevance to the EA. It is recognised, however, that engagement between both parties will need to continue due to their joint vested interest in the area of the proposed scheme.

2 Record of engagement

2.1.1 The parties have been engaged in consultation since the pre-application period for the Application. A summary of the meetings and correspondence that has taken place between National Highways and the EA in relation to the Application is outlined in Table 2.1.

Table 2.1 Record of engagement

Date	Form of correspondence	Key topic discussed and key outcomes
23 January 2017	Letter from NH to the EA	Notification of non-statutory consultation.
3 March 2017	Letter from the EA to NH	Response to the non-statutory consultation. Preferred option not stated. The EA highlighted that the proposed scheme presents an opportunity to provide improvements to the water environment. The EA acknowledged and agreed that Flood Risk Assessment (FRA) and Water Framework Directive (WFD) assessment will be required to inform the proposed scheme.

Date	Form of correspondence	Key topic discussed and key outcomes
23 May 2017	Meeting – face to face (drainage and flood risk)	<ul style="list-style-type: none"> • Overview of the proposed scheme. • Hydraulic models will be built from scratch by Jacobs for five watercourses (Roman River, Domsey Brook, Rivenhall Brook, the River Ter and Boreham Brook). The EA confirmed that they would want to review any models once they are completed. • The EA requested that the proposed scheme must assess the climate change impacts on existing culverts requiring extension, to demonstrate no deleterious impact upon peak water levels. • The climate change uplift factors for peak flow were agreed as 100yr+65%. • The EA expected the floodplain to be avoided in the first instance, and any loss of floodplain would need to be justified and mitigated. • Agreed that rainfall intensity to be used for surface water drainage design would be based on a +20% climate change uplift factor and assessed against a +40% climate change uplift factor.
23 May 2017	Meeting – face to face (biodiversity)	<ul style="list-style-type: none"> • Habitats Regulation Assessment Screening – the proposed scheme does not lie within 2km of European sites and there are no likely effects on any sites. • Ecological survey scope – desk studies conducted, and species recorded in the area identified. Phase 1 habitat survey undertaken in summer 2016. Detailed species surveys programmed including bats, badgers, great crested newts, barn owls and dormice. • River Ter is a good quality habitat with eel populations. The EA would want the high-quality environment of this river to be maintained. • The EA flagged that glow-worms are present around Whetmead Local Nature Reserve. • The EA would like any survey information conducted on white clawed crayfish, as currently only one recorded in Essex.
17 October 2019	Meeting – face to face (flood risk)	<p>Reintroduction to the proposed scheme for the EA and Essex County Council (ECC) flood risk and drainage teams.</p> <p>Presentation of surface water drainage and flood risk assessment and design criteria.</p>
21 October 2019	Letter from NH to the EA	Notification by NH of junctions 23 to 25 non-statutory consultation.

Date	Form of correspondence	Key topic discussed and key outcomes
10 July 2020	Meeting – MS Teams (WFD, geomorphology hydrogeology)	Provided project update; seeking agreement on baseline conditions and assessment approaches (WFD, aquatic ecology, geomorphology, and hydrogeology); and data requests.
25 August 2020	Transmittal from NH to the EA	Meeting minutes (10 Jul 2020) issued.
27 November 2020	Email from NH to the EA	Advice sought on earthworks within landfill boundaries, at Witham between junction 21 and junction 22, and east of junction 25. Further information was also requested on historical landfills, records of licensed water abstractions and registered/all known private water supplies within 500m of the proposed scheme. In addition, information on other infilled land, waste sites or potentially contaminated sites on and within 250m of the proposed scheme.
22 December 2020	Email from the EA to NH	The EA's response to NH to 27 November 2020 request providing landfill information and a list of licensed water abstractions. If infiltration features are proposed in the future the EA would need to be consulted to determine effects on groundwater quality. The EA advised that site investigations would be expected to determine ground conditions; and appropriate protocols, including remedial measures, to be put in place should unsuitable or unexpected material be encountered.
19 January 2021	Meeting – MS Teams (general)	Scoping opinion comments; WFD potential impacts (Boreham Brook, Domsey Brook, Roman River and Rivenhall Brook); watercourses and proposed modifications; and water quality issues. It was agreed to arrange a follow up meeting to discuss aquatic ecology.
19 January 2021	Meeting – MS Teams (flood risk)	Introduction to with-scheme hydraulic modelling, including climate change allowance, and flood mitigation. Discussion on proposed scheme design and preliminary outcome of watercourse flood risk modelling.
21 January 2021	Email from NH to the EA	Clarification sought by NH from the EA on Source Protection Zone 3 which is defined for the northern extent of the proposed scheme. Anticipated that these abstractions are from the Chalk which is present beneath the London Clay.
21 January 2021	Transmittal from NH to the EA	Action from 19 January 2021 meeting. Lower Blackwater Brain baseline modelling report and Mid Blackwater baseline modelling report issued to the EA.
29 January 2021	Email from the EA to NH	Response from the EA to 21 January 2021 query.

Date	Form of correspondence	Key topic discussed and key outcomes
29 January 2021	Email from the EA to NH	The EA provided the draft updated climate change allowances, updated for peak river flow to be applied for the proposed scheme.
10 February 2021	Meeting – MS Teams (biodiversity)	<p>Presented findings of baseline surveys undertaken in 2020. The EA agreed with the survey findings and agreed that white-clawed crayfish <i>Austropotamobius pallipes</i> are likely absent from the study area.</p> <p>Requested confirmation regarding the biodiversity river metric and the EA confirmed that the scope of the biodiversity river metric should relate to the proposed aim of the scheme for no net loss to biodiversity and be proportionate.</p> <p>Provided an overview of otter survey results, details regarding construction of new culverts, and details on minor realignments of Rivenhall Brook, Roman River and Domsey Brook. The EA confirmed that they would prefer open span bridges to culverts.</p>
23 March 2021	Transmittal from NH to the EA	Two meeting minutes (19 January 2020) issued.
13 May 2021	Meeting – MS Teams (flood risk)	Introduced the findings of the preliminary FRA ahead of formal issue.
22 June 2021	Letter from NH to the EA	Notification of statutory consultation by NH.
12 July 2021	Transmittal from NH to the EA	Issued preliminary FRA for comment.
8 August 2021	Letter from the EA to NH	EA response to the statutory consultation, including comments on the Preliminary Environmental Information Report (PEIR).
15 September 2021	Meeting – MS Teams (WFD)	Review of EA's comments on the PEIR in relation to WFD Regulations, water crossings and culverts.
16 September 2021	Meeting – MS Teams (biodiversity)	<p>Presented current watercourse crossing and realignment designs.</p> <p>The EA considered the current biodiversity and hydromorphology mitigation and enhancements were not sufficient given the scale of the proposed scheme and the pre-existing issues with the impacts of the A12 on watercourses.</p>
22 September 2021	Letter from the EA to NH	Response received from the EA setting out their review comments of the preliminary FRA.

Date	Form of correspondence	Key topic discussed and key outcomes
26 October 2021	Email from NH to the EA	Further data requested from the EA for the FRA: <ul style="list-style-type: none"> • Historic flood incidents • Other developments for consideration of opportunities and cumulative impacts • Any other flood risk constraints the EA would like the Application to take into consideration
5 November 2021	Letter from NH to the EA	Notification of supplementary consultation.
15 November 2021	Transmittal from NH to the EA	Issue of hydraulic models to the EA for review: Boreham Brook, Domsey Brook and Roman River.
22 November 2021	Meeting – MS Teams (WFD)	Discussion on the design of watercourse crossings.
17 December 2021	Letter from the EA to NH	EA response to the supplementary consultation. Key issues raised: <ul style="list-style-type: none"> • Corridors 1 and 3 for the Cadent gas main diversion due to the historic landfill and Whetmead local nature reserve. • Full investigation of groundwater within the local shallow aquifers will be needed to determine the extent to which the gas main diversion corridors will disturb groundwater flow. • Hydrogeological Impact Assessments required of the gas main corridors that would potentially affect abstractions to ensure that they will not be permanently derogated, and to assess the degree of temporary impact. • Request for methodology for gas main diversion river crossings to be included in the Environmental Management Plan (EMP). • The Sustainable drainage system design (SuDS) guide for Essex should be referred to and utilised for the design of the Inworth Road improvements • The EA re-stated their comments in respect of the main river crossings proposed as part of the overall scheme, and the resulting impact on the biodiversity of the river ecosystems.
20 December 2021	Transmittal from NH to the EA	Issue of hydraulic models to EA for review: Lower Brain and Blackwater and Rivenhall Brook.
21 December 2021	Transmittal from NH to the EA	Issue of preliminary Water Quality Assessment Report (WQAR) for review by the EA.

Date	Form of correspondence	Key topic discussed and key outcomes
12 January 2022	Transmittal from NH to the EA	Issue of hydraulic models to the EA for review: Middle Blackwater.
14 January 2022	Letter from the EA to NH	Response received from the EA setting out their review comments of the preliminary WQAR.
18 January 2022	Letter from the EA to NH	Response received from the EA setting out their review comments of the flood risk modelling for: Boreham Brook, Domsey Brook and Roman River.
17 February 2022	Letter from the EA to NH	Response received from the EA setting out their review comments of the flood risk modelling for: Lower Brain, Blackwater and Rivenhall Brook.
3 March 2022	Meeting – MS Teams (hydrogeology)	Presentation of the emerging findings of the hydrogeology assessment in the Environmental Statement.
23 March 2022	Letter from the EA to NH	Response received from the EA setting out their review comments of the flood risk modelling for the Middle Blackwater.
4 November 2022	Relevant Representation from the EA	Relevant Representation published (via the Planning Inspectorate) setting out key issues that the EA believe should be considered in the DCO examination.
7 December 2022	Review of SoCG	Review of SoCG by both parties confirming outstanding issues
18 January 2023	Online meeting	Discussion regarding the interaction of the proposed scheme and the River Brain flood defence.
23 January 2023	Online meeting	Discussion of land quality issues, in particular provision of existing and future reports
25 January 2023	Review of SoCG	Review of SoCG by both parties confirming outstanding issues
31 January 2023	Online meeting	Discussion of various issues relating to flood risk, including Watercourse 21, River Brain flood defence and design standards.
2 February 2023	Online meeting	Review of Proposed Scheme culverting proposals on main rivers
6 February 2023	Email	Response of EA to draft SoCG shared with them on 31/1/23
30 March 2023	Online meeting	Review of EA's response to NH submission at Deadlines 2 and 3 specific to flood risk
5 May 2023	Online meeting	Discussion on culverting proposals and other SoCG matters

Date	Form of correspondence	Key topic discussed and key outcomes
25 May 2023	Email	Update from EA on updated SoCG submitted by NH at Deadline 4
6 June 2023	Online meeting	Review of SoCG items under discussion in email of 25/5/23

- 2.1.2 It is agreed that this is an accurate record of the key meetings and consultation undertaken between (1) NH and (2) the EA in relation to the issues addressed in this SoCG.

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3 Issues raised

3.1 Biodiversity and ecology matters

Table 3.1 Biodiversity and ecology matters

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
B1	Rivenhall Brook Culvert	A12 EA Relevant Representation 4/11/22 (RR-011) paragraphs 1.1-1.10 and 2.9	<p>The EA has substantial concerns regarding the proposed use of culverts on Rivenhall Brook, Domsey Brook, the extension of the existing culvert crossing of the Roman River and extensions to existing bridges on the rivers Brain, Blackwater, and Domsey Brook.</p> <p>The Applicant needs to provide clarity on the approach to reduce biodiversity impacts. It should follow the Design for Manual for Roads and Bridges and clarity should be provided which shows the use of this approach and consequently the proposals will not result in multiple negative effects of strategic significance which exceed the footprint of the proposed scheme.</p>	Discussions are ongoing	Under discussion	
B2	Domsey Brook Bridge	A12 EA Relevant Representation 4/11/22 (RR-011) paragraphs 1.1-1.10 and 2.21	The EA has substantial concerns regarding the proposed use of culverts on Rivenhall Brook, Domsey Brook, the extension of the existing culvert crossing of the Roman River and extensions to	Discussions are ongoing	Under discussion	

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
			<p>existing bridges are on the rivers Brain, Blackwater, and Domsey Brook.</p> <p>The Applicant needs to provide clarity on the approach to reduce biodiversity impacts. It should follow the Design for Manual for Roads and Bridges and clarity should be provided which shows the use of this approach and consequently the proposals will not result in multiple negative effects of strategic significance which exceed the footprint of the proposed scheme.</p>			
B3	Domsey East Culvert	A12 EA Relevant Representation 4/11/22 (RR-011) paragraphs 1.1-1.10 and 2.25	<p>The EA has substantial concerns regarding the proposed use of culverts on Rivenhall Brook, Domsey Brook, the extension of the existing culvert crossing of the Roman River and extensions to existing bridges are on the rivers Brain, Blackwater, and Domsey Brook.</p> <p>The Applicant needs to provide clarity on the approach to reduce biodiversity impacts. It should follow the Design for Manual for Roads and Bridges and clarity should be provided which shows the use of this approach and consequently the proposals will not result in multiple negative effects of strategic significance which exceed the footprint of the proposed scheme.</p>	Discussions are ongoing	Under discussion	

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
B4	Roman River culvert extension	A12 EA Relevant Representation 4/11/22 (RR-011) paragraphs 1.1-1.10 and 2.30	<p>The EA has substantial concerns regarding the proposed use of culverts on Rivenhall Brook, Domsey Brook, the extension of the existing culvert crossing of the Roman River and extensions to existing bridges are on the rivers Brain, Blackwater, and Domsey Brook.</p> <p>The Applicant needs to provide clarity on the approach to reduce biodiversity impacts. It should follow the Design for Manual for Roads and Bridges and clarity should be provided which shows the use of this approach and consequently the proposals will not result in multiple negative effects of strategic significance which exceed the footprint of the proposed scheme.</p>	Discussions are ongoing	Under discussion	
B5	Brain Bridge culvert extension	A12 EA Relevant Representation 4/11/22 (RR-011) paragraphs 1.1-1.10 and 2.6	<p>The EA has substantial concerns regarding the proposed use of culverts on Rivenhall Brook, Domsey Brook, the extension of the existing culvert crossing of the Roman River and extensions to existing bridges are on the rivers Brain, Blackwater, and Domsey Brook.</p> <p>The Applicant needs to provide clarity on the approach to reduce biodiversity impacts. It should follow the Design for Manual for Roads and Bridges and clarity should be provided which shows the use</p>	Discussions are ongoing	Under discussion	

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
			of this approach and consequently the proposals will not result in multiple negative effects of strategic significance which exceed the footprint of the proposed scheme.			
B6	River Blackwater crossing		The EA has commented on the widening of Ashman's Bridge and its impact on the watercourse, stating it to being a ' <i>long, dark crossing</i> '.	Following further discussion with the EA in September 2021, it was agreed that the proposed widening of Ashman's Bridge would not lead to adverse impacts along the watercourse and would not lead to a long, dark crossing.	Agreed	7/12/22
B7	Watercourse crossings		The EA has commented that the current design of approximately 30 culvert crossings would repeat historical mistakes made along the A12. The EA advised that the crossings require a holistic design approach to allow for a fully functioning river system and ecosystem. Their preference would be to use portal structures and/or realign watercourses with meandering sections to offset impacts arising from culverts.	Discussions are ongoing	Under discussion	
B8	Design details for proposed outfalls		The EA requested that outfalls to watercourses be set back to introduce additional riparian habitat.	Discussions are ongoing	Agreed	7/12/22

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
B9	Biodiversity Net Gain	Chapter 9: Biodiversity [APP-076], Section 9.13 Appendix 9.14: Biodiversity net gain report [APP-138]	<p>The EA would expect the proposed scheme to provide a 10% biodiversity net gain. If this cannot be achieved, then the proposed scheme should look beyond its current red line boundary.</p> <p>The EA expects enhancements to be included along each watercourse.</p>	<p>Biodiversity Net Gain (BNG) is discussed further in the BNG report [APP-138] and Chapter 9 of the Environmental Statement [APP-076], where it is demonstrated that the proposed scheme would result in greater than a 10% BNG, despite the proposed scheme not having a statutory target.</p> <p>The BNG assessment splits rivers and ditches and Table 3 plus its footnotes includes a breakdown. There would be a +0.16% increase in the Rivers biodiversity unit.</p> <p>The provision of enhancements along each watercourse has been considered, but these can only arise through the provision of essential mitigation.</p>	Under discussion	
B10	Mammal crossings	Chapter 9: Biodiversity [APP-076], Section 9.10	The EA would expect further mitigation for mammals in addition to mammal ledges in culverts, such as tunnels.	<p>The consideration of mammal crossings is included in Chapter 9 of the Environmental Statement [APP-076].</p> <p>Dedicated mammal tunnels are not included in the proposed scheme, but new and modified culverts have been designed where practicable to allow safe passage by wildlife under all flow conditions through the</p>	Under discussion	

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
				<p>provision of mammal ledges above the 1 in 100-year flood level.</p> <p>The proposed scheme will provide otter fencing where appropriate and where mortality is considered a risk.</p>		
B11	Vegetation clearance	Chapter 9: Biodiversity [APP-076], Section 9.10	The EA advised that in general, trees and scrub should not be cleared from the banks of watercourses. Planting more native tree saplings and shrubs in a scattered mosaic to introduce partial shade would be preferable.	The environmental design includes a range of planting types to offset lost habitats and vegetation. The majority of new planting would be native, except where responding to local landscape character, e.g. parklands. The planting would be agreed in conjunction with the drainage and landscape teams during the pre-construction stage. The preliminary planting plan is shown on the Environmental Masterplan [APP-086 to APP-088], with further details included in the Landscape and Ecology Mitigation Plan (Appendix I of the first iteration EMP [APP-193]).	Agreed	30/3/23
B12	Assessment of aquatic ecology	Chapter 9: Biodiversity [APP-076], Section 9.11	The EA disagrees with the PEIR assessment of no significant effects on local aquatic ecology and requests new meandering sections to offset impacts caused by crossings.	<p>Comments on the assessment of likely significant effects have been taken into account in the Environmental Statement.</p> <p>Mitigation, both standard and additional, is described further in Section 9.10 of Chapter 9 [APP-076], and Section 14.10 of Chapter</p>	Under discussion	

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
				<p>14, of the Environmental Statement [APP-081].</p> <p>Realignments of Main Rivers and ordinary watercourses would exhibit gently sinuous planforms to encourage natural processes and habitat creation.</p>		
B13	Proposed lighting	Chapter 9: Biodiversity [APP-076], Section 9.11	The EA disagrees with the PEIR assessment of no likely significant effects associated with lighting at watercourses.	<p>Item LV11 of the REAC (APP-185) states that temporary (construction) lighting would be avoided or directed away from ecological receptors.</p> <p>Chapter 9 of the ES (APP-076) references best practice that would be adopted: CIRIA C741 and C961.</p> <p>Lighting will be designed sensitively, such as through the use of horizontally mounted flat glass lanterns, modern dimmable light emitting diodes with cut-off properties, and dynamic systems of operation to provide the minimum amount of light required at different times. Design will be carried out in accordance with the latest BS 5489 standard and the Applicant's specifications. The design will also take into consideration guidance notes from the Institution of Lighting Professionals, including Guidance</p>	Agreed	30/3/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
				Note 1 for the Reduction of Obtrusive Light (2020) and Guidance Note 8 for Bats and Artificial Lighting (2018).		

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3.2 Flood risk matters

Table 3.2 Flood risk matters

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
F1	Boreham Brook crossing	A12 EA Relevant Representation 4/11/22 (RR-011) paragraphs 2.3 - 2.4	The EA agrees that the embankment widening will take place in Flood Zone 1 and confirm that there is no alternation to flood levels and extents because of the works.	-	Agreed	4/11/22
F2	River Ter crossing	A12 EA Relevant Representation 4/11/22 (RR-011) paragraph 2.5	The EA agrees that the crossing will be safe in all flood events.	-	Agreed	4/11/22
F3	River Brain crossing	A12 EA Relevant Representation 4/11/22 (RR-011) paragraph 2.6	The EA seeks clarification regarding whether the scheme will affect the existing flood defence embankment.	<p>A call was held on 18/1/23 to discuss the interaction. Information on the defence is limited but the EA plan to visit site in January 2023 to confirm the location, extent and purpose of the feature.</p> <p>31/1/23: NH has undertaken a topographic survey and initial findings indicate that the Proposed scheme would be at least 16m away from the defence. Details are to be provided by NH in due course.</p> <p>6/2/23; EA has seen draft survey outputs and is satisfied that works at least 16m from defence</p>	Agreed	6/2/23 (via email)

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
F4	Rivenhall Brook increase in water levels	A12 EA Relevant Representation 4/11/22 paragraphs 2.11	<p>The FRA does not mention the increased flood risk outside of the order limits boundary, and it is not clear whether the increase is within the river or on the floodplain. This information on the location of the increased flood levels should be provided. The acceptability of this increase should be agreed with the landowner, or the NH land ownership boundary increased to include this area.</p> <p>The EA would expect to see copies of correspondence between NH and the landowner.</p>	With reference to paragraph 2.5.16 of the Flood Risk Assessment (APP-162), the increased flood depths downstream of the scheme are either within NH retained land or those outside the Order Limits are contained within the watercourse channel. Liaison with the riparian owners of the affected length of watercourse is ongoing	Agreed in principle (pending acceptance by landowner)	
F5	Loss of Flood Zone 3b	A12 EA Relevant Representation 4/11/22 paragraphs 2.7, 2.12, 2.19 and 2.28	<p>Loss of Flood Zone 3b requires compensation, or the Applicant should explain why compensation is not being provided on the River Brain, Rivenhall Brook, River Blackwater and Domsey Brook (East) in accordance with NNNPS paragraph 5.109.</p> <p>The EA does not consider itself to be the authority for this point but is raising awareness.</p>	The NH response to the EA's relevant representation (RR-011) sets out that because there is not a significant increase in pass forward flow and consequently no increase in flood risk, the loss of FZ3b is informally provided within the floodplain.	Agreed	30/3/23
F6	Ordinary Watercourse 15	A12 EA Relevant Representation 4/11/22 paragraph 2.13	The Lead Local Flood Authority (LLFA) will need to determine whether the infilling of the watercourse 15 is acceptable, as a permit would be required for this infilling.	NH is liaising with ECC as the LLFA on this matter.	Agreed	25/5/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
F7	WCH route north of the A12	A12 EA Relevant Representation 4/11/22 paragraph 2.15	The relocated route will cross the Rivenhall Brook floodplain and be at risk of flooding. It should be ensured that the local authority Emergency Planners are satisfied with the safety of the future users of this route.	NH is preparing a risk assessment that will be submitted to local authority emergency planners. It is anticipated that this would be before the end of March 2023.	Agreed	25/1/23
F8	WCH route and footbridge south of the River Blackwater crossing	A12 EA Relevant Representation 4/11/22 paragraphs 2.16 and 1.17	The local authority Emergency Planners should consider whether the mitigation provided for the WCH route and footbridge is acceptable.	NH is preparing a risk assessment that will be submitted to local authority emergency planners. It is anticipated that this would be before the end of March 2023.	Agreed	25/1/23
F10	East of Witham a Private Means of Access Route	A12 EA Relevant Representation 4/11/22 paragraph 2.20	The local authority Emergency Planners should consider whether the mitigation provided for the route is acceptable.	NH is preparing a risk assessment that will be submitted to local authority emergency planners. It is anticipated that this would be before the end of March 2023.	Agreed	25/1/23
F11	Existing and proposed A12	A12 EA Relevant Representation 4/11/22 paragraph 2.24	The existing and proposed A12 is also safe from flooding, as it is over 5m above the flood level in the 1% with 38% climate change flood event.	N/A	Agreed	4/11/22
F12	Domsey Brook (East)	A12 EA Relevant Representation 4/11/22 paragraphs 2.25 - 2.29	See advice on "Biodiversity and Ecology" for the EA position on the use of culverts on main rivers. There will be an increase water levels within this area. The FRA concludes that this area is within the order limits of the	The location that would experience an increase in peak water levels would remain within the ownership of NH. A location plan was issued to EA on 26/5/23.	Agreed	8/6/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
			scheme, but it is not clear whether it will remain in the ownership of NH, and therefore be acceptable. If it is to remain third-party land then the agreement of the land owner to the increased water levels should be obtained, or flood compensation provided to mitigate this.			
F13	Roman River crossing	A12 EA Relevant Representation 4/11/22 paragraph 2.31	The results show that there will be negligible alteration to flood levels as a result of the proposed works. As a result no mitigation is proposed in this location.	N/A	Agreed	7/12/22
F14	Haul roads, borrow pits and all crossings of/works affecting ordinary watercourses	A12 EA Relevant Representation 4/11/22 paragraph 2.33	<p>Some of the works will lead to minor increases in flood depths at specific locations. Where the affected land will not remain within the ownership of NH, it should be ensured that landowners are accepting of this increased risk or compensatory storage should be considered.</p> <p>Via email 25/5/23: "This point effectively only relates to the two areas of increased flood risk associated with the haul roads at Witham & Ashmans".</p>	<p>A plan was shared with the EA on 2/6/23 indicating the area of increase at Ashman's Bridge would remain with the ownership of NH.</p> <p>The Applicant has prepared a summary note of the increase peak water levels at Witham to be shared with the affected landowner.</p> <p>Additionally, measures to mitigate potential adverse impacts to the water environment during construction would be addressed by a Water Management Plan – see REAC item RDWE1 [APP-185].</p>	Under discussion	

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
F15	Culverts on ordinary watercourses	A12 EA Relevant Representation 4/11/22 paragraph 2.34	The use of a culvert over a bridge should be justified, and it should be ensured that culverts where used are appropriately sized. Culverts should usually be the largest size that the watercourse can accommodate; with the current proposals it is not always clear that this approach has been applied.	As ordinary watercourses fall within the remit of the Lead Local Flood Authority, NH would seek approval for these works through the ordinary watercourse consenting process to ECC as the Lead Local Flood Authority.	Agreed	
F16	Ordinary watercourse 7 and scheme NNNPS compliance	A12 EA Relevant Representation 4/11/22 paragraphs 2.35 - 2.36	In the vicinity of Ordinary watercourse 7, the proposed A12 is at risk of flooding in the extreme 0.1% event. The FRA has not clearly stated if there is a need for a scheme to remain operational during a worst-case flood event over the development's lifetime.	<p>NH is currently re-running the OWc7 hydraulic model with a 0.1% (+ Upper End allowance) AEP event to determine the risk to the proposed scheme.</p> <p>It is noted that the EA's guidance on Flood Risk Assessments does not include a Credible Maximum Scenario for rainfall intensity which is the approach adopted to develop flows on this minor watercourse.</p> <p>NH has met with local authority emergency planners on 2/5/23, Essex Fire and Rescue on 9/5/23, Essex Police on 15/5/23 and none have raised concerns regarding the risk of flooding to the A12.</p>	Agreed in principle (subject to discussion with Essex ambulance service)	
F17	Drainage Basins	A12 EA Relevant Representation	It would be preferable for the basins to be sited in Flood Zone 1, so that they do not displace floodwater and are removed	Drainage pond locations have been informed by hydraulic modelling undertaken for the proposed	Agreed	5/5/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
		4/11/22 paragraph 2.37	from the potential risk of flooding. The LLFA will comment further on this aspect of the scheme.	scheme, which we consider to be more detailed and accurate due to recent site investigations and detailed topographic survey and the regional scale of the models developed for flood zone mapping, than those that have been used to develop FZ mapping. Therefore ponds may appear to be within Flood Zones 2 or 3 but would be outside the modelled 1 in 100 plus an allowance for climate change event extent, so the present and future Flood Zone 3. This applies to four ponds only; all others are in Flood Zone 1. An explanatory note was submitted by NH at Deadline 4 [REP4-063].		
F18	Construction Flood Risk	A12 EA Relevant Representation 4/11/22 paragraph 2.38	In respect of construction across the scheme, the proposed measures related to flood risk in chapter 7 of the FRA and the First Iteration EMP seem appropriate.	N/A	Agreed	4/11/22
F19	Safety and flood warnings	A12 EA Relevant Representation 4/11/22 paragraph 2.39	It is proposed to utilise flood warnings to ensure the safety of people. It may be beneficial to also look at Met Office weather warnings for smaller watercourses not covered by EA flood warnings.	The first iteration EMP [APP-184] states that the Applicant would monitor weather forecasts to inform the coordination of channel works and ensure there are measures in place to alert workers and remove	Agreed	5/5/23

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				<p>equipment when high flows are expected.</p> <p>The REAC [APP-185] includes a commitment (REAC-CC3) to incorporate a requirement to use weather forecasting and to develop plans for extreme weather events (e.g. very high intensity rainfall events or heat waves) within the second iteration EMP.</p>		
F20	Water level monitoring	A12 EA Relevant Representation 4/11/22 paragraph 2.41	<p>EMP Appendix N: Water Management Plan (APP-198) states at N.10.18 that there would be: 'No monitoring required during the construction phase'.</p> <p>However, monitoring of river levels, flood warnings, and met office rainfall alerts would be required during the construction phase, particularly for temporary works in watercourses or on the floodplain. Works may need to cease on receipt of a warning or when levels rise for the safety of the workers, and to ensure no increase in offsite flood risk.</p>	See F19	Agreed	5/5/23
F21	Gas main diversion at Blackwater river	A12 EA Relevant Representation 4/11/22 paragraph 2.42	The proposed gas main diversion will use trenchless techniques to take the pipes under the River Blackwater. The required minimum depth under the hard bed of the main river is 1.5m, and this depth must	The River Blackwater crossing will be via trenchless techniques and at least 2m below the hard bed of the watercourse as stated in item RDWE58 in the updated REAC submitted at deadline 2 [Applicant	Agreed	7/12/22

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			be maintained for 5m either side of the banks of the river before rising.	Reference Appendix A: Register of Environmental Actions and Commitments (REAC) TR010060/APP/6.5 rev 2].		
F22	Climate change guidance	Chapter 14: Road drainage and the water environment [APP-081] Appendix 14.5: Flood risk assessment [APP-162]	Updated climate change allowances for peak river flow were published in July 2021. For the Essex Management Catchment, the Higher Central climate change allowance is 38% and the Central allowance is 25%. Therefore, it would be advantageous to consider the offsite impacts with 25% climate change. If this shows no increase in offsite flood risk, then this can be considered to be acceptable.	The updated allowances have informed the FRA submitted with the Application. See Environmental Statement Appendix 14.5 [APP-162].	Agreed	7/12/22
F23	Hydraulic modelling of the River Blackwater		Details of the modelling of the River Blackwater, not available at PEIR stage were requested by the EA.	The updated FRA [APP-162] includes details of the hydraulic modelling undertaken demonstrating there will be no increase in flood risk from the proposed scheme. EA stated in paragraph 2.1 of their Relevant Representation (RR-011) that the flood modelling is fit for purpose.	Agreed	7/12/22
F24	Preliminary flood compensation		Inclusion of floodplain compensation areas within the proposed scheme	Floodplain compensation areas have been included where required to address unmitigated increases in	Agreed	7/12/22

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
	areas for watercourses yet to be modelled		boundary where hydraulic modelling was not available.	flood risk along the proposed scheme. EA stated in paragraph 2.1 of their Relevant Representation (RR-011) that the flood modelling is fit for purpose.		
F25	Scheme safety		The FRA needs to demonstrate the safety of the proposed scheme regarding flood risk and prevent an increase in flood risk to other parties.	The effects on flood risk and the safety of the proposed scheme with respect to flood risk are addressed in the FRA [APP-162]. Meetings have been held with local authority emergency planners on 2/5/23, Essex Fire and Rescue on 9/5/23 and Essex Police on 15/5/23. No concerns have been raised by these parties regarding flood risk to the proposed scheme. A further meeting is to be arranged with Essex Ambulance service before the end of examination.	Agreed in principle, subject to F16	
F26	Hydraulic model review		The EA requested the opportunity to review the hydraulic models developed to assess the impacts of the proposed scheme.	'With Scheme' models for Boreham Brook, Domsey Brook, Rivenhall Brook, River Ter, Roman River and Brain and Lower Blackwater have been issued. Comments from the EA were received in January and February 2022.	Agreed	7/12/22

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
				<p>These comments are considered to be relatively minor and have been addressed in the updated FRA [APP-162].</p> <p>EA stated in paragraph 2.1 of their Relevant Representation (RR-011) that the flood modelling is fit for purpose.</p>		
F27	Hydraulic model review		The EA requested the opportunity to review the hydraulic models developed to assess the impacts of the proposed scheme.	<p>'With Scheme' models for Boreham Brook, Domsey Brook, Rivenhall Brook, River Ter, Roman River and Brain and Lower Blackwater have been issued. Comments from the EA were received in January and February 2022.</p> <p>These comments are considered to be relatively minor and have been addressed in the updated FRA [APP-162].</p> <p>EA stated in paragraph 2.1 of their Relevant Representation (RR-011) that the flood modelling is fit for purpose.</p>	Agreed	7/12/22
F28	Hydrology	Appendix 14.5: Flood risk assessment, Annex L: Hydraulic	The EA identified discrepancies in the calculated flows (ReFH2) and flows applied to the hydraulic model via .ied files for Domsey Brook.	The comments received following the model reviews have been incorporated into the versions that support the FRA [APP-162] and	Agreed	7/12/22

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
		modelling reports [APP-172]		Chapter 14 of the Environmental Statement [APP-081]. EA stated in paragraph 2.1 of their Relevant Representation (RR-011) that the flood modelling is fit for purpose.		
F29	Rivenhall Brook		The EA require further details on the comparative changes in flood flows downstream of the proposed Rivenhall Brook culvert. Also, to meet requirements of the Flood Risk Activity Permit, landowner permission should be sought if the impacted channel is outside the Order Limits.	The comments received following the model review have been incorporated into the versions that support the updated FRA [APP-162] and Chapter 14 of the Environmental Statement [APP-081]. NH will progress discussions with the landowner.	Agreed in principle (pending acceptance by landowner – see F4)	
F30	River Brain and Lower Blackwater		The EA has identified discrepancies with the adopted model for the River Brain and Lower Blackwater 'With Scheme' model.	The comments received following the model review have been incorporated into the versions that support the updated FRA [APP-162] and Chapter 14 of the Environmental Statement [APP-081]. EA stated in paragraph 2.1 of their Relevant Representation (RR-011) that the flood modelling is fit for purpose.	Agreed	7/12/22

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
F31	Domsey Brook		<p>The EA requested further information on:</p> <ul style="list-style-type: none"> • Evidence of storm duration testing • Minor correction to flow tables in report • Evidence needed to support extended cross section schematisation. 	<p>The comments received following the model review have been incorporated into the versions that support the updated FRA [APP-162] and Chapter 14 of the Environmental Statement [APP-081].</p> <p>EA stated in paragraph 2.1 of their Relevant Representation (RR-011) that the flood modelling is fit for purpose.</p>	Agreed	7/12/22
F32	River Ter		<p>The EA requested responses to comments relating to:</p> <ul style="list-style-type: none"> • structure TER02_0374bu • survey data • check levels at gauge 	<p>The comments have been addressed and have been incorporated into the updated FRA [APP-162] and Chapter 14 of the Environmental Statement [APP-081].</p> <p>EA stated in paragraph 2.1 of their Relevant Representation (RR-011) that the flood modelling is fit for purpose.</p>	Agreed	7/12/22
F33	Construction flood risk for the Cadent gas main diversion	First iteration EMP, Appendix N: Water management plan [APP-198]	Some construction works for the gas main diversion will be carried out within the floodplain, which may require temporary mitigation. The EA consider that these issues can likely be controlled via a Flood Risk Activity Permit.	Works within the floodplain will be controlled by measures to minimise risk of pollution or other incidents as described in the Water Management Plan (Appendix N of the first iteration EMP [APP-198]), that the EA will be consulted on.	Agreed	7/12/22

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
F34	Inworth Road flood risk	Appendix 14.5: Flood risk assessment [APP-162]	ECC, as Lead Local Flood Authority, should be consulted on the proposed surface water drainage for Inworth Road and any mitigation proposed to manage the existing flood risk.	Appendix 14.5: Flood Risk Assessment [APP-162] was sent to ECC on 31 August 2021 for comment.	Agreed	7/12/22
F35	Ordinary Watercourse 21	Appendix 14.5: Flood risk assessment [APP-162]	The EA agree with the proposal to model the impacts of the proposed Ordinary Watercourse 21 works, and that no further mitigation will be required providing the modelling shows there to be no increase in flood risk as a result of the works.	Ordinary Watercourse 21 has been assessed in Appendix 14.5: Flood Risk Assessment [APP-162], of the Environmental Statement. Mitigation has been proposed to minimise the effects of increased flood risk. There is a location of increased flood risk, but it is within the proposed scheme Order Limits and therefore would not affect other parties. The Applicant is preparing a summary memo for sharing with the EA to demonstrate this.	Agreed in principle (subject to NH providing location plan confirming area within the Order Limits)	
F36	Ordinary Watercourse 15a	Chapter 14: Road drainage and the water environment [APP-081], Section 14.11	Comments raised over the potential disconnection of Ordinary Watercourse 15a from its source, and its potential effects on flood risk, ecology and hydromorphology.	Ordinary Watercourse 15a was discussed in meetings in September and November 2021. The watercourse is a largely dry and vegetated drainage ditch, only active during heavy rainfall and flooding of Rivenhall Brook. The design would not lead to a loss of source but would move its source to an attenuation pond and outfall, where	Agreed	25/5/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
				<p>flow regimes would remain dependant on rainfall.</p> <p>The disconnection of Watercourse 15a has been included in the modelling of the Rivenhall Brook and no adverse flood risk impacts have been identified.</p> <p>NH would seek approval for these works through the ordinary watercourse consenting process to ECC as the Lead Local Flood Authority.</p>		
F37	Ordinary Watercourse 11	<p>Chapter 14: Road drainage and the water environment [APP-081]</p> <p>Appendix 14.3: Hydromorphology assessment [APP-160]</p>	<p>Comment regarding new culverts. Reasoning required for the culvert and its length. Alternatives should be considered.</p>	<p>Discussions have taken place about potentially revisiting this crossing as a portal culvert, but they concluded with any changes potentially encroaching on a live quarry. Other issues surrounding the choice of a portal culvert include environmental sustainability and localised environmental impacts arising from construction, as well as cost and programme implications.</p> <p>The culvert cannot be shortened to accommodate realignment as this layout would also encroach on the live quarry to the east of the proposed scheme.</p>	Agreed	25/5/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
				NH would seek approval for these works through the ordinary watercourse consenting process to ECC as the Lead Local Flood Authority.		
F38	Ordinary watercourse 7	REP2-053 §2.2.2-2.2.4	Information is requested on both the increased depths and their locations. Landowner agreement should be obtained for the increases.	The modelled increase is considered to be artificial in the model and not a true effect. Further clarification was emailed to the EA on 26/5/23.	Agreed	
F39	Ordinary watercourse 21a	REP2-053 §2.2.13	The LLFA should determine if the proposed works are acceptable. It should be detailed how far upstream the increase in in-channel water level will be felt.	The increase extends 200m upstream and is wholly within the Order Limits. This has been presented to the LLFA who raised no concerns	Agreed	30/3/23
F40	Ordinary watercourse 23	REP2-053 §2.2.17 & §2.2.33	No justification provided for a bridge rather than a culvert. Why has the opportunity not been taken to replace a substandard existing culvert.	As ordinary watercourses fall within the remit of the Lead Local Flood Authority, NH would seek approval for these works through the ordinary watercourse consenting process to ECC as the Lead Local Flood Authority.	Agreed	25/5/23
F41	Ordinary watercourse 26	REP2-053 §2.2.20	Provide justification as to why a culvert larger than 450mm dia. is not possible. The LLFA will be responsible for permitting and agreeing these points.	There is an existing hydraulic constraint of a 450mm culvert that will remain hence increasing the diameter of the proposed culvert will not remove this constraint. There are local constraints to the vertical	Agreed	30/3/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
				alignment that prevent the inclusion of a larger culvert.		
F42	Ordinary watercourse 26	REP2-053 §2.2.23	Increase in water levels upstream, but not clear whether the area of increase would remain in NH land or would require landowner agreement.	The extent of increased water levels would remain within the Order Limits	Agreed	30/3/23
F43	Culvert blockage risk	REP2-053 §2.2.38	Culverts should be large enough for debris to pass through without the need for a trash screen.	Culverts have been designed in accordance with DMRB. A commitment to develop a trash screen maintenance regime has been added to item RDWE38 in the updated REAC submitted at deadline 2 [Applicant Reference Appendix A: Register of Environmental Actions and Commitments (REAC) TR010060/APP/6.5 rev 2]	Agreed	30/3/23
F44	Reservoir Flooding	REP2-053 §2.3.1 & §2.3.2	The local planning authority should request further details on the potential depths of flooding and diversion of flows if required.	This point will be raised with emergency planners when they are consulted in relation to F16	Agreed	30/3/23
F45	Borrow Pits E & F and surface water flood risk	REP2-053 §2.5.1	The approach to sizing the dimensions of temporary ditches where they intercept surface water flow paths should be provided.	Commitment RDWE16 in the REAC [APP-185] addresses sizing of new ditches and they would be covered through consenting of works by the LLFA.	Agreed	30/3/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
F46	Borrow Pit I	REP2-053 §2.5.2	Develop a flood management plan for construction activities within the Borrow Pit as within the floodplain of the Rivenhall Brook	This request is addressed by commitment RDWE13 in the REAC [APP-185].	Agreed	30/3/23
F47	Borrow Pit J	REP2-053 §2.5.3	Permanent mitigation works on ordinary watercourses 21 and 21a should be completed before their temporary realignment around Borrow Pit J	The point is noted and the Applicant is liaising with the LLFA on this point.	Agreed	30/3/23
F48	Dewatering - Ordinary Watercourse 10	REP2-053 §2.5.5	Unclear if dewatering flows would lead to out of bank flooding.	The Applicant is currently considering the impact and intends to provide further information for the EA to consider	Under discussion	
F49	Temporary overpumping	REP2-053 §2.6.1	Temporary water retaining structures should be sized to be overtopped for <50% AEP event, not the current 5% and ideally designed to be removed in advance of high flows.	The recommendation is noted to size temporary works based on watercourse size rather than storm event frequency. This would be addressed through the separate consenting regime (outside of the DCO) for the proposed scheme.	Agreed	30/3/23

3.3 Contaminated land matters

Table 3.3 Contaminated land matters

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
C1	Regarding 6.1 Environmental Statement Chapter 10 Geology and Soils (APP-077),	A12 EA Relevant Representation 4/11/22 paragraphs 3.2 – 3.3	<p>The EA notes paragraph 10.8.52 and agrees that a site-specific Detailed Quantitative Risk Assessment (DQRA) will be required at detailed design stage. We should be engaged directly regarding this.</p> <p>With reference to paragraph 10.9.12, we would wish to review the supplemental ground investigation (GI) for the Whetmead LNR Witham Landfill when available. Again, we should be engaged specifically on this issue.</p>	The Applicant acknowledges these requests and confirms that all relevant information will be supplied to The EA during Stage 5 (detailed design) along with specific consultations.	Agreed	30/3/23
C2	Document 6.3 Environmental Statement Appendix 10.1 Land Quality Risk Assessment (APP-142)	A12 EA Relevant Representation 4/11/22 paragraph 3.4	Paragraph 2.4.1 states that some limited test data is missing but that a full data set will be utilised in the detailed design. We would need to re-review the assessment upon production of this. We would also wish to see any supplemental GI following gap analysis.	The Applicant acknowledges these requests and confirms that all relevant information will be supplied to the EA during Stage 5 (detailed design) along with specific consultations.	Agreed	30/3/23
C3	Document 6.3 Environmental Statement Appendix 10.1 Land Quality	A12 EA Relevant Representation 4/11/22 paragraphs 3.5 – 3.8	Contamination above screening values have been identified in the assessment, but no proposed measures to remediate have been proposed. The reason for this should be clarified.	The Applicant acknowledges these requests and confirms that all relevant information will be supplied to the EA during Stage 5 (detailed	Agreed	30/3/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
	Risk Assessment (APP-142)		<p>Any areas under development will need to be reviewed with respect to contamination risk to groundwater. If any existing contamination is not dealt with as part of this development, the opportunity to do so is likely to be lost.</p> <p>Areas such as the borrow pits affected by elevated concentrations have the potential to have the existing contamination worsened rather than improved through disturbance. This would not be an acceptable outcome as the development should seek to improve groundwater quality rather than deteriorate.</p> <p>We note that no detailed laboratory results, exploratory logs etc have been provided, only a summary. Detailed results should be provided for review.</p> <p>We would wish to review the 2nd Iteration Environmental Management Plan in respect of this topic when produced.</p> <p>The EA requests to be added as a named consultee to Requirement 3 within this section in the DCO.</p>	<p>design) along with specific consultations.</p> <p>The Applicant is committed to continuing engagement with the EA. Detailed results will be submitted during Stage 5 for review.</p> <p>Requirement 6 of the draft DCO makes provision for consultation with the EA should contaminated groundwater be encountered during construction.</p> <p>The Applicant confirms that the EA is a named consultee in relation to the Second Iteration EMP and Third Iteration EMP requirements 3 and 4 on matters related to its functions. This amendment has been made in the dDCO submitted at Deadline 3 [REP3-002]. In addition, the EA would be involved in discussions regarding consents and licences administered by them.</p>		

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
C4	Document 7.8 Borrow Pits Report (APP-278),	A12 EA Relevant Representation 4/11/22 paragraph 3.9	<p>There is a suggestion for several of the selected borrow pit locations that waterbodies may remain after excavation. Given the environmental sensitivity of this, we suggest that this is avoided in case these surface water bodies are at risk of being impacted by pollution. If it is unavoidable, please consider what mitigation measures are to be included to ensure that there is no enhanced risk of pollution to the groundwater at these locations.</p> <p>Please refer to our Groundwater Position Statements, in particular Position Statement G1. This should be taken forward to any detailed design. Any dewatering requirements should consider early engagement with our permitting team.</p>	Item RDWE60 has been added to the REAC submitted at deadline 4 [Applicant Reference Appendix A: Register of Environmental Actions and Commitments (REAC) TR010060/APP/6.5 rev 2] stating that measures will be included to protect waterbodies that may remain as surface expressions of groundwater after excavation from external sources of pollution during the operation of the proposed scheme to prevent surface water and groundwater contamination.	Agreed	
C5	Cadent gas main diversion	Chapter 10: Geology and soils [APP-077]	The EA has commented on Corridor 1 and 3 for the Cadent gas main diversion, as presented at the supplementary consultation. These corridors would pass through the historic landfill at Whetmead and would therefore potentially open contamination pathways to surface water and groundwater.	The corridor selected by Cadent Gas is Corridor 4. As such, all comments about other corridors will not be addressed as these are no longer relevant. Corridor 4 does not pass through the historic landfill.	Agreed	7/12/22

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
C6	Terminology for groundwater assessment	Chapter 10: Geology and soils [APP-077] Appendix 14.4: Groundwater assessment [APP-161]	Composition of the Lowestoft Formation is currently incorrectly described as 'Boulder Clay'. Also, the use of 'PWS' to describe private abstractions could be confused with public water supply.	Suggestions incorporated into Chapter 10: Geology and soils [APP-077], and Appendix 14.4: Groundwater assessment [APP-161], the Environmental Statement..	Agreed	7/12/22

3.4 Groundwater resources matters

Table 3.4 Groundwater resources matters

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
G1	Groundwater resources	A12 EA Relevant Representation 4/11/22 paragraph 4.1 – 4.2	Although presently some assessments are at a very high level, they form a good basis for initial work. All impacts on groundwater receptors will be assessed in the appropriate level of detail during the pre-application process for any dewatering abstraction licence(s) required from us. The requirement for licences is included in the Consents and Licences position statement. We are satisfied that all adverse impacts will be considered during the permitting process.	-	Agreed	4/11/22
G2	Site walkovers- (GWDTE) in 6.3 Environmental Statement Appendix 14.4: Groundwater Assessment (APP-161)	A12 EA Relevant Representation 4/11/22 paragraph 4.3	Groundwater Assessment (APP-161) were undertaken in September 2021 when groundwater levels were low; features only present during the recharge period could not be assessed at this time. We do not believe that this is an issue because we are able to ensure that any GWDTE at risk are included as part of the licensing process.	-	Agreed	4/11/22
G3	Groundwater resources	A12 EA Relevant Representation 4/11/22	The location and duration of groundwater monitoring will also be agreed at this juncture and is likely to need to be flexible. Six months before construction	It is acknowledged that groundwater monitoring will be required pre, during and post construction of the proposed scheme. Groundwater	Agreed	6/2/23 (via email)

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
		<p>paragraphs 4.4 – 4.5</p>	<p>may be acceptable, especially if there is already groundwater levels data from previous ground investigations. But the time for which it's required afterwards will be site specific and will need to be longer than six months if any issues should arise. Full information on dewatering rates, duration and impacts will be determined at the time of application.</p>	<p>monitoring has already been undertaken and is continuing from the initial phases of ground investigations carried out.</p> <p>Further commitments on water management and monitoring are contained in the first iteration Environmental Management Plan (EMP) [APP-6.5] to mitigate potential adverse impacts on the water environment during construction of the proposed scheme.</p> <p>Working practices and impact assessments would be aligned with relevant EA guidance, including Hydrogeological impact appraisal for dewatering abstractions (Science Report SC040020/SR1, EA, 2007) and the Protect Groundwater and Prevent Groundwater Pollution guidance (EA, 2017).</p> <p>The Applicant will continue to engage with the EA through the application process for any dewatering abstraction licences required and intends to seek early engagement with the EA permitting team regarding any such dewatering requirements.</p>		

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
			<p>Similarly, the potential for adverse impacts on ground and surface water quality due to mobilisation of existing contamination can be fully investigated on the application of dewatering discharges consents.</p>	<p>The need to protect groundwater and surface water quality during construction of the proposed scheme is acknowledged, including due to mobilisation of existing contamination.</p> <p>The first iteration EMP [APP-184] includes commitments on water management to mitigate potential adverse impacts on the water environment during construction of the proposed scheme and requires water quality monitoring to be undertaken.</p> <p>The first iteration EMP [APP-184] requires that any contaminated groundwater intercepted during construction which cannot be treated to achieve consented discharge parameters would be tanked and disposed off-site at an appropriate licensed location. Where water is to be discharged to watercourses, constraints on the discharge rate, pre-treatment and the scope of the monitoring required would be agreed in advance with the EA or the Lead Local Flood Authority as appropriate through the consenting process.</p>		

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
G4	Groundwater resources	A12 EA Relevant Representation 4/11/22 paragraph 4.6	The assessment of groundwater quality due to contaminated land in Appendix 14.4 (APP-161) was done in comparison to EQS. Comparison with Drinking Water Inspectorate standards would be needed for any sites where groundwater quality at groundwater abstractions could be adversely impacted during construction activities.	<p>The Applicant acknowledges that further assessment is required for sites where groundwater abstractions could be affected by construction of the proposed scheme. The use of EQS was triggered by the likelihood that any dewatered contaminated groundwater would be likely to be discharged to a surface water receptor. It is accepted that comparison with Drinking Water Inspectorate standards would be appropriate for sites where groundwater quality at groundwater abstractions could be adversely impacted.</p> <p>The first iteration EMP [APP-184] includes commitments for ongoing consultation with the EA, the local authority and private landowners during detailed design to confirm the status of licensed and unlicensed groundwater abstractions potentially impacted by the proposed scheme and the need for further mitigation measures.</p>	Agreed	6/2/23 (via email)

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
G5	Groundwater resources	A12 EA Relevant Representation 4/11/22 paragraph 4.7	We would also highlight that we have no expertise to review the information in the groundwater assessments with regards to ground settlement on dewatering.	<p>The Applicant notes the EA's comment on groundwater assessments with regards to ground settlement on dewatering.</p> <p>The first iteration EMP [APP-184] provides that a detailed differential settlement risk assessment based on the detailed design and supplementary ground investigation would be undertaken to assess the potential for differential settlement to all buildings identified in the Groundwater Assessment (Appendix 14.4) of the Environmental Statement [APP-161].</p>	Agreed	30/3/23
G6	Borrow pits	Chapter 2: The proposed scheme [APP-069], Section 2.6	The EA requires more information regarding the borrow pit dimensions, fill, material re-use and dewatering.	Details of the borrow pits are included in Chapter 2: The proposed scheme, of the Environmental Statement [APP-069] and the Borrow Pits Report [APP-278].	Agreed	6/2/23 (via email)
G7	Groundwater dependent terrestrial environments (GWDTE)	Chapter 14: Road drainage and the water environment [APP-081] Appendix 14.4: Groundwater	Details requested of pollution management to protect GWDTEs.	Details provided in Appendix 14.4: Groundwater Assessment, of the Environmental Statement [APP-161]. Mitigation measures are included in the REAC [APP-185], within the first iteration EMP [APP-184].	Agreed	6/2/23 (via email)

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
		assessment [APP-161]				
G8	Groundwater abstractions along the route of the Cadent gas main diversion	Chapter 14: Road drainage and the water environment [APP-081] Appendix 14.4: Groundwater assessment [APP-161]	The EA note the presence of two licensed groundwater abstractions near the Oliver's Farm area, along the route of the potential gas main diversion corridors, that need to be assessed. There is also a record of a domestic well at Glen Acres to the south of the spring that needs to be investigated and assessed. All diversion corridors potentially involve some disruption to groundwater flow.	The corridor selected by Cadent Gas is Corridor 4. Corridor 4 does not pass near Glen Acres, and therefore the domestic well should not be impacted by the gas main diversion. The gas main diversion is not likely to generate any significant effects to groundwater. Chapter 14: Road Drainage and the Water Environment [APP-081] and Appendix 14.4: Groundwater assessment [APP-161] provide further detail on the gas main diversion's impact to groundwater.	Agreed	7/12/22
G9	Horizontal directional drilling for the Cadent gas main diversion	Chapter 14: Road drainage and the water environment [APP-081]	If horizontal directional drilling is to be used for crossings, it will be key to ensure that the hydraulic properties of the shallow aquifers are not significantly altered, that drilling muds are inert, with a pumping strategy to avoid break outs, and a monitoring strategy to identify breakouts promptly.	Such measures will be included in method statements that will need to be prepared and approved in advance of construction. The specific details regarding trenchless crossings will be determined during the detailed design stage. Once the detailed design is available and the horizontal directional drilling locations are known, the Applicant will update the EMP. The Applicant will continue to liaise with the EA and	Agreed	30/3/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
				will discuss these details when known.		
G10	Dewatering	Appendix 14.4: Groundwater assessment [APP-161]	If any dewatering is required during construction, it is likely to require an abstraction licence. The Applicant should consult with the EA to determine whether this is the case.	Discussions with the EA are ongoing. A dewatering assessment has been undertaken to inform Chapter 14 of the Environmental Statement [APP-081] and is included in Appendix 14.4: Groundwater Assessment, of the Environmental Statement [APP-161].	Agreed	30/3/23
G11	Dust Suppression	RR-011	<p>Will dewatering water be re-used for the dust suppression aspect, or will the dust suppression water be obtained from elsewhere?</p> <p>Email 6/2/23: We would consider the use of dewatering water for dust suppression to be a consumptive use. The key issue to be considered if water was to be used in this way would be its abstraction, rather than its discharge. The proposed use of water must be specified in any abstraction licence application for us to consider, along with detail on volumes, duration, location of use etc. Without reviewing the specific detail, we could not say whether such an abstraction licence would or would not be granted, so early discussions and/or alternative provision should be ensured.</p>	The Applicant does not currently foresee the need to use dewatering water for dust suppression, all dewatering will be discharged as per agreed discharge consents (to be sought in 2023/2024). If at a later date, the Applicant wishes to explore the option of using dewatering water for dust suppression then the EA will be consulted at the earliest possibility and the Applicant would not proceed until an abstraction licence is granted.	Agreed	30/3/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
			Providing the NH text addresses the abstraction considerations, this can remain 'Agreed', or it can be 'Under discussion' for now.			

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3.5 Surface water and water resources matters

Table 3.5 Surface water matters

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
S1	Pollution control	A12 EA Relevant Representation 4/11/22 paragraph 5.1	We note that pollution risks to surface water are low and the use of attenuation cells will further reduce the risk. The inclusion of isolation chambers, controlled by penstock valves, downstream of attenuation cells provides containment for accidental spills	-	Agreed	4/11/22
S2	Water quality	A12 EA Relevant Representation 4/11/22 paragraph 5.2	We are satisfied that mitigation will reduce impacts to surface water to an acceptable level.	-	Agreed	4/11/22
S3	Water quality	A12 EA Relevant Representation 4/11/22 paragraph 5.3	We are satisfied that Document 6.3 Environmental Statement – Appendix 14.6 Surface Water Drainage Strategy (APP-174) has been informed by the Water Quality Assessment.	-	Agreed	4/11/22
S4	Fire water management	A12 EA Relevant Representation 4/11/22 paragraph 5.5	We note that there is no consideration of fire water management. The Applicant should consult with Essex Fire and Rescue Service on this issue. This issue should also be included within 6.5 First Iteration Environmental Management Plan - Appendix F: Emergency	The consideration of fire water management is covered in the updated first iteration EMP (First Iteration Environmental Management Plan TR010060/APP/6.5 rev 2) submitted at deadline 4.	Agreed	30/3/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
			Procedures and Record of any Environmental Incidents (APP-190).			
S5	Site drainage	A12 EA Relevant Representation 4/11/22 paragraph 5.6	We note that there is no specific mention of site drainage, or pollution prevention measures in respect of the compounds. Details of where these issues are addressed should be signposted.	NH acknowledges there is no specific mention of site drainage within the current First Iteration Environmental Management Plan - Appendix C. Possible measures to treat runoff including surface water and foul sewage from compounds can be found within First Iteration Environmental Management Plan - Appendix N Water Management Plan sections 9 and 11. Further information will be added to the Second Iteration Environmental Management Plan on which the EA would be consulted.	Agreed	5/5/23
S6	Checking of watercourses	A12 EA Relevant Representation 4/11/22 paragraph 5.8	The process of checking watercourses should be formalised within the EMP, for example what activities/weather conditions trigger checks being made, frequency of checks, where checks will be made etc. Checks should be recorded in a site diary or similar.	This would be included in the second iteration Environment Management Plan Appendix F: Emergency Procedures and Record of any Environmental Incidents [APP-190] on which the EA would be consulted.	Agreed	5/5/23
S7	First Iteration Environmental Management Plan - Appendix N:	A12 EA Relevant Representation 4/11/22 paragraph 5.9	This is a high-level document and describes best practice with regards to water quality. Appropriate issues relating to surface waters are identified, monitoring, and control/mitigation	The Applicant confirms that the EA is a named consultee in relation to the Second Iteration EMP and Third Iteration EMP requirements 3 and 4 on matters related to its functions.	Agreed	30/3/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
	Water Management Plan (APP-198).		measure proposed to be put in place where needed. We are satisfied that more detail will be provided in the Second Iteration EMP, which we should review.	This amendment was made in the dDCO submitted at Deadline 3 [REP3-002]. In addition, the EA would be involved in discussions regarding consents and licences administered by them.		
S8	Water resources	A12 EA Relevant Representation 4/11/22 paragraph 5.10	In respect of water resources, our key issues relate to impacts on existing abstractors, and the availability of water to be abstracted for use in the scheme. Monitoring and more detailed assessment of impacts on affected sources will be carried out as part of the Second Iteration EMP, and the licencing of abstractions will ensure no abstraction takes place to derogate other abstractors without appropriate mechanisms in place. We are therefore generally satisfied at this stage although there are some pre-emptive conclusions on impacts to waterbodies given the current lack of detail on abstraction needs.	<p>The EA's concerns regarding water resources and potential impacts on existing abstractors are noted. However, any requirement to abstract water for use in the scheme has not yet been determined.</p> <p>The first iteration EMP [APP-184] includes commitments for ongoing consultation with the EA, the local authority and private landowners during detailed design to confirm the status of licensed and unlicensed groundwater abstractions potentially impacted by the proposed scheme and the need for further mitigation measures.</p> <p>The Applicant will continue to engage with the EA through the application process for any dewatering or consumptive abstraction licences required and intends to seek early engagement</p>	Agreed	30/3/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
				with the EA permitting team regarding any such requirements.		
S9	Abstractions	A12 EA Relevant Representation 4/11/22 paragraph 5.11	We would wish to review the Second Iteration EMP as it will contain detailed information on the impact to other abstractors, including in relation to the gas main realignment. The Second Iteration EMP should consider mitigation and whether there any potential permanent impacts/ medium to long term impacts.	The Applicant confirms that the EA is a named consultee in relation to the Second Iteration EMP and Third Iteration EMP requirements 3 and 4 on matters related to its functions. This amendment has been made in the dDCO submitted at Deadline 3 [REP3-002]. In addition, the EA would be involved in discussions regarding consents and licences administered by them.	Agreed	30/3/23
S10	Water mains connections	A12 EA Relevant Representation 4/11/22 paragraph 5.12	6.5 First Iteration Environmental Management Plan - Appendix G: Energy & resource use management plan (APP-191) refers to connecting to mains water. Is this a temporary measure and has consultation with the water company been undertaken to ensure water would be available?	The reference to the First Iteration Environmental Management Plan – Appendix G: Energy & resources refers to connecting to mains water as a temporary measure for the construction works. Liaison with Anglian Water is ongoing.	Agreed	6/2/23 (via email)
S11	Mains water supply	A12 EA Relevant Representation 4/11/22 paragraph 5.13	The Applicant needs to liaise with the relevant water company in the areas where they propose to connect to water mains, to confirm that the company has the surplus required to supply the scheme.	The requirement for these connections is not currently finalised. The design of the compounds will be developed in 2023 allowing the Applicant to engage with Anglian Water with more detailed information on the water supply requirements.	Agreed	6/2/23 (via email)

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
				NH acknowledges the constraints on the local water network and has been liaising with Anglian Water regarding the need for these connections and will continue to work with them to identify a suitable connection point that will minimise the pressure on the network.		
S12	Reuse of water	A12 EA Relevant Representation 4/11/22 paragraph 5.14	Reference is made to the re-use of water where possible. Will dewatering water be re-used for the dust suppression aspect, or will the dust suppression water be obtained from elsewhere? This should be covered in any applications made.	Please refer to G11	Agreed	30/3/23
S13	Water abstraction licences	A12 EA Relevant Representation 4/11/22 paragraph 5.15	We would highlight that the granting of water abstraction licences is subject to water availability in the area of abstraction. In this area, water availability is limited and therefore consumptive licences are unlikely to be granted. Dewatering is generally seen as non-consumptive. We recommend that the Applicant undertakes an enhanced pre-application consultation for water abstraction licences with our National Permitting Service.	The Applicant does not currently foresee the need to use dewatering water for dust suppression, all dewatering will be discharged as per agreed discharge consents (to be sought in 2023/2024). If at a later date, the Applicant wishes to explore the option of using dewatering water for dust suppression then the EA will be consulted at the earliest possibility and the Applicant would not proceed until an abstraction licence is granted.	Agreed	30/3/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
S14	Detailed drainage proposals, environmental management, whilst advising on consultation for permitting and licensing	Chapter 14: Road drainage and the water environment [APP-081]	<p>The EA would want to review and comment on the detailed drainage proposals when they become available. This would include the Surface Water Drainage Strategy, Environmental Management Plan, and the Water Quality Assessment Report, in addition to the Environmental Statement.</p> <p>The EA also requires consultation at the earliest opportunity to advise on permitting and licensing.</p>	<p>Details, as requested are found in the documents below:</p> <p>Appendix 14.6: Surface water drainage strategy, of the Environmental Statement [APP-174]</p> <p>Appendix 14.1: Water quality assessment report, of the Environmental Statement [APP-158]. A preliminary version of this report was shared with the EA in December 2021</p> <p>First iteration Environmental Management Plan [APP-184] and the Consents and Licences Position Statement [APP-041]</p>	Agreed	7/12/22
S15	Ordinary Watercourse 11	<p>Chapter 14: Road drainage and the water environment [APP-081]</p> <p>Appendix 14.3: Hydromorphology assessment [APP-160]</p>	<p>Comment regarding new culverts. Reasoning required for the culvert and its length. Alternatives should be considered.</p>	<p>Discussions have taken place about potentially revisiting this crossing as a portal culvert, but they concluded with any changes potentially encroaching on a live quarry. Other issues surrounding the choice of a portal culvert include environmental sustainability and localised environmental impacts arising from construction, as well as cost and programme implications.</p> <p>The culvert cannot be shortened to accommodate realignment as this</p>	Agreed	25/5/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
				<p>layout would also encroach on the live quarry to the east of the proposed scheme.</p> <p>As ordinary watercourses fall within the remit of the Lead Local Flood Authority, NH would seek approval for these works through the ordinary watercourse consenting process to ECC as the Lead Local Flood Authority.</p>		
S16	WFD assessment and individual water quality elements	<p>Chapter 14: Road drainage and the water environment [APP-081]</p> <p>Appendix 14.2: Water Environment Regulations (WFD Regulations) compliance assessment [APP-159]</p>	<p>Commenting on the Preliminary WFD assessment, the EA referred to the 'Weser Ruling' (European Court of Justice, 2015), as it is not convinced the preliminary WFD regulations compliance assessment evaluates impacts on a water body quality and supporting element scale. The EA requires this to be carried out in the detailed assessment. Also, the EA remains unconvinced that the proposed scheme can be considered compliant and welcomes the recommendation of undertaking a detailed assessment.</p>	<p>The detailed WFD compliance assessment is presented in Appendix 14.2: Water Environment Regulations (WFD Regulations) compliance assessment, of the Environmental Statement [APP-159]. This was shared with the EA in June 2022. The EA responded on 7 July 2022 advising:</p> <p>General agreement that with mitigation measures and habitat enhancements there should be no deterioration of the surface waterbodies.</p> <p>Agreement that any impacts at the groundwater body scale would not be great enough to have a significant effect, given the provisions of the</p>	Under discussion	

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
				groundwater abstraction licensing and discharge consenting process.		
S17	Water quality effects	Appendix 14.1: Water quality assessment report [APP-158]	The EA advised (based on the preliminary WQAR that was submitted at PEIR stage) that it requires changes to the design in order to mitigate significant effects on water quality at four outfalls.	<p>The assessment undertaken at the PEIR stage has been updated based on design revisions and is reported in Appendix 14.1: Water quality assessment report, of the Environmental Statement [APP-158]. No significant effects for water quality are identified.</p> <p>The EA is named as a consultee in relation to the Second Iteration EMP and Third Iteration EMP requirements 3 and 4 of the dDCO on matters related to its functions. This amendment has been made in the dDCO submitted at Deadline 3 [REP3-002]. In addition, the EA would be involved in discussions regarding consents and licences administered by them.</p>	Agreed	6/6/23
S18	Water quality impacts for Inworth Road improvements	Chapter 14: Road drainage and the water environment [APP-081]	Water quality impacts should be considered. Drainage attenuation ponds are referred to as part of the proposed approach which should improve the quality of run off. The SuDS design guide	Highways England Water Risk Assessment Tool (HEWRAT) assessments have been undertaken in accordance with Design Manual for Roads and Bridges LA 113 to consider the water quality impacts of	Agreed	30/3/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
		Appendix 14.1: Water quality assessment report [APP-158]	for Essex should be referred to and utilised.	<p>the Inworth Road improvements. The HEWRAT has been developed through research undertaken by NH (formerly Highways England) with the EA.</p> <p>ECC's (2020) Sustainable Drainage Systems Design Guide refers to the CIRIA (2015) SuDS Manual (C753). Section 26.7, Table 26.1 of the SuDS Manual advocates assessment of water quality using increasing levels of complexity. The complexity of the design methods in Table 26.1 progresses to detailed risk assessment and ultimately to process-based modelling. HEWRAT incorporates both these methods in that it uses site-specific information and statistical distributions of likely concentrations and loadings in the runoff. HEWRAT therefore provides a detailed and site-specific approach to water quality risk management.</p> <p>The Applicant's discussions with ECC are ongoing.</p>		
S19	Fire water runoff	RR-011	The Applicant should consult with Essex Fire and Rescue regarding management of fire water runoff	See S4	Agreed	30/3/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
S20	Construction Compounds Drainage	RR-011 paragraph 5.6	There is no specific mention of site drainage, or pollution prevention measures in respect of the compounds. Details of where these issues are addressed should be signposted.	<p>The compound foul and surface water drainage designs and pollution management measures will be developed through the detailed design phase of the Project and be added to the second iteration Environmental Management Plan.</p> <p>Requirement 11 makes provision for consultation between the Applicant and the EA regarding surface and foul water drainage relating to matters within the function of the EA.</p>	Agreed	30/3/23
S21	Water Mains Connections	RR-011 paragraph 5.7	Existing sewage networks should be referenced here to show that drainage has been considered at the compounds.	The compound water supply requirements will be developed through the detailed design phase of the Project and be added to the second iteration Environmental Management Plan.	Agreed	30/3/23

3.6 Waste matters

Table 3.6 Waste matters

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
W1	Waste	A12 EA Relevant Representation 4/11/22	At this stage we are satisfied that the appropriate legislation and regulatory requirements have been acknowledged.	-	Agreed	4/11/22
W2	Waste received at Blackwater Lane landfill	Chapter 10: Geology and soils [APP-077], Section 10.8	<p>The EA was consulted on potentially contaminated sites identified on and within 500m of the study area including historical landfills. They confirmed via email that the nature of wastes received by one of the historical landfills at Witham (Blackwater Lane landfill) included hazardous wastes.</p> <p>The EA commented that, due to the age of the deposits within the landfill sites, there will be many uncertainties as to the actual waste inputs.</p> <p>They recommended that any works disturbing the landfill wastes must be fully assessed for impacts that may lead to mobilisation of contaminants and thereby increase the risk of groundwater pollution. They advised that site investigations should be considered to determine the ground conditions and appropriate protocols, including remedial measures to be put in place should</p>	<p>Although the Scoping Opinion stated that the EA records indicate that the historical Perry Road landfill took hazardous waste, feedback from subsequent consultation with the EA indicates that the historical Perry Road landfill received industrial, commercial, and household wastes. All these wastes may include hazardous components, and it should be noted that past waste categories do not directly compare to current waste classifications.</p> <p>Further investigation including ground investigation and risk assessment will take place during the detailed design. This will inform a method statement for construction which will be shared with the EA.</p>	Agreed	7/12/22

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
			unsuitable or unexpected material be encountered.			

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3.7 Draft DCO and legal matters

Table 3.7 DCO and legal matters

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
D1	Requirement 3	A12 EA Relevant Representation 4/11/22 paragraphs 1.1 - 7.2	The EA should have the opportunity to review and comment on the Second Iteration Environmental Management Plan proposals prior to construction. The EA should be included as a named consultee.	The EA is named as a consultee in relation to the Second Iteration EMP and Third Iteration EMP requirements 3 and 4 of the dDCO on matters related to its functions. This amendment has been made in the dDCO submitted at Deadline 3 [REP3-002]. In addition, the EA would be involved in discussions regarding consents and licences administered by them.	Agreed	30/3/23
D2	Requirement 4	A12 EA Relevant Representation 4/11/22 paragraphs 7.3 - 7.4	Requirement 4 requires the development to be operated and maintained in accordance with the Third Iteration EMP. Therefore the EA should be included as a named consultee in respect of Requirement 4 for relevant matters.	The EA is named as a consultee in relation to the Second Iteration EMP and Third Iteration EMP requirements 3 and 4 of the dDCO on matters related to its functions. This amendment has been made in the dDCO submitted at Deadline 3 [REP3-002]. In addition, the EA would be involved in discussions regarding consents and licences administered by them.	Agreed	30/3/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
D3	Requirement 6	A12 EA Relevant Representation 4/11/22 paragraphs 7.5, 7.6 & 7.7	<p>The determination of the need for remediation in part (2) should be based on a consideration of the risk assessment by all parties, rather than determined solely by the undertaker</p> <p>While we are satisfied that it will be possible to manage the risks posed to controlled waters by this development, further detailed information will be required before built development is undertaken.</p> <p>There is a need for an additional Requirement to detail the measures for managing contaminated land across the scheme. This should include site investigation, remediation and verification as required, carried out in advance of any commencement of works to highlight any areas of risk.</p> <p>We recommend the following wording: Prior to each phase of development as approved, no development shall commence until a remediation strategy to deal with the risks associated with contamination of the site in respect of the development hereby permitted, has been submitted to, and approved in writing by the Secretary of State, following consultation with the EA. This strategy will include the following components: 1.</p>	The Applicant has amended Requirement 6 to include the wording contained in the A47 Blofield to North Burlingham DCO. Please refer to our response to the EA's Relevant Representation [RR-011] and the updated draft DCO submitted at Deadline 4.	Agreed	30/3/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
			<p>A site investigation scheme, based on the preliminary risk assessment to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off-site. 2. The results of the site investigation and the detailed risk assessment referred to in (1) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken. 3. A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in the remediation strategy in (2) are complete and identifying any requirements for longer-term monitoring, maintenance, and arrangements for contingency action. Any changes to these components require the written consent of the Secretary of State, following consultation with the EA.</p> <p>Email 6/2/23: This addresses the amendments requested to R6 in our Rel Rep para 7.5 & can be 'Agreed'. We are happy with the updated wording to the existing R6.</p> <p>The request for an additional requirement in para 7.6 & 7.7 of our Rel Rep needs to</p>			

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
			be responded to in the SoCG separately. It should currently show as 'Under discussion'.			
D4	Requirement 10	A12 EA Relevant Representation 4/11/22 paragraphs 7.8 – 7.9	<p>Requirement 10 Detailed Design provides for amendments to the preliminary scheme design subject to the approval of the Secretary of State following consultation with the relevant local planning authority and relevant local highway authority. The EA should also have the opportunity to review and comment on any proposed amendments.</p> <p>The EA should be included as a named consultee in respect of Requirement 10 (1)(c) for relevant matters.</p>	<p>If any amendments are proposed to the design, the Secretary of State must be "satisfied that any amendments would not give rise to any materially new or materially different environmental effects in comparison with those reported in the environmental statement." It is difficult to identify a situation in which that criterion could be the case, but where a new Environmental Permit would be required from the EA. In any event, this requirement does not prevent the need to comply with other consents such flood risk activities permit (FRAP) and protected species licences. The Applicant does not therefore consider that there is justification for the EA being a named consultee in this requirement.</p> <p>Requirement 10(2) makes it clear that amended details are approved "under paragraph (1)". Therefore any amended details would be</p>	Agreed	30/3/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
				<p>subject to the consultation requirements set out in paragraph (1).</p> <p>The requirement as drafted, which only requires consultation with the Local Planning Authority, is in line with precedent in recent orders such as the A47 Blofield to North Burlingham Order 2022</p>		
D5	Requirement 11	A12 EA Relevant Representation 4/11/22 paragraph 7.10	We are pleased to note that the EA is included as a named consultee in part (1). The EA should also be included as a named consultee for part (2), to comment on any proposed amendments to details agreed under part (1).	The Applicant has agreed to including the EA as a named consultee under part (2) of Requirement 11 of the dDCO on matters related to its functions.	Agreed	30/3/23
D6	Requirement 12	A12 EA Relevant Representation 4/11/22 paragraph 7.11	We can confirm that we are satisfied with this Requirement. Consents and Licences Position Statement (Document 3.3 APP-041).	-	Agreed	4/11/22
D7	Environmental Permits	A12 EA Relevant Representation 4/11/22 paragraphs 8.1 – 8.5	We note that the Applicant is not seeking to dis-apply the majority of the environmental permits that may be required during construction and operation of the scheme. We would like to remind the Applicant that it will be necessary to apply for and have in place all necessary permits prior to any works commencing	<p>Discussions are ongoing.</p> <p>NH does not anticipate the need to apply for discharge consents to cover the operational phase of the proposed scheme.</p>	Under Discussion	-

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
			<p>The Applicant has stated an intention to disapply the requirement for Flood Risk Activity Permits (FRAP) for permanent structures and environmental permits for the discharge of water and sediment during operation.</p> <p>We are not content to accept the disapplication of flood risk activity permits for permanent structures.</p> <p>Additionally, we do not normally agree to the disapplication of discharge consents.</p> <p>Section 150 of the Planning Act 2008 states that no disapplication of legislation within the remit of the EA can take place without our consent.</p>			
D8	New Requirement for contaminated land	A12 EA Relevant Representation (RR-011) 4/11/22 paragraphs 7.6 & 7.7	Need for an additional Requirement to detail the measures for managing contaminated land across the scheme.	<p>The Applicant has already undertaken investigations to identify contamination as reported in the Environmental Statement. NH notes that no areas of contamination have been identified that would warrant a remediation strategy as envisaged by the EA.</p> <p>In respect of those parts of the proposed scheme where site specific Detailed Quantitative Risk Assessment will be required at detailed design stage, it is considered that Requirement 6 is</p>	Agreed	30/3/23

Ref	Issue	Document reference	Environment Agency position	National Highways position	Status	Date
				<p>sufficient to appropriately manage risks.</p> <p>The Applicant confirms that the EA is a named consultee in relation to the Second Iteration EMP and Third Iteration EMP requirements 3 and 4 on matters related to its functions. This amendment has been made in the dDCO submitted at Deadline 3 [REP3-002].</p>		

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Acronyms

Abbreviation	Term
BNG	Biodiversity Net Gain
dDCO	Draft Development Consent Order
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges
EA	Environment Agency
ECC	Essex County Council
EMP	Environmental Management Plan
FRA	Flood Risk Assessment
GWDTE	Groundwater Dependent Terrestrial Environment
HEWRAT	Highways England Water Risk Assessment Tool
NH	National Highways
PA 2008	Planning Act 2008
PEIR	Preliminary Environmental Information Report
PWS	Private Water Supply
REAC	Register of Environmental Actions and Commitments
SoCG	Statement of Common Ground
SuDS	Sustainable Drainage System
WFD	Water Framework Directive
WQAR	Water Quality Assessment Report