

A47 Blofield to North Burlingham

Scheme Number: TR010040

Volume 8

8.3 Statement of Common Ground with Highways England and Norfolk County Council

Rule 8 (1)(e)

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

July 2021

Deadline 1

Infrastructure Planning

Planning Act 2008

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

A47 Blofield to North Burlingham
Development Consent Order 202[x]

Statement of Common Ground – Norfolk County Council

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Rev 0	July 2021	Deadline 1

STATEMENT OF COMMON GROUND

This statement of Common Ground has been prepared and agreed by (1) Highways England Company Limited and (2) Norfolk County Council

Signed

Nikki Rowley-Todd

Project Manager

On behalf of Highways England

Date: **INSET DATE**

Signed

NAME

POSITION

On behalf of Norfolk County Council

Date: **INSERT DATE**

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1 INTRODUCTION

1.1 Purpose of this Document

- 1.1.1 This Statement of Common Ground (SOCG) relates to an application made by Highways England ("the Applicant") to the Planning Inspectorate ("PINS") under Section 37 of the Planning Act 2008 ("PA 2008") for a Development Consent Order (a "DCO"). If made the DCO would grant consent for the Applicant to undertake the A47 Blofield to North Burlingham Scheme ("the Scheme"). A detailed description of the Scheme can be found in the ES Chapter 2 The Proposed Scheme (**APP-40**).
- 1.1.2 This SoCG does not seek to replicate information which is available elsewhere within the Application documents. All documents are available on the Planning Inspectorate website.
<https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-blofield-to-north-burlingham/>
- 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. 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) Highways England as the Applicant and (2) Norfolk County Council (NCC).
- 1.2.2 Highways England 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 Highways England 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 Highways England.
- 1.2.3 NCC is the Local Authority for the Scheme falling within Category A of section 43(1) of PA 2008 and are the highways authority for the Scheme, which falls entirely within the Council's administrative area.

1.3 Terminology

1.3.1 In the tables in Section 3 'Issues' of this SoCG the following terminology is used:

- "Agreed" indicates where the issue has been resolved
- "Not Agreed" indicates a final position
- "Under discussion" where these points will be the subject of on-going discussion wherever possible to resolve, or refine, the extent of disagreement between the parties.

1.3.2 It can be taken that any matters not specifically referred to in the Issues chapter of this SoCG are not of material interest or relevance to NCC, and therefore have not been the subject of any discussions 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 NCC.

2 RECORD OF ENGAGEMENT

2.1.1 A summary of the meetings and correspondence that has taken place between Highways England and Norfolk County Council in relation to the Application is outlined in Table 2-1.

Table 2-1 : Record of Engagement

Date	Form of Correspondence:	Key topics discussed and key outcomes (the topics should align with the Issues tables)
	Statutory Consultation, Section 49 of PA 2008	A range of comments from both Norfolk County Council (NCC) and Highways England (HE) regarding the development in response to statutory consultation
07.03.2018	Letter	NCC provided comment in the Scoping Opinion.
24.05.2018	Meeting	<p>Joint meeting with the EA and the Lead Local Flood Authority (LLFA)^[1] which discussed flood risk and drainage including:</p> <ul style="list-style-type: none"> The LLFA had informal accounts of flooding on the A47 resulting from overland surface water flow paths. The Proposed Scheme must accommodate these flow paths through the use of 'dry culverts'. Siting of the culverts must be based on topographic survey rather than relying on LiDAR data. The LLFA requested that NCC Highways department be consulted with regards to the nature of the pond at Lingwood Road and whether this receives highways runoff. The LLFA stated that drainage design should be tested against a 40% allowance for climate change. Any 'dry culverts' or alterations to ordinary watercourses would require consent from the LLFA. The LLFA advised of the importance of reliable infiltration testing to inform the drainage design. The assessment of climate change on groundwater features should take the form of a simple qualitative assessment. Currently Environment Agency (EA) projections suggest annual groundwater recharge would remain the same but with altered seasonal timing. <p>The EA requested that proposed groundwater monitoring as part of the ground investigation (GI) should allow for monitoring of groundwater levels until at least spring 2019.</p>

^[1] Lead Local Flood Authority (LLFA) is Norfolk County Council

Date	Form of Correspondence:	Key topics discussed and key outcomes (the topics should align with the Issues tables)
19.10.2018	Meeting	Feedback was received from NCC and the parish councils and other key stakeholders including local landowners, interest groups and the local communities. This feedback provided insight into the key issues in the area for walking and cycling connectivity and numerous suggestions for improvement. Issues raised during these consultations have been taken into account to develop the design through design interventions.
12.12.2019	Meeting (conference call)	A multi-party meeting (SWECO, Galliford Try, NCC and HE) Traffic and Highways: A scheme overview.
19.12.2019	Meeting (conference call)	A multi-party meeting between Highways England, Sweco and NCC to discuss thoughts and issues surrounding Public Rights of Way, walking, and cycling trails.
01.02.2020	Email	NCC have been consulted regarding Barbastelle bats and the wider mitigation proposals for bats by the Proposed Scheme. In addition, bat mitigation implemented as part of the completed northern distributor road and the associated monitoring data was discussed. Data was exchanged on the locations of Barbastelle bats.
25.03.2020	Meeting (conference call)	A multi-party meeting (SWECO, Galliford Try, NCC and HE) Local Road Departures and Design Meeting. To discuss (a) departures from standard on Local Authority road network, (b) design speeds of local road network and (c) proposed road widths of local road network.
01.04.2020	Email	The NCC was invited to comment on the survey methodologies regarding the birds of the Proposed Scheme but did not respond.
17.04.2020	Meeting (conference call)	A multi-party meeting (SWECO, Galliford Try, NCC and HE) Local Road Departures and Design Meeting. To discuss (a) the Rejected Departure (DEP0013) and (b) cross section and classification of local road network.
23.04.2020	Email	NCC advised that Environmental Health is the remit of the local District Council in the area. The Environmental Health Department of Broadland District Council were consulted by Email on 23 April 2020. The consultation Email outlined the proposed approach to the assessment of noise and vibration due to the Proposed Scheme, advising that the assessment would be carried out in accordance with Design Manual for Roads and Bridges, (DMRB), Revision 2 LA 111 Noise and Vibration.
22.05.2020	Meeting (conference call)	Presentation on A47/Cucumber Lane roundabout Issues.
02.07.2020	Email	NCC were consulted on suitability of the uncertainty log developed for the traffic model for the cumulative effects assessment (CEA).
09.07.2020	Meeting	NCC were consulted on CEA methodology.

Date	Form of Correspondence:	Key topics discussed and key outcomes (the topics should align with the Issues tables)
16.07.2020	Email	Draft Drainage Strategy Report (DSR) provided to the LLFA for review.
17.07.2020	Meeting (conference call)	A multi-party meeting (NCC, HE, Galliford Try and SWECCO) A47 Cucumber Lane Roundabout Option Assessment Meeting. Meeting to discuss the identified issues presented on 22/05/2020 A47/Cucumber Lane Roundabout from HE to NCC.
17.07.2020	Email	NCC provided additional developments to be considered in the cumulative long list. NCC also recommended contacting Suffolk CC as part of the consultation process for the CEA.
23.07.2020	Email	NCC was contacted regarding a mineral impact assessment as part of the materials and waste assessment chapter. The NCC confirmed the approach for the mineral impact assessment.
28.07.2020	Email	The DMRB published updated guidance that had been referenced in the proposed methodology section of the Environmental Impact Assessment (EIA) Scoping Report. Technical disciplines contacted the NCC to confirm changes to the proposed methodology to be adopted in the Environmental Statement (ES).
06.08.2020	Email	Draft Flood Risk Assessment (FRA) provided for review to LLFA.
06.08.2020	Letter	LLFA's comments received on the draft DSR.
14.08.2020	Letter	LLFA's comments received on the FRA (reissued on 24.09.2020).
21.08.2020	Email	NCC confirmed uncertainty log approach for CEA is suitable methodology.
15.09.2020	Letter	LLFA provided information on local flooding.
16.09.2020	Letter	Letter from the LLFA setting out recent consultation responses and comments on the FRA and the DSR. Refer to Appendix 1 for detailed technical points.
22.09.2020	Email	Draft Groundwater Assessment provided to the LLFA for review.
24.09.2020	Meeting	Meeting to discuss Highways England's response to the LLFA's comments on the DSR and the FRA.
25.09.2020	Meeting	Meeting to discuss Highways England's response to the LLFA's comments on the DSR and the FRA continued.
07.10.2020	Letter	NCC letter setting out outstanding matters following meeting on 24 & 25 September to discuss comments on the DSR and the FRA.
07.10.2020	Letter	NCC provided comments on the Groundwater Assessment.

Date	Form of Correspondence:	Key topics discussed and key outcomes (the topics should align with the Issues tables)
08.10.2020	Email	Highways England's response to NCC's comments on the draft Groundwater Assessment.
08.10.2020	e-mail (David Cummings)	Draft response to Highways England consultation.
22.10.2020	Letter	Response to Highways England email of 8 October 2020 in relation to the Groundwater Assessment.
27.10.2020	Email	Highways England correspondence regarding embankment drainage in reply to letter of 07.10.2020 from NCC.
30.10.2020	Email	Meeting to discuss the archaeological trenching results and to obtain an agreement regarding the study area methodology with the NCC.
06.11.2020	Meeting (conference call)	A multi-party meeting between Highways England, Carter Jonas, WBD, Sweco to review the first draft of the DCO document shared with Norfolk County Council.
12.11.2020	Meeting (conference call)	A multi-party meeting between Highways England, Carter Jonas, WBD, Sweco and Broadland District Council. To discuss the A47 Blofield DCO with Broadland District Council Planning Officer
13.11.2020	Meeting (conference call)	A meeting between Highways England, Sweco and Norfolk County Council to discuss the de-trunking and adoption plans with NCC.
20.11.2020	Meeting (conference call)	A meeting between Highways England, Sweco and Norfolk County Council to discuss planned Walking Cycling and Horse-Riding facilities.
30.11.2020	Email	NCC responded to email of 27.10.2020 with their position on embankment drainage.
03.12.2020	Email	Highways England provided the FRA and DSR by email for review to LLFA.
22.12.2020	Letter	With reference to the FRA and DSR provided by email on 03.12.2020 for review, the LLFA outlined some final points setting out the status for drainage and flood reporting on the Proposed Scheme and some final matters to be discussed.
16.02.2021	Meeting (conference call)	Meeting between Highways England, NCC and Sweco: To update and review A47 Blofield progress and areas for adoption. In particular, to discuss outstanding areas prior to examination, in the events that representations made during the examination period.
16.03.2021	Meeting (conference call)	Follow up meeting to 16/02/2021 between Highways England, Sweco and Norfolk County Council. To discuss outstanding matters in relation to adoption and commuted sums.

Date	Form of Correspondence:	Key topics discussed and key outcomes (the topics should align with the Issues tables)
18.03.2021	Meeting	Meeting between Highways England's Flood Lead and Drainage Lead with LLFA to resolve remaining LLFA comments on the FRA and DSR.
31.03.2021	Response to DCO application	Norfolk County Council Comments on the A47 Blofield to North Burlingham Dualling
13/04/2021	Meeting (conference call)	Follow up meeting to 16/03/2021 between Highways England, Sweco and Norfolk County Council. To discuss outstanding matters in relation to adoption and commuted sums.
11/05/2021	Meeting (conference call)	Follow up meeting to 13/04/2021 between Highways England, Sweco and Norfolk County Council. To discuss outstanding matters in relation to adoption and commuted sums.
02/06/2021	Meeting (conference call)	Meeting between Sweco and Norfolk County Council to discuss adoption standards.
21/06/2021	Meeting (conference call)	Meeting between Sweco and Norfolk County Council to discuss adoption standards.

- 2.1.1 It is agreed that this is an accurate record of the key meetings and consultation undertaken between (1) Highways England and (2) Norfolk County Council in relation to the issues addressed in this SoCG.

3 ISSUES

3.1 Included within the Statutory Consultation response, but does not appear within the relevant representation of 31/03/21

Table 3-1 : Issues

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
Dualling priorities for NCC		Together with the proposals also in RIS1 for dualling between Easton and Tuddenham this will create a dual carriageway link all the way from Dereham, via Norwich, to Acle. We believe that, for RIS2, dualling of the link to Great Yarmouth should be completed by dualling the A47 Acle Straight. This, and dualling between Tilney and East Winch, this are Norfolk County Council priorities for RIS2.	Highways England has noted these comments from Norfolk County Council	This is still a live comment for NCC	30.06.21
Housing opportunities		and should help to accelerate the delivery of significant amounts of housing.	Highways England note this comment.	This is still a live comment for NCC	30.06.21
Standards & Compliance		For the final scheme, the County Council would expect the proposals to include full details of construction and compliance with nationally recognised standards, which would ensure that the road improvement is fit for purpose	This information can be found in Environmental Statement (Application document 6.1) and the Environmental Management Plan (Application document 7.8).	This is still a live comment for NCC	30.06.21
Biodiversity Some important sources are omitted from section 8.2.1.		References to the guidance and best practice used in the biodiversity assessment (section 8.2.1.) are noted. This is as expected although some important sources are not mentioned, notably BS42020:2013 Biodiversity - Code of practice for planning and development, and the industry best practice guidance relating to Environmental Impact Assessment Guidelines for Ecological	This is covered in the Environmental Statement (Application document 6.1) and the Habitat Regulations Assessment (Application document 6.11).	Closed.	29.06.21

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
		Impact Assessment in the UK and Ireland (CIEEM, 2018). Compliance with these documents would provide greater confidence in the reporting and conclusions drawn.			
County Controlled Traffic Flows		The consultation material does not include any traffic flow information showing predicted changes to traffic levels on local County Council controlled roads within the vicinity of the proposed improvement	The predicted changes to traffic levels within the vicinity of the Scheme area have been provided to Norfolk County Council.	Closed.	24.06.21
Network upgrades		The LLFA would welcome that the existing drainage schemes are upgraded to the same standard as the proposed scheme where possible.	The design does not allow for the upgrade of the existing drainage outside of the Scheme extents. However, where there is a direct interaction between the design and the existing drainage network, this will be upgraded to the same standard.	Closed.	24.06.21
Drainage Routes		LLFA state that it is unclear if section 2.4.17 of the PEIR is suggesting that greenfield runoff as well as informal drainage and overland flow routes (from the Environment Agency Risk of Surface Water flood map) will be considered, diverted or remain on a natural pathway. Clarification on what will be diverted and what will remain on a natural pathway would be welcome.	Surface water pathways as shown on the Environment Agency Risk of Surface Water Flood Map will be maintained along existing routes where these cross the Scheme. Additional mapping indicating more detail on existing surface water pathways provided by Norfolk County Council aligns with the overland flow drainage design provided for the scheme, with only slight diversions of the existing pathways required to collect these flows and align with the road crossings provided for overland flow drainage.	Closed.	24.06.21
Waste Management site availability		The Waste Planning Authority notes the contents of Table 10.1 (Licenced Waste Management Facilities). However, the Waste Planning Authority would caution that a number of these sites are not currently operational for the acceptance of waste;	Table 10.1 within the Preliminary Environmental Impact Report (dated August 2018) was based on baseline data available in 2018 and it is appreciated that a number of these sites may not be operational for the acceptance of waste at the time of	Closed	28.05.21

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
		even though they still have a valid Environmental Permit from the Environment Agency. Highways England should ascertain that waste management sites that they may wish to utilise for the management of waste are operational and are accepting waste before their inclusion in Table 10.1	construction. Impact of waste in accordance with DMRB LA 110 is considered in the Environmental Statement (Application document 6.1).		
Run-off pathway		Lead Local Flood Authority (LLFA) state that it is unclear if section 2.4.17 of the PEIR is suggesting that greenfield runoff as well as informal drainage and overland flow routes (from the Environment Agency Risk of Surface Water flood map) will be considered, diverted or remain on a natural pathway. Clarification on what will be diverted and what will remain on a natural pathway would be welcome.	Surface water pathways as shown on the Environment Agency Risk of Surface Water Flood Map will be maintained along existing routes where these cross the Scheme. Additional mapping indicating more detail on existing surface water pathways provided by Norfolk County Council aligns with the overland flow drainage design provided for the scheme, with only slight diversions of the existing pathways required to collect these flows and align with the road crossings provided for overland flow drainage.	Closed.	24.06.21
Water quality of road run-off		LLFA request that a robust water quality assessment of road runoff is provided, and that the Sustainable Drainage System (SuDS) Manual (2015) is consulted and followed for the worst case pollution hazard anticipated. LLFA highlight that proprietary systems such as oil interceptors are not considered to be a SuDS treatment step and would request that any sole reliance on these prior to discharge without any SuDS water quality treatment components be supported by appropriate bespoke water quality assessments and permits which might be required from the Environment Agency.	The SUDS Manual C753 was consulted and followed for pollution control. All appropriate water quality considerations (including risk assessment) are detailed in the Environmental Statement (Application document 6.1).	Ongoing discussion with NCC	

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
Storm allowance for run-off		LLFA note that several soakaways and an attenuation basin are proposed but no calculations are provided at this stage.	This is covered in the Drainage Impact Assessment section of the Environmental Impact Assessment (Application document 6.1). Storm events were modelled with 20% and 40% allowances for climate change.	Ongoing discussion with NCC	
Current flood locations		Flooding on the existing A47 at the location of where the Environment Agency Risk of Surface Water Flood Map crosses the road should be reviewed and improvements made where possible.	This has been reviewed, and surface water flooding pathways have been accommodated in the design of the Scheme.	Closed.	24.06.21
Tree planting		Some screening could also be used to further enhance the route, this would be more attractive for families with pushchairs, cyclists and dog walkers who are all looking to access the woods to the north.	The inclusion of planting has taken into account the visual amenity of users of the network of Public Rights of Way and Burlingham Woodland Walks to the north of the Scheme. Proposed planting treatments and their environmental mitigation functions are defined Scheme Environmental Masterplan and includes a combination of hedgerows, trees and woodland groups as appropriate to the location to contribute to screening and integration of the Scheme.	Closed.	30.06.21
Local Character features		The Baseline Data, section 7.5, identifies the broad National Character Area as well as the Local Landscape Character areas. Whilst these are useful in considering the wider context and surrounding landscape, the summary of Landscape Features provided in 7.5.5 appears quite brief and lacks detail in comparison. This could benefit from further detail reflecting the Local Landscape Character areas, which outlines how the landscape changes along the route.	This point has been acknowledged by the inclusion of assessment specific landscape character areas which recognise the character changes along the route. Reference to landscape features has been extended to provide further detail. The landscape and visual assessment of the Scheme is included in the Environmental Statement (Application document 6.1)		

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
Visibility modelling distances		The county council also agrees that the 1km study area should be appropriate, although it is possible that further into the process this area could be deemed as too restrictive and some further views may need taking into consideration. This is due to the open nature of the surrounding landscape and potential for long distance views. Existing vegetation data was not available at the point of this assessment; however this will be important in considering the extent of vegetation loss and potential impact on views.	The 1km study area has been tested by digital Zone of Theoretical Visibility modelling and site walkover validation of views and is confirmed as representing an appropriate extent within which to assess the potential for landscape and visual effects. The landscape and visual assessment of the Proposed Scheme is included in the Environmental Statement (Application document 6.1)		
Landscape character impacts		Impacts on local landscape character are likely during both the construction and operational phases as a result of the enlarged junctions and overbridges within a relatively flat and open landscape.	This observation is acknowledged and reported in the assessment presented in the Environmental Statement (Application document 6.1).		
PEIR – reporting detail		Much of the ecology information in the Preliminary Environmental Information Report (PEIR) is in summarised form (eg the great crested newt Habitat Suitability Index assessments); the county council would wish to see the original reports before being able to say if it supports the assessments.	Norfolk County Council have been contacted. Survey results will be provided within the Environmental Statement (Application document 6.1)	Closed.	29.06.21
PEIR - Visual assessment		Paragraph 7.2.1 of the PEIR notes the various sources referred to as best practice guidelines, which have informed the methodology of Highways England's assessment. These are considered appropriate for this type of landscape and visual assessment. The county council also agrees that the 1km study area should be appropriate.	Highways England noted this comment. The landscape and visual assessment of the Proposed Scheme is included in the Environmental Statement (Application document 6.1).		

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
PEIR - Planting and screening		The PEIR sets out that potential landscape impacts include the removal of existing vegetation, earthworks and presence of construction plant, materials, machinery, compounds and lighting during construction. As part of the mitigation, Highways England will produce a detailed planting design to integrate the design into the surrounding landscape. This will include considerations for amenity like visual screening and biodiversity.	The landscape design is reflected in the Environmental Masterplan which defines the elements and functions of the environmental components of the Scheme. This includes the identification of visual screening and biodiversity objectives.		
Public Health – Air Quality		It is anticipated that matters relating to, for example, air quality and site and dust management, would be managed by other statutory agencies such as the Environment Agency and Broadland District Council.		Closed.	29.06.21
Footway Width Shared footways should be 3.0m as opposed to 2.5m per plans		The current plans for shared footways width are 2.5m. NCC would expect these to be 3.0m for shared cycle/footways.		Not Closed.	28/05/21

3.2 Discussed at meetings but not included within the Relevant Representation of 31/03/2021

General

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
DCO		Aspects of the DCO had been queried by NCC, in terms of discharging authority, Traffic Management and Working Practices.	<ul style="list-style-type: none"> It was noted that the HE DCO has standard content and requirements. It was noted that the discharging authority is the Secretary of State and not the LPA. It was noted that some elements appeared to be missing from the DCO, however, these are within the EMP or stated within best practice. <p>It was noted that the Traffic Management Plan would be submitted alongside the DCO.</p>		

Design

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
The Windle The central reservation at the Windle was not part of the scheme, however, HE may look to close this in the future.		NCC have concerns about the approach speed to The Windle junction.	<ul style="list-style-type: none"> It was noted that previous designers recommended the gap closure to HE. HE has noted NCC concerns re: approach speed. 		

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
NCC standards and departures from standards		NCC confirmed that the NCC standards and departures from standards are based on the Road Safety Audit Process.		Closed	28/05/21
Narrowing of Southbound verge from 2.5m to 0.6m. Safety, cost and maintenance issues.		NCC will not accept the narrowing of the Southbound verge from 2.5m to 0.6m, per departure 0013 (DEP0013), due to reduced safety width, reduced maintenance space for operative parking and the cost of maintenance to NCC should the parapet be damaged. Should audio-tactile edge line be installed in addition to the 1.0m hard strip, the minimum verge width accepted by NCC would be 1.0m.	<ul style="list-style-type: none"> It was noted that HE will retain ownership of the parapet. 	Closed	28/05/21
Local Road Network		SWECO request that NCC formalise their aspirations for the local road network on the Blofield to North Burlingham Scheme.		This is still a live comment for NCC.	30.06.21
Shared Cycle/Footway Differing views on shared cycleway width		NCC stipulate shared cycle and footway at 3.0m	HE has stated that the guidance provided by NCC is in relation to urban settings and therefore 2.50m is adequate	This is still a live comment for NCC.	28.05.21
Access Track to NCF		It was flagged as a risk that the area could be used for unauthorised encampment.		Closed.	24.06.21
Departures from standard on Local Authority road network		No concerns have been raised by NCC in relation to the following departures from Standard on the Local Authority Road Network.		Closed	28.05.21

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
		<ul style="list-style-type: none"> DEP 0001 Left-out merge radius at Yarmouth Junction. DEP 0002 Visibility at junction intersecting with Yarmouth Road. DEP 0007 Centreline radius and no trans at High Noon Lane tie in. DEP 0008 Centreline radius at junction tie in to CGSJ overbridge. DEP 0009 Centreline radius at Main Road junction. DEP 0010 No trans along de-trunked A47 connection to CGSJ overbridge. DEP 0011 Centreline radius at junction tie in to Skew overbridge. 			
No Trans along B1140 northbound link (DEP005)		NCC request to see approach speeds within traffic surveys, to determine support for speed change. Change requested as a result of introduction of a compact grade-separated junction.			
Bridge Width		NCC queried the Bridge width, SWECO noted that the bridge width itself would not reduce due to the visibility requirements, but that cross section is still to be discussed.			
Western end junction		This is not a fully grade separated junction. Local impacts are now known and NCC look to agree any minor changes to county roads because of the scheme.			
Design Overview Scheme overview provided:	HE551490-GTY-HML-000-DRCH-30035_P01	There will be a gap on the Yarmouth Road southern footway by the Blofield Farm Shop (to Shreeve Road)	Any extension on the southern side would be outside the red line and DCO boundary. There is an existing footway on the northern side		

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
outstanding queries/issues noted.					
B1140 width Is width suitable for heavy agricultural transport.		Regarding the B1140, has 6m width been agreed? This is used by heavy agricultural vehicles to transport to the sugar beet factory in Cantley. There is 2-way flow of vehicles from September to March.		Closed.	28.05.21
B1140 junction with South Walsham Road		Suggested that the island on the north turning traffic could be removed to allow greater turning.			
Road / Overbridge widths Has this been agreed by Council Officers?		Overbridge at eastern end of scheme appears to be 0.5m too narrow.			
HGV and Bus movements		NCC to determine the future volume of HGV and bus movements.			
Overbridge streetlighting		Noted that NCC preferred no streetlighting.			

Adoption & Ownership

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
Layby Ownership		The ownership of the decommissioned layby will be discussed / agreed prior to DCO application.		This is still a live comment for NCC	30.06.21
Tree Ownership Ownership has yet to be agreed.		NCC wish to understand the condition of these trees.	There will be transfer of tree ownership from HE to NCC.	This is still a live comment for NCC	30.06.21
Landscaping			Landscaping of side roads will fall to NCC. There may be additional planting to the Northern edge to replace what is already there.		
Carriageway ownership Boundaries Clarification is required around the points at which HE ownership ceases and NCC commences.		<ul style="list-style-type: none"> Clarification required surrounding ownership boundaries between NCC and HE. E.g. Carriageway joint lines, side road orders. NCC require Drainage plans are for current / future A47. NCC require a 6m carriageway for trunk road in the event of diversions. <p>Speed limits at each stage of the scheme were noted. Outside of the red line boundary to the north it was noted that there has been a request to NCC for a reduction near properties to 30 mph.</p>			
Access track to NCF PROW or		NCC query whether this is PROW or Highway. This is a PROW and a private road to the fields.	On the Southern side of the new A47, there is an access road with footway, leading onto a private means of access (agricultural	This is still a live comment for NCC.	30.06.21

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
Highway status			access track), with footpath proposed to be adopted by Norfolk		
Bridge at B1140			Suggested that HE will retain the bridge ownership, with NCC taking responsibility for the road on the bridge.	Closed if HE comments stand – HE is taking responsibility for the bridge and NCC for the road.	30.06.21

Congestion

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
Traffic Data Surveys There is a concern the scheme will introduce congestion to local network upon opening.		NCC have noted concerns around congestion and traffic flows: <ul style="list-style-type: none"> through Blofield through The Windle at the A47/Cucumber Lane junction.	Traffic data surveys completed in October 2019 and the process of incorporating that data into revised traffic forecasting data has been presented to NCC.	Closed.	24.06.21
Changes in traffic levels and impacts to vicinity. Changes in traffic levels and impacts to		It is clear though that there will be an impact, perhaps particularly at the link bridge over the existing A47 to connect it to Yarmouth Road at the western end of the scheme since the junction does not provide for all movements. We would need to understand fully the predicted changes to traffic levels to determine if there is an	The predicted changes to traffic levels within the vicinity of the Scheme area have been provided to Norfolk County Council.	Closed.	24.06.21

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
vicinity.		impact with traffic on the local settlements for example through Blofield, and what improvements might be required, and where.			
Proposal impact to local network and community. Ongoing co-operation is required to understand the impact to the network.		Since the S42 consultation NCC have engaged with Highways England to understand the proposal's impact on the local road network and on local communities. NCC would want to continue to work with HE on this.		Closed.	24.06.21

Drainage and Flooding

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
Flood Risk Assessment (see appendix 1 for full technical details)	FW_2020_0688 / Appendix 1	LFFA guidance is not mentioned in the FRA. The FRA has not included any consideration of the future maintenance and management provisions proposed for the surface water management features and structures. This should be clarified in the revised FRA report.		Ongoing discussion with NCC	

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
<p>Drainage Strategy (see appendix 1 for full technical details)</p> <p>There are a number of recommendations which need to be considered as part of LFAA response.</p>	FW_2020_0688 / Appendix 1	<ul style="list-style-type: none"> The drainage design does not meet the requirement for the surface water drainage to attenuate the 1% AEP (1 in 100 year) plus climate change event. The LLFA recommends the attenuation provided in the infiltration basin and soakaways proposed drainage design is reviewed and brought into accordance with these standards. In future drawing and report revisions, the half drain times are expected to be provided. Clarification required: space in relation to the positioning of the soakaways and whether the distances between the soakaways, the basin and the properties are appropriate? The LLFA will await the submission of appropriate supporting evidence. Swales <ul style="list-style-type: none"> Use as vehicle access is unusual. No outline design information has been provided. What are the drainage design constraints to the footpaths and what options have been discounted to manage footpath run-off? Where the existing carriageway is unchanged LFAA would be interested in the Water Quality Management due to the predicted increase in traffic 		Ongoing discussion with NCC	

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
		<p>volumes. Has an assessment been undertaken?</p> <ul style="list-style-type: none"> • Are vortex interceptors and dedicated spillage containment tanks included within the design? • Are there to be any remedial works within the unchanged systems? • The LFAA can confirm that the infiltration testing would be required to the area north of the eastern tie in. When will this occur? • Clarification around maintenance and ownership to be obtained, e.g. drivable swales, dry culverts and drainage from the allotments. • Information is required about the construction phase drainage works along with any temporary measures. 			
Groundwater Assessment	FW_2020_0688 / Appendix 1	No Groundwater assessment has been provided for review.		Closed.	24.06.21
Southern Infiltration basin	2.7 Drainage and Surface Water Plans	Query as to whether piped or surface run off.	<ul style="list-style-type: none"> • Confirmed piped, drainage plans shared. • Low point highlighted in vicinity. <p>Maintenance liability agreements required going forward.</p>	Ongoing discussion with NCC	
Adoption of Drainage		NCC thoughts around drainage are that this should be retained under HE ownership, including infiltration basins, where possible.	Agreed that this requires agreement.	Ongoing discussion with NCC	

Construction

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
Surface Course		The surface course type to be discussed once construction programme and the design is further developed.		This is still a live comment for NCC	30.06.21
Programme		An indicative programme to determine forward works and development to be shared with NCC.		This is still a live comment for NCC	30.06.21

Archaeology

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
Requirements		<p>NCC have suggest that a suite of requirements is put in place encompassing Scheme of Investigation (Sol), development and land occupation in line with Sol.</p> <p>A) No development shall take place until an archaeological written scheme of investigation that has been submitted to and certified by the Secretary of State. The scheme shall include an assessment of significance and research questions; and 1) The programme and methodology of site investigation and recording, 2) The programme for post investigation assessment, 3) Provision to be made for</p>		Closed.	28.06.21

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
		analysis of the site investigation and recording, 4) Provision to be made for publication and dissemination of the analysis and records of the site investigation, 5) Provision to be made for archive deposition of the analysis and records of the site investigation and 6) Nomination of a competent person or persons/organization to undertake the works set out within the written scheme of investigation. And B) No development shall take place other than in accordance with the written scheme of investigation approved under requirement (A) and C) The development shall not be occupied or put into first use until the site investigation and post investigation assessment has been completed in accordance with the programme set out in the archaeological written scheme of investigation approved under condition (A) and the provision to be made for analysis, publication and dissemination of results and archive deposition has been secured.			

Walking, Cycling and Horse-riding

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
Burlingham Woods			It was noted that there is planned development at Burlingham Woods in		

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
			relation to the local Green Infrastructure Plan.		
Shared use Footpath/way		Lack of agreement on shared usage footpath width and constraints NCC would expect these to be 3.0m for shared cycle/footways.	<ul style="list-style-type: none"> The current plans for shared footways width are 2.5m. <p>Discussion on the constraint for the provided shared use path width, this being (a) the design speed of the retained and de-trunked A47 and (b) the trees along the highway boundary."</p>	This is still a live comment for NCC	28.05.21
Parish Council Proposals			The Parish Council (NB & Lingwood) proposed a walking or shared use crossing of the B1140 junction and potential use of the decommissioned layby and A47 for an additional walking facility. These are under review, subject to departures and WCHR assessment outcome. NCC's support for using the decommissioned layby for such a use was noted.		
Designated Funds		Application for designated funds for crossing at North Burlingham has not been progressed. An application for designated funds was made in relation to a footbridge to improve connectivity between Lingwood and North Burlingham. This appears to have fallen by the wayside.	Previous Designated Funds applications did not progress due to the closure of the Road Investment Period 1 (RIP 1) and that HE are waiting on the definition of the RIP 2 Designated Funds, should they be included in the RIP 2 settlement by the Department for Transport.		
Western end of scheme – ProW Isolated ProW		At the west end of the section near the Blofield Farm and Social Club, there is an isolated ProW and this should have been addressed at the time of previous dualling.			

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
Southern Links at White House Junction. There are no ongoing non-road links from the White House Junction, heading South.		At the White House Junction, there are no continuing non-road links going south from this point. Northern connections are good, southern requires improvement and route at FP3 to improve severed parish.			
Permissive Footpaths and scheme footways		Surface, users (pedestrians / cyclists and horse riders) and status of footpath/PRoW from east to west requires clarification.	Footways are now the length of the carriageway.		
Local User Forums		Identification of and engagement with local user groups (walking and cycling) has been discussed.			

Environment

Issue	Document reference	Norfolk County Council Comment	Highways England Response	Status	Date
NCC informed of DMRB guidance update	ES technical chapters	NCC responded to individual discipline leads regarding scope.	Specialist teams responded to NCC queries and adopted changes in the relevant ES chapters as per discussions.		

Issue	Document reference	Norfolk County Council Comment	Highways England Response	Status	Date
Mineral Impact Assessment	ES chapter 10: Material assets and waste	<p>The proposed route alignment shown in the DCO boundary contains small areas that have been identified as safeguarded mineral resources (sand and gravel) in the Norfolk Minerals and Waste Local Plan.</p> <p>A list of the active safeguarded mineral and waste sites can be found on the council's website at: https://www.norfolk.gov.uk/-/media/norfolk/downloads/what-we-do-and-how-we-work/policy-performance-and-partnerships/policies-andstrategies/minerals-and-waste-planning/list-of-sites-safeguarded-under-core-strategy-policy-cs16.pdf?la=en</p> <p>NCC has outlined the approach to the mineral impact assessment.</p>	<p>Chapter 10 of the ES, Material assets and waste has assessed the impact on safeguarded mineral resources as identified in the Norfolk Minerals and Waste Development Framework. The chapter also assesses landfill capacity and disposal to landfill requirements.</p> <p>Appendix 10.4 to the ES, Mineral Impact Assessment, assesses the effects of the Proposed Scheme onto any potential sterilization of mineral sites and peat resources. Mineral safeguarding sites have been identified and assessed within this Appendix.</p> <p>The approach to the minerals impact assessment is in accordance with that outlined by NCC.</p>		
Archaeological trenching results and study area methodology	ES	It was stated that that the consultee had no issues with the scope and extent of the study area.	Noted		
Uncertainty Traffic log	ES chapter	NCC confirmed that uncertainty log approach was suitable methodology for CEA on all A47 schemes.	Noted.		
Approach of the CEA methodology	ES chapter	NCC attended the meeting to confirm the approach of the CEA and to incorporate any further inputs. All parties agreed the methodology adopted for the assessment was appropriate.	Noted		

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List of other developments	ES chapter	NCC recommended five additional projects to be considered.	Of the five additional projects, four of the windfarms were outside of the study area and not considered further. The remaining project, the Third River Crossing project, has been carried forward into the short list of the assessment.		
Scoping Opinion	Section 13.7 of Chapter 13 Road Drainage and the Water Environment of the ES.	<p>Information provided on flooding in the summer of 2014 at the location of the overland flow path shown on EA surface water mapping. It was detailed that following an investigation, the source of the flooding was unknown. The incident however highlighted that the design of the Proposed Scheme should carefully consider and propose mitigation to avoid the overland flow path.</p> <p>Links were provided to the Norfolk surface water management strategy and plan for the urban area.</p> <p>The following issues detailed to be considered for the development and addressed:</p> <p>FRA/surface water DSR identifying local sources of flood risk and how surface water drainage will be managed to ensure there is no increase in flood risk.</p> <p>In particular to consider:</p> <ul style="list-style-type: none"> Sustainable Drainage System (SuDS) prioritised in the order of surface water discharge to: shallow infiltration; watercourse; 	<p>All feedback from the NCC was considered in the development of the drainage design and mitigation for flood risk.</p> <p>Overland flow paths were considered and accommodated in the drainage design. Dry Culverts were designed for the 1 in 100 year plus 65% climate change event.</p> <p>An FRA and DSR were prepared. The EA were consulted on discharge to infiltration features deeper than 2m bgl.</p> <p>Infiltration testing was undertaken to BRE Digest 365. Infiltration features were designed to attenuate the 1 in 100-year return period storm from road run-off including a 40% allowance for climate change.</p> <p>Attenuation features are not located in a floodplain or in a Source Protection Zone (SPZ).</p> <p>A maintenance and management plan is included in the DSR. The GI concluded that no ponds that are to be infilled are groundwater fed. SuDS incorporated into</p>		

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		<p>sewer; combined sewer/deep infiltration generally greater than 2m bgl.</p> <ul style="list-style-type: none"> Consider flood risk sources: fluvial, surface water and groundwater flood risk. SuDS to manage flood risk and address water quality. Noting the absence of watercourses crossing the Proposed Scheme, all appropriate permissions to be sought to reach any outlying watercourses and the responsibility to maintain same to be established. Provision of surface water modelling of overland flow routes and mitigation, to include dry culverts sized for 1 in 100 years plus climate change allowance. At least one feasible proposal for the disposal of surface water to be demonstrated. Infiltration testing to be undertaken in accordance with Building Research Establishment (BRE) Digest 365. Post development runoff to be attenuated at predevelopment greenfield rates up to the 1 in 100-year return period storm plus climate change. Any existing formal or informal drainage to be maintained or accommodated. It is noted that the EIA Scoping Report, February 2018 indicated historical flooding on the existing highway and identifies the same area of flood risk for surface water as in the EA flood map. 	<p>the drainage design in the form of filter drains, an infiltration basin, and soakaways.</p>		

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		<ul style="list-style-type: none"> Flow paths crossing the existing and proposed road to be assessed. Any ordinary watercourse/ditch crossing the Proposed Scheme to be assessed and modelled if appropriate. <p>Suggestions for consideration include:</p> <ul style="list-style-type: none"> A site walkover; modelling to include tributaries if applicable; topographical survey to include floodplains; New culverts across tributaries and dry culverts conveying surface water to be designed to pass the 100 year plus climate change allowance; replacing existing culverts to take account of impacts of additional flows downstream and ensure no increase in flood risk; New drainage to include SuDS, manage flood risk and provide water quality mitigation; New drainage infrastructure providing attenuation to be outside the 100-year floodplain. <p>Ordinary Watercourse Consent applications to show how flow will be managed and how flood risk will not be increased. Link to LLFA guidance on prevention of the increase in flood risk for development provided. Advised to maintain or divert any existing formal or informal drainage. Flows relating to ponds to be infilled to be managed and mitigation provided if they are groundwater fed. The LLFA welcomed that the FRA would include a DSR and requested that the</p>			

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		<p>drainage scheme be tested for 20% and 40% climate change. The LLFA noted that the existing drainage would only be used at tie-ins. It was requested that measures are put in place to minimise temporary additional runoff and that this would be diverted away from the final drainage scheme to avoid siltation. The DSR to include a maintenance and management plan and identify the responsible authority who will adopt and maintain the features. The LLFA stated that the approval of LLFA as NCC to be applied for in respect of any likely affects in an ordinary watercourse.</p>			
Various Matters - flood risk and drainage	N/A	<p>At the joint meeting with the EA and the LLFA, which discussed flood risk and drainage the following points were made:</p> <ul style="list-style-type: none"> The LLFA had informal accounts of flooding on the A47 resulting from overland surface water flow paths. The Proposed Scheme must accommodate these flow paths through the use of 'dry culverts'. Siting of the culverts must be based on topographic survey rather than relying on LiDAR data. The LLFA requested that NCC's Highways department be consulted with regards to the nature of the pond at Lingwood Road and whether this receives highways runoff. The LLFA stated that drainage design should be tested against a 40% allowance for climate change. 	<p>The siting and sizing of 'dry culverts' during the preliminary design was based on LiDAR.</p> <p>A detailed topographic survey will be undertaken as part of the detailed design stage and the siting and sizing of 'dry culverts' would be re-evaluated at this stage.</p> <p>The pond at Lingwood Road, that would be infilled, is believed to receive water from highway runoff. The drainage is designed for the 100-year storm event with a 40% allowance for climate change.</p> <p>Infiltration testing, in accordance with BRE 365, has been undertaken throughout the DCO Boundary of the Proposed Scheme.</p> <p>Further infiltration testing will be undertaken, in areas where more</p>		

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		<ul style="list-style-type: none"> Any 'dry culverts' or alterations to ordinary watercourses would require consent from the LLFA. The LLFA advised of the importance of reliable infiltration testing to inform the drainage design. The assessment of climate change on groundwater features should take the form of a simple qualitative assessment. Currently EA projections suggest annual groundwater recharge would remain the same but with altered seasonal timing. 	<p>information is required, as part of the supplementary GI to commence in Spring 2021.</p> <p>The impacts of climate change on groundwater flood risk is considered qualitatively.</p>		
Existing Flooding	Section 13.7 of Chapter 13 Road Drainage and the Water Environment of the ES	The FRA discusses the surface water flood history and notes the 'high impact' flooding incident of 2019 which closed the western bound carriageway in Blofield. As a 'high impact' local flood event, the LLFA would expect further comment regarding the cause, impacts and remedial works within the body of the report. At present there are only limited remarks in the conclusion. A plan with the approximate location and extent of this specific flood would be considered appropriate for inclusion (either as a separate plan or on an existing plan). As some of the existing drainage systems are proposed to remain in use and unchanged, it would be appropriate to confirm whether the area of the flood is served by highway drainage that is proposed to remain unaltered. If these two areas overlap, it would be appropriate for the FRA to discuss whether the existing drainage system has	<p>The LLFA's comment relates to the draft FRA which was provided to the LLFA for comment. The FRA (Section 5.2, Appendix 13.1 (TR010040/APP/6.2) to the ES (TR010040/APP/6.1)) and Section 13.7 of Chapter 13 Road Drainage and the Water Environment of the ES (TR010040/APP/6.1) detail previous flood events in the locality of the Proposed Scheme and any associated with the A47 drainage network with reasons where known.</p> <p>Flooding of the carriageway was associated with the existing drainage network and largely as a result of blocked gullies. In 2019 heavy rainfall caused complete closure of 200m of the westbound carriageway located more than 1km from the Proposed Scheme. A location map in the FRA shows only</p>		

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		been reviewed to confirm its current design capacity is acceptable.	known highway drainage flooding within 1km of the DCO Boundary as per the defined study area. Existing carriageway flooding to the west and east of the Proposed Scheme is to be investigated by Highways England and, where appropriate, remedial works will be undertaken. Where the Proposed Scheme drainage replaces the existing drainage; this will be designed to current DMRB standards.		
Surface Water Flood Risk	The FRA (Appendix 13.1 (TR010040/APP/6.2) to the ES	<p>The FRA does not report on the matter of surface water being redirected along existing flow paths as indicated in the DSR. The LLFA would seek confirmation that the redirected flow does not increase the on-site and off-site flood risk.</p> <p>The further information the LLFA would seek is to address this concerns is;</p> <ul style="list-style-type: none"> • identification of the redirected flow path; • identification of the flow paths receiving the additional flow; • the anticipated additional amount of overland flow; and • the identification of off-site property likely to be impacted. 	The LLFA's comment relates to the draft FRA which was provided to the LLFA for comment. The FRA (Appendix 13.1 (TR010040/APP/6.2) to the ES (TR01004/APP/6.1)) has now been updated to incorporate a detailed assessment in line with the LLFA's requirements.		

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Pre-development runoff rates	Both the FRA (Appendix 13.1 (TR010040/APP/6.2)) and the DSR (Appendix 13.2 (TR010040/APP/6.2)) to the ES	There is currently no reporting or summary of the pre-development and post-development runoff rates and the associated attenuation volumes within the FRA.	The LLFA's comment relates to the draft FRA which was provided to the LLFA for comment. Both the FRA (Appendix 13.1 (TR010040/APP/6.2)) and the DSR (Appendix 13.2 (TR010040/APP/6.2)) to the ES (TR010040/APP/6.1)) have been revised to include details of the discharge or attenuation volumes to soakaway trenches and infiltration basin generated for the 1 in 10 year and 1 in 100-year storm event including climate change allowances. As infiltration based SuDS solutions are proposed, there is no requirement to attenuate to greenfield \ pre-development runoff rates. The infiltration rate determines the storage required and the soakaways are designed accordingly.		
Climate Change	The FRA (Appendix 13.1) (TR010040/APP/6.2) and the DSR (Appendix 13.2) (TR010040/APP/6.2) to the ES	In relation to the drainage design, the FRA confirms that during consultation with the LLFA, it was requested that "Drainage mitigation should provide sufficient attenuation for a 1 in 100-year event including an allowance for future climate change" At present, some elements of the current drainage design do not meet these standards.	The LLFA's comment relates to both the draft FRA and draft DSR which were provided to the LLFA for comment. The FRA (Appendix 13.1) (TR010040/APP/6.2) and the DSR (Appendix 13.2) (TR010040/APP/6.2) to the ES (TR010040/APP/6.1) have been updated to clarify the design standards in the reports which remain unchanged throughout the design process. The highway drainage has been designed to attenuate up to a 1 in 100-year storm event including a 20% climate change allowance. Hydraulic modelling has confirmed that water levels within the		

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			<p>soakaways do not exceed adjacent ground levels or the capacity of the infiltration basin for all events modelled, up to 1 in 100 year with 40% allowance for climate change.</p> <p>Existing surface water pathways for overland flows have been maintained or facilitated through interception using appropriately designed collection drains and cross-drains, also known as 'dry culverts'. 'Dry culverts' shall be designed to convey a 1-in-100-year flow including an additional 65% climate change allowance in order to maintain connectivity of surface water flooding pathways.</p> <p>Clean water soakaways shall be used to attenuate natural catchment runoff and have been designed to a 1 in 10-year storm event including a 20% climate change allowance. Hydraulic modelling of these soakaways has confirmed that they attenuate a significant proportion of the 1 in 100-year storm event including a 40% allowance for climate change. Therefore, due to this attenuation there is likely to be a reduction in downstream surface water flood risk compared to the existing situation. Where there is a risk that the Proposed Scheme will increase surface flood risk to itself or to a downstream flood risk receptor then the clean water soakaways are sized to attenuate a volume up to the 1 in 100-year event</p>		

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			including an allowance for climate change.		
Climate Change	The DSR (Appendix 13.2)	<p>The LLFA had stated the requirement for the surface water drainage to attenuate the 1% AEP (1 in 100 year) plus climate change event. This is supported by the DMRB document CG 501 – Design of Highway Drainage Systems, National Planning Policy Framework (NPPF) and the SuDS National Technical Standards. However, at present the drainage design does not meet this standard. The drainage strategy has stated it would only design the highway drainage systems up to a 2% AEP (1 in 50 year) storm. There is no mention of designing for the 1% AEP (1 in 100-year) plus climate change storm, rather than the 1% AEP storm with climate change allowance would be used to assess the risk.</p> <p>The infiltration basin and the soakaways are stated as being design to a 10% AEP (1 in 10 year) storm with 20% climate change. The DSR states that a “check for flooding in a 1 in 100-year storm with 40% allowance for climate change” would be performed rather than designing for the 1% AEP storm with climate change.</p> <p>The LLFA have been clear in previous correspondence (which are appended to the DSR) and in their policy guidance document</p>	<p>The LLFA’s comment relates to the draft DSR which was provided to the LLFA for comment.</p> <p>The DSR (Appendix 13.2 (TR010040/APP/6.2) to the ES (TR010040/APP/6.1)) has been updated to clarify the design standards for the Proposed Scheme which have remained unchanged. The highway drainage has been designed to attenuate up to a 1 in 100-year storm event including a 20% climate change allowance. Hydraulic modelling has confirmed that water levels within the soakaways do not exceed adjacent ground levels or the capacity of the infiltration basin for all events modelled, up to 1 in 100 year with 40% allowance for climate change.</p> <p>Existing surface water pathways for overland flows have been maintained or facilitated through interception using appropriately designed collection drains and cross-drains, also known as ‘dry culverts’. ‘Dry culverts’ shall be designed to convey a 1-in-100-year flow including an additional 65% climate change allowance in order to maintain</p>		

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		<p>(Norfolk LLFA Statutory Consultee Guidance Document) that they will seek the nationally accepted standard that restricts the surface water runoff from a greenfield site to the greenfield runoff. In addition, the correspondence appended to the DSR clear states "Any drainage mitigation for the should attenuate the post development runoff rate and volume to the equivalent pre development greenfield rate and volume up to the 1 in 100 plus climate change allowance."</p>	<p>connectivity of surface water flooding pathways.</p> <p>Clean water soakaways shall be used to attenuate natural catchment runoff where the natural catchment runoff needs to be diffused at the downstream side of the road due to the collection system on the upstream side and the pipe crossing locally channelling natural catchment flows across the Proposed Scheme. The clean water soakaways will serve to dissipate any increase in velocity in these flows on the downstream side of the road. They have been designed to a 1 in 10-year storm event including a 20% climate change allowance. Hydraulic modelling of these soakaways has confirmed that they attenuate a significant proportion of the 1 in 100-year storm event including a 40% allowance for climate change. Therefore, due to this attenuation there is likely to be a reduction in downstream surface water flood risk compared to the existing situation where surface water flows from the natural catchment flow freely overground. Where there is a risk that the Proposed Scheme will increase surface flood risk to itself or to a downstream flood risk receptor then the clean water soakaways are sized to attenuate a volume up to the 1 in 100-year event including an allowance for climate change. Subsequently, the FRA</p>		

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			(Appendix 13.2 (TR01004/APP/6.2) to the ES (TR010040/APP/6.1) has been revised with an updated summary.		
Existing Drainage	N/A	The LLFA would welcome that the existing drainage schemes are upgraded to the same standard as the Proposed Scheme where possible.	It is anticipated that the existing drainage along approximately 400m of the existing A47, which incorporates the North Burlingham access, will be upgraded and brought into the new section of the drainage system provided by the Proposed Scheme. These discharges would be attenuated utilising the new infiltration systems. Any other part of the existing drainage is outside the scope of the works.		

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Overland flow pathways	<p>Preliminary Environmental Information Report (PEIR)</p> <p>Section 8.2 of the FRA (Appendix 13.1) (TR010040/APP/6.2) and Sections 8 and 9 of the DSR (Appendix 13.2) (TR010040/APP/6.2)</p>	<p>Flooding - LLFA state that it is unclear if section 2.4.17 of the PEIR is suggesting that greenfield runoff as well as informal drainage and overland flow routes (from the EA Risk of Surface Water flood map) will be considered, diverted or remain on a natural pathway. Clarification on what will be diverted and what will remain on a natural pathway would be welcome.</p>	<p>Surface water pathways as shown on the EA Risk of Surface Water Flood Map will be maintained along existing routes as far as possible where these cross the Proposed Scheme. Additional mapping indicating more detail on existing surface water pathways provided by NCC aligns with the overland flow drainage design provided for the Proposed Scheme, with only slight diversions of the existing pathways required to collect these flows and align with the road crossings provided for overland flow drainage.</p> <p>More details are provided within: Section 8.2 of the FRA (Appendix 13.1) (TR010040/APP/6.2) and Sections 8 and 9 of the DSR (Appendix 13.2) (TR010040/APP/6.2) of Surface water pathways as shown on the EA Risk of Surface Water Flood Map will be maintained along existing routes as far as possible where these cross the Proposed Scheme. Additional mapping indicating more detail on existing surface water pathways provided by NCC aligns with the overland flow drainage design provided for the Proposed Scheme, with only slight diversions of the existing pathways required to collect these flows and align with the road crossings provided for overland flow drainage. More details are provided within: Section 8.2 of the FRA (Appendix 13.1) (TR010040/APP/6.2) and Sections 8 and</p>		

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			9 of the DSR (Appendix 13.2) (TR010040/APP/6.2) of Chapter 13 Road Drainage and Water Environment of the ES (TR010040/APP/6.1); and on the Drainage and Surface Water Plans (TR010040/APP/2.7).		
Treatment of highway drainage	Section 13.8 – 13.10 of the ES Chapter 13 Road Drainage and Water Environment (TR010040/APP/6.1).	Flooding - LLFA request that a robust water quality assessment of road runoff is provided, and that the SuDS Manual (2015) is consulted and followed for the worst-case pollution hazard anticipated. LLFA highlight that proprietary systems such as oil interceptors are not considered to be a SuDS treatment step and would request that any sole reliance on these prior to discharge without any SuDS water quality treatment components be supported by appropriate bespoke water quality assessments and permits which might be required from the EA.	<p>All appropriate water quality considerations (including potential impacts and risk assessment) are detailed in Section 13.8 – 13.10 of the ES Chapter 13 Road Drainage and Water Environment (TR010040/APP/6.1). The approach to the assessment follows that set out in the Scoping Report (February 2018) and subsequent Scoping Opinion (March 2018) for the Proposed Scheme, in combination with the most up to date guidance in the DMRB, Volume 11, Section 3, LA 113 Road Drainage and the Water Environment.</p> <p>The EA and the LLFA have been consulted and have commented on a draft a version of the DSR. Their comments have been incorporated into the revised DSR.</p>		

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Existing Flooding	Section 3.2 of the DSR (Appendix 13.2 to ES Chapter 13 Road Drainage and the Water Environment) (TR010040/APP/6.2)).	Flooding - Flooding on the existing A47 at the location of where the EA Risk of Surface Water Flood Map crosses the road should be reviewed and improvements made where possible.	<p>The EA's Risk of Flooding from Surface Water map (EA, 2020) as well as information from previous flooding events has been reviewed, and surface water flooding pathways have been accommodated in the design of the Proposed Scheme by the use of cross drains or 'dry culverts' designed for a 100 year event with an allowance for climate change. This will improve conveyance of the existing overland flood low pathways where they cross the existing A47 east of Blofield. Further details can be found in the DSR (Appendix 13.2 to ES Chapter 13 Road Drainage and the Water Environment) (TR010040/APP/6.2)).</p> <p>Chapter 13 (TR010040/APP/6.1) states that the existing surface water pathways for overland flows have been maintained or facilitated through interception using appropriately designed collection drains and cross-drains, also known as 'dry culverts'. Where it was not possible to connect directly with existing surface water pathways, infiltration via clean water soakaways have been proposed, which have been designed to accommodate 1 in 100 year event with an allowance for climate change where there is a risk of flooding to nearby properties.</p>		

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Various matters - Consultation Response on draft DSR (P01)	Chapter 13 Road Drainage and the Water Environment) (TR010040/APP/6.2)).	<p>Response received on DSR (P01) by the NCC on 6 August 2020:</p> <p>CG501 is quoted and confirmation is requested for compliance with the design for the 1% AEP plus climate change for highway drainage systems and attenuation of surface water runoff. Half drain times for infiltration features to be provided on drawings.</p> <p>An appropriate distance to be provided between infiltration features and from properties. Clarification to be provided on the siting of these features. Design information to be provided for the driveable swales to demonstrate safety for use, the maximum depth of water conveyed and an environment assessment. Clarity to be provided on if vortex interceptors and dedicated spillage containment tanks to be included in the drainage design.</p> <p>Clarity to be provided on how footpaths present constraints to the drainage design. LLFA are interested in whether an assessment on water quality for increased traffic had been undertaken for existing drainage areas.</p> <p>The LLFA have requested that the interaction between surface water flow paths, any redirected flow paths and road drainage is marked up on the drawings in the DSR and identification of any impacts.</p> <p>The LLFA also requested the following:</p> <ul style="list-style-type: none"> Clarity required on whether a consultation was held with off-site property owners. 	<p>Highways England agreed to revise the DSR in light of the LLFA's response.</p> <p>The response to the LLFA's comments were provided to the LLFA and discussed in a meeting on 24 September 2020 before the DSR was updated.</p> <p>It was confirmed that the highway drainage and attenuation was designed for 1% AEP plus climate change. Half drain times were provided on tables on the drawings in the updated DSR.</p> <p>Clarification provided on the siting of soakaway features - aimed at keeping as flat as possible in the topography to maximise storage. Soakaway features separated by 10 m in the revised DSR drawings and a note added re further micro siting to establish appropriate separation distances at detailed design stage.</p> <p>Further information on driveable swales was included in the DSR, issued to NCC on 03.12.2020. It was confirmed that vortex interceptors and dedicated spillage containment would not be included in the design and the appropriate spillage assessment has been undertaken.</p> <p>It was confirmed that where footpaths were included in the design, the road run-off would have to be drained into kerb</p>		

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		<ul style="list-style-type: none"> • Clarity on any required remedial works for existing drainage systems. • The LLFA requested the timeline for any further infiltration testing and that this be carried out in accordance with BRE Digest 365. • Clarifications required on the future responsibility for drainage design elements. • Information required on construction phase drainage works and temporary measures. 	<p>and gully systems instead of filter drains.</p> <p>The traffic assessment on existing sections of road which would retain existing drainage outfalls concluded that there would be less traffic on these roads (which will become local access roads) compared to the existing A47.</p> <p>The drawings now show the surface water paths and the interceptor ditches and cross-drains where these collect overland flow and it can be seen that there is no significant redirection of flows as these are conveyed across the new carriageway.</p> <p>Incidences for existing / historic flooding were requested from the local authorities and specific responses regarding localised flooding to landowners were obtained during public consultation. Clarity was provided on remedial works. Highways England are investigating the known flooding hotspots on the existing A47 to the east and west of the Proposed Scheme, including the October 2019 flooding event, and will review options to remediate the risk of flooding to the existing A47 carriageway. However, these works will be undertaken separately from the Proposed Scheme.</p> <p>The timeline given for further infiltration testing was Q1 2021 and this is ongoing currently.</p>		

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			<p>Information was provided in the DSR on future responsibility for drainage elements in so far as the scope of the DSR allowed. HE and the NCC to finalise agreements on this.</p> <p>Advice on construction phasing will be included at detailed design when a phasing plan will be made available from the Contractor. Temporary measures have been included in Chapter 13 of the ES.</p>		
Attenuation of embankment drainage	Chapter 13 Road Drainage and the Water Environment) (TR010040/APP/6.2)).	<p>The NCC requested embankment runoff should be attenuated. This had been discussed at the meeting of 24.09.2020.</p> <p>Following subsequent correspondence NCC responded on 30.10.20 to state</p> <p>"On this occasion due to the advanced stage of the design, the impending DCO submission and the limited amount of embankment surface water runoff, the LLFA will not pursue the inclusion of surface water toe drains at the base of the embankments within the Proposed Scheme. However, the LLFA does reiterate our stance and expectation that in the future, all developments (including road improvement schemes) will need to manage the surface water runoff from geotechnical structures. These structures have altered the existing ground conditions through</p>	<p>The DMRB CG501 Rev 2, paragraph 2.1, 4) requires management of embankment runoff only and not attenuation. To confirm, the drainage design includes toes drains at the base of embankments. To satisfy the request from NCC, the design was examined retrospectively. The Proposed Scheme does not have very large embankments, being overall quite a flat scheme. It was agreed that to retrospectively build in the attenuation of short sections of embankment in this late stage of the development of the design would be onerous and impact on the outfall levels for the road drainage.</p> <p>The larger embankments are proximate to the infiltration basin and as such will</p>		

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		their construction process (such as compaction) and their geometry (such as slopes gradients and the local topography). Therefore, they are not able to drain in the same manner as before the land was developed. "	drain directly to the basin where they will be attenuated to a 1 in 100-year event with a 40% allowance for climate change. This had already been considered in the design and is shown as part of the relevant drainage catchment in the drainage drawings in Annex B of the updated DSR (P02).		
Outstanding queries on revised FRA and revised DSR	N/A	The LLFA acknowledged that many of the recommendations and requirements in their previous pre-application responses were taken on board. Further queries raised in letter dated 22/12/20.	At meeting on 18.03.2021 agreed to provide additional information. Where appropriate, this will be provided as a revision to the FRA and the DSR.	Outstanding - work in progress	
Details of construction phase surface water management approach and any temporary measures that would be in place.	N/A	Further information requested for the DSR and FRA.	At meeting on 18.03.2021 agreed to provide outline construction drainage plan.	Outstanding - work in progress	
Infiltration Basin drain down times	Chapter 13 Road Drainage and the Water Environment) (TR010040/APP/6.2)).	LLFA queried the half drain down time of 40 hours for the infiltration basin which is greater than the CD 530 requirement of 24 hours. The freeboard or other justification was requested.	The infiltration basin is required to empty in 72 hours in accordance with CD 532 and there is a freeboard of 1.3m above the 1 in 100 year + 40% Climate Change water level.		

3.3 SoCG: Relevant Representation response of 31/03/2021

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
General		<p>However, whilst the proposals include a grade-separated junction at the B1140, which is welcomed due to the casualty record at this junction and its role in serving HGV movements to Cantley, the proposals include only a limited-movement junction at Blofield.</p> <p>Norfolk County Council's principal concern with the scheme relates to the lack of provision proposed for non-motorised users wishing to cross the A47 in the middle of the proposal, in the vicinity of North Burlingham. The A47 has historically been a barrier to connectivity between the two settlements of Burlingham and Lingwood, in an area where permissive paths and the Public Rights of Way network are all popular. The county council has consistently pressed the applicant, Highways England, to provide a connection and considers that a suitable facility, in the form of an overbridge, should form part of the scheme proposals. More detail is provided later in our representation.</p> <p>The principle of dualling the A47 is fully supported. This has been a longstanding objective of the county council. The county council leads the A47 Alliance, which has been campaigning for full dualling of the A47 from Lowestoft to the A1 at Peterborough with appropriate</p>			

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		grade-separation. The current proposals largely meet this aspiration, providing a dual-carriageway standard A47.			
De-trunking		<p>No agreement has been made to accept any current Highways England assets and we will not do so until an agreement process including exchange of data and provision of funding regarding assets which may require attention in the short to medium term has been completed.</p> <p>The agreement should be based on the condition and number of the assets to generate either a sum of funding to be transferred to Norfolk County Council, or the asset brought up to an as new or good condition. The county council would expect to receive a commuted sum, agreed with Highways England, for future maintenance of transferred assets.</p>			
De-trunking		The county council is in agreement that the B1140 remains as a B class road, with the majority of other roads classed as C roads. We would, however, suggest two of the small cul de sac sections being U class rather than C class roads; these are located south of the new A47 where they realign for the over bridge and the access to the lagoon near Blofield.			
De-trunking		In reference to the lagoon near Blofield, this will be the responsibility of Highways			

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		England. We have suggested the need to engage with Norfolk County Farms as the farms track is on their land, indicating a private farm track with a PROW for pedestrians could be a viable route forward.			
De-trunking		For slopes and verges, clear indication is required, with demarcation possibly necessary, to confirm ownership for ongoing maintenance requirements. Clear numbering / labelling of signs posts for instance at a junction would be beneficial to help facilitate who is responsible for assets in the future. Trees will be retained near the cycle path; clarity is needed whether it is proposed that these will be NCC, Highways England or private owner boundary trees.			
Highways Impacts		The Transport Assessment sets out projected changes to traffic patterns and therefore the likely impacts on local roads and communities. Based on this assessment, we are satisfied that the extent of the impacts does not warrant further mitigation beyond that which is being proposed.			
Highways Impacts – Cucumber Lane		At the A47 / Cucumber Lane junction at Brundall, Highways England have discussed taking forward a separate proposal, at a later date yet to be confirmed, encompassing traffic signals at this roundabout in order to accommodate peak-time traffic flows. We			

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		do not consider that this provides sufficient commitment to mitigation that has been identified as being needed. In addition, the county council does not support the solution that has been mooted by Highways England (signalisation of the roundabout junction) as it will lead to delays on the trunk and local road network throughout the day. We would like to have assurance that an appropriate solution can be identified and agreed; about the timing of its delivery; and commitment to its funding. We consider that Highways England should commit to monitoring to ascertain whether, and at what point in time, a scheme at this junction is required.			
		The county council would also expect there to be minimum disruption on the local highway network during the A47 dualling construction period and would want to work with Highways England, or its contractors, on managing traffic during the works.			
Socio Economic Issues		The county council would certainly want to see opportunities for inclusive growth and social mobility included in the socio-economic opportunities for Norfolk. We would be willing to work with Highways England or the appropriate agency to support this			
Socio Economic Issues		The county council will continue to work proactively with Highways England to			

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		encourage apprenticeships, work experience and internships being included at an appropriate stage in the project.			
Socio Economic Issues		Productivity and other wider economic benefits will arise from the completed schemes. These include journey time savings and reliability improvements, benefitting businesses. These are to be welcomed.			
Air Quality		The county council supports improvements to air quality and would want to see continued monitoring including in operation of the scheme following construction.			
Archaeology		A significant amount of archaeological investigations has already been undertaken in association with the scheme. Geophysical surveys and archaeological trial trenching have been carried out within almost all of the 'redline' area of the proposed scheme.			
Archaeology		Following a review of reports on the geophysical survey and trial trenching the county council agreed an outline scope for post-consent archaeological mitigation with Highways England's archaeological consultant at the end of November last year.			
Archaeology		We welcome any opportunities for enhancement of cultural heritage in the North Burlingham area as set out on			

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		page six of the Environmental Statement: Non-Technical Summary			
Arboriculture	At the time of writing, this topic is included within one of the documents that is inaccessible and marked 'confidential' and the response has been prepared in the absence of sight of this report.				
Arboriculture		It is expected that all trees that require removal due to the impact of the scheme have been identified in this document and appropriate tree protection plans and method statements produced to safeguard trees that are suitable for retention. Considerations to elements such as lighting, sight lines (to junctions, signage and cameras etc), under and over ground utility installation, construction compounds and drainage will be appropriately considered at this stage. It is expected that this document will highlight how the scheme has			

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		identified and retained high quality trees where appropriate and that all of the arboricultural impacts feed into the landscaping scheme to clearly demonstrate net gain is achieved			
Arboriculture		The arboricultural assessments and recommendations outlined above should be in accordance with British Standard 5837 2012: Trees in relation to design, demolition and construction.			
Landscape		<p>From the information that is currently available, overall, the methodology is sound and uses appropriate guidance to inform the process. The identification of receptors and their sensitivities appears appropriate.</p> <p>Paragraph 7.9.7 (of Chapter 7 of the Environmental Statement: Landscape and Visual Effects) details the proposed mitigation during construction, this appears appropriate, although officers have been unable to identify any mapping where bunds and storage mounds are shown.</p> <p>Paragraph 7.9.8 details mitigation during operation, and this is additionally shown on TR010040/APP/6.8. It would be beneficial to have further details of the proposed planting included, such as species mix, seed mix etc...</p> <p>Paragraph 7.10.4 onwards details vegetation removal, but more detail is assumed to be in the arboriculture</p>			

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		survey, which is currently unavailable. The council would want to see this demonstrated graphically so that the overall impacts can be seen. The effects on receptors during construction appears to have been considered sufficiently, and the identification that for many of these the effects will be moderately and largely adverse is noted. We also broadly agree with the conclusions drawn regarding effects during operation, the effects would be much more adverse immediately following completion, and for some time afterwards, but would decrease to negligible when planting matures (demonstrated from a fifteen-year perspective).			
Landscape		The impacts of lighting both from introduced lighting, and those of elevated headlights are concerning, and would largely still be noticeable for many years into the operation of the road. The impact on overall light pollution and an increase in the lighting of the sky should also be considered. Whilst not a particularly noted area of dark sky, this scheme has the potential to increase the overall areas light pollution considerably.			
Landscape		There is potential for development of the Community Woodland as part of the wider landscaping scheme to not only offer benefits to the landscape from a biodiversity perspective, but also from a health and wellbeing perspective offering			

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		local access to green space where the shortened route to Burlingham Woods has been severed.			
Biodiversity		<p>As stated in the council's previous response to the Section 42 consultation (September 2018), we would wish to see the original reports before we are able to say if we agree or disagree with the assessments made.</p> <p>At this stage, we broadly agree with the scope of the ecology work but we are not able to make comment on the appropriateness of the survey data, or the assessments of impacts.</p> <p>There are some key concerns regarding the limitations of some of the protected species surveys, and the intention to 'complete surveys prior to construction.'</p> <p>The Environmental Statement Non-Technical Summary states that "It was not possible to complete surveys due to COVID-19 restrictions during the survey window. These will be completed prior to construction."</p> <p>The extant government circular on planning and biodiversity (Circular 06/2005) makes it explicit that "the presence or absence of protected species, and the extent to which they could be affected by a proposed development, should be established before planning permission is granted, since otherwise all material considerations</p>			

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		<p>might not have been considered in making the decision."</p> <p>Paragraph 116 of the same circular also states: "When dealing with cases where a European Protected Species may be affected, a planning authority has a statutory duty under Regulation 3(4) to have regard to the requirements of the Habitats Directive in the exercises of its functions.</p> <p>Further the Directive's provisions are clearly relevant in reaching planning decisions, and these should be made in a manner which takes them fully into account ...".</p>			
Bats		<p>We have recently downloaded the bats information from the PINS website which was previously marked confidential and will review this and provide comments regarding the level of assessment that has taken place for bats, in particular for barbastelle bats. The risk to bats is significant due to the presence of barbastelle bats, which are protected under the Conservation of Habitats and Species Regulations 2017 and nationally important. The Bat Conservation Trust (BCT) www.bats.org.uk, has evidenced the Core Sustenance Zone (CSZ) for barbastelle bats to be 6km in radius. However, from the information seen in the Environmental Statement, barbastelle bats have only been considered at a 2km radius, based on results of the Norfolk Biodiversity</p>			

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		Information Service Data Search and subsequent surveys. No reference to CSZs was found in the relevant sections; Chapter 8 Biodiversity or Chapter 6.4 Environmental Statement Non Technical Summary. A (CSZ) refers to the area surrounding a communal bat roost within which habitat availability and quality will have a significant influence on the resilience and conservation status of the colony using the roost. The scheme might not therefore provide adequate assessment on the level of bat use in the area. Other issues such as Lighting Schemes, mitigation for reptiles, amphibians, mammals, birds will be commented on once the relevant reports are available			
Lingwood Community Woodland		<p>Lingwood Community Woodland is on land owned by Norfolk County Council / County Farm Estate. It would be expected that the Norfolk County Council Environmental Policy 2019 be considered. Four key aims of the Environmental Policy are:</p> <ul style="list-style-type: none"> • Recovering nature and enhancing the beauty of landscapes • Connecting people with the environment to improve health and wellbeing • Using and managing land sustainably • Increasing resource efficiency and reducing pollution and waste. 			

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		Detail of the planting plan could not be found. We would expect to see a design for the layout and species mix of the replacement and additional woodland planting. The replacement and additional woodland should consider the need for rides (linear trackways designed for access) for walking and access for management and open glades			
Geology and Soils		No comments in respect of this particular topic in the submission.			
Material Assets & Waste		<p>The Mineral Planning Authority (MPA) welcomes the inclusion of a Mineral Impact Assessment as part of the proposed scheme. The MPA agrees with the summary of mineral resources within the scheme and the constraints which are outlined in paragraph 10.4.6 (of the Mineral Impact Assessment). The MPA also agrees with the assessment of reuse suitability of site-won materials as outlined paragraphs 10.6.5-10.6.7.</p> <p>The MPA notes that an estimate of 22,400m³ of site won material is likely to be extracted during the construction phase, in paragraph 10.6.8.</p> <p>The MPA recognises that this an estimate and that a full assessment of the reuse potential of material will be required as it is excavated. Paragraph 10.6.9 states that the scheme has a significant earthworks material deficit, and therefore any opportunity to reuse the excavated material will be taken.</p>			

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		<p>In conclusion, the MPA considers that the Mineral Impact Assessment appropriately assesses the safeguarded mineral resources for the proposed scheme and contains an appropriate strategy for identifying suitable material for reuse in the construction phases of the scheme.</p> <p>Norfolk County Council, in its capacity as the Mineral Planning Authority, considers that if the scheme is required to follow the strategy outlined in the Mineral Impact Assessment this will effectively address mineral safeguarding issues relating to resource sterilisation</p>			
Noise and Vibration		<p>The county council would expect disruption to be kept to a minimum during the A47 dualling construction period and would want to work with Highways England, or its contractors, on managing traffic during the works.</p>			
Population and Human Health		<ul style="list-style-type: none"> • Additional and new non-motorised travel, commuting and longer-distance recreation choices have been created with the cycle lane along the northern side and a footpath along the southern side of the new highway <p>Local, on-the-doorstep, short distance welfare recreation choices, however, will be further limited by the current alignment:</p> <ul style="list-style-type: none"> o Burlingham Footpath 3 (FP3) is to be severed and no crossing point provided: o North/south non-motorised user (NMU) 			

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		<p>movement is already restricted by the A47, but the dual carriageway will be a complete barrier (there is no crossing provision)</p> <ul style="list-style-type: none"> o The proposal doesn't discourage use of cars to access local points of interest and recreation • The concerns the county council raised previously, in discussion with Highways England and the Section 42 consultation, have not been addressed. • Whilst NMUs will be able to travel north-south via the new cycle and footpaths, at the road junctions either end of the scheme, this is a significant east-west increase in distance alongside a busy dual carriageway and so only suited to some recreation (eg running/cycling) choices while limiting others (dog-walking, welfare walking/cycling) • Linkages between the Parishes of Lingwood and Burlingham would effectively be severed. 			
		<p>To address these concerns, the council feels that it is imperative that in addition to all the NMu provision proposed:</p> <ul style="list-style-type: none"> • A bridge should be installed on the alignment of FP3 to enable NMu north south movement across the A47 keeping local connectivity and continuity. This should be a green bridge to add to the ecological mitigation measures necessary for this scheme and further 			

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		<p>enhance tangible well-being measures</p> <ul style="list-style-type: none"> • The new footpath proposed along the southern boundary of the new highway should be of a higher status than footpath, ie a multi-user path so that it links with the proposals for the north side provision, again enabling NMU connectivity and continuity and so further widening choice and opportunity. It seems at odds to segregate and limit usage when the infrastructure is already going in • All new cycle and footpath provision must tie in with footways and safe crossing points at all junctions to ensure NMU traffic does not meet 'dead ends' or have to utilise the highway at busy junctions or slip roads 			
Population and Human Health Funding of bridge		<p>As set out in the Walking, Cycling and Horse riding Review, Highways England is suggesting that the cost of this provision could be met locally from CIL. However, as the crossing is considered to be directly related to the dual carriageway scheme, the council would expect Highways England to deliver it. There is an agreed, clear and concise process within Greater Norwich for CIL allocation and this would need to be followed should CIL be sought for this scheme. However, Greater Norwich has receipted circa £26m CIL in total since 2014, most of which is already allocated, and the first £4m in each forthcoming year is already pre committed (£2m NDR</p>			

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		and £2m education). It is very unlikely therefore that there would be sufficient CIL available to fund a bridge, and funding for it would need to compete with other projects including Long Stratton Bypass, East Norwich and projects in the North East Growth Triangle. As a point of detail, the GNIP reports infrastructure delivery, but there are no funding commitments within it. The five-year Infrastructure Investment Plan is where CIL commitments are made			
		The A47 has historically been a barrier in public access separating the two settlements of Burlingham and Lingwood. Burlingham Woods, north of the A47, associated permissive paths and the Public Rights of Way network are all popular with pedestrians and dog walkers. The surveys conducted by Highways England (in advance of the Section 42 consultation and in recognition of the concerns of the county council) support this, with 90 users having walked along Burlingham FP1 one Sunday. Other days in the Highways England survey showed consistently high use. However, it was noted that very few users, and on most days no-one, would choose to cross the A47. Usage (according to the Highways England PEIR Report) of the Public Rights of Way network south of the A47 was recorded as low. Two close settlements having such a huge contrast in usage indicates			

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		that the A47 is likely to be acting as a substantial barrier to walkers.			
		<p>The A47 Dualling Scheme has the opportunity to change this and with the right improvements can significantly enhance the Rights of Way network in this area.</p> <p>Whilst a footway has been proposed along with access across both road junctions, which in theory provide north south connections, the proposal (comprising a footway running parallel to the road) is not considered to be perceived as safe and attractive for families and dog walkers. This scheme could offer significant benefit for users if, wherever possible, a multi-user path was provided set back from the road rather than alongside the road. Some screening could also be used to further enhance the route, this would be more attractive for families with pushchairs, cyclists and dog walkers who are all looking to access the woods to the north.</p> <p>The most important improvement Highways England have the opportunity to make is installing a footbridge across the A47 connecting Burlingham FP1 and FP3 (these footpaths run north-south at the eastern end of the settlement of Burlingham; on either side of the A47) and ultimately providing a safe off-road link connecting the parish of Burlingham but furthermore offering links to South Walsham in the north and Strumpshaw in</p>			

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		<p>the south.</p> <p>The alternative (to a new crossing of the A47 at Burlingham) is walking considerably further to gain access at the proposed road bridges (west and east of Burlingham, both some 1500m from FP1 and FP3). This route will not be considered safe or appealing to families, cyclists or dog walkers. In summary, a new bridge would provide a much-needed missing link in the network, will offer a safe route for all users, and ultimately connects rural paths bringing two communities together</p>			
		<p>Related to the above, previous funding bids were submitted to Highways England to create a Burlingham-Lingwood walking and cycling link. This aims to create a walking and cycling bridge across the A47 south of Burlingham Woods to provide connection between Lingwood, Lingwood Station and the Burlingham estate trails network to the south and Burlingham Woodlands and businesses to the north of the A47.</p> <p>Burlingham Woods forms part of Norfolk County Council's Trails network and provides important connections between local settlements and a number of amenity spaces in this part of Norfolk. The scale of planned housing growth in east Broadland has led to a new focus on enhancing and expanding the core of Burlingham Woods at the heart of the</p>			

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		<p>Burlingham estate, to provide new green open space, connections and facilities for the wider population.</p> <p>This connection could encourage greater use of Burlingham Woods, the woods and estate green space is considered key in relieving pressure on the most sensitive designated Broads sits in the vicinity. It would also encourage residents south of the A47 in Lingwood and surrounding areas to use the Burlingham Woods trail to the north.</p> <p>The proposal is complementary to a wider ongoing project by Norfolk County Council, Broadland District Council and the University of East Anglia to expand the area and offering at Burlingham Woods.</p>			
Road Drainage and the Water Environment		<p>The Lead Local Flood Authority (LLFA) team has been in contact with Highways England's project design team providing initial reviews of the flood risk assessment and drainage strategy. The drainage strategy has been developed in accordance with the Design Manual for roads and Bridges (DMRB) guidance, as have those for the other A47 schemes in Norfolk. The design guidance provided by DMRB is derived from a variety of planning policies, regulations, legislation and directives applicable in England, some of which have been updated. DMRB LA113 in section 2.13 and section 4.3 in DMRB CG 501 state all schemes designs shall include the latest climate</p>			

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		<p>change allowances in accordance with relevant national legislation requirements. The climate change allowances applied within the proposed drainage strategy have been superseded. The most recent guidance was updated in July 2020, although the updating of the peak rainfall allowances occurred previously in December 2019. The LLFA considers that the presence of the road structures footprint would be expected to last into the 2080s epoch (2070 to 2115) within the climate change guidance. This means the DMRB CG 501 advice in relation to the application of climate change is no longer in line with the current DMRB guidance. This has been addressed in the other schemes although it has not been raised as a point until now on this scheme.</p> <p>The proposed drainage design should apply the latest climate change allowances and would lead to the application of a 40% allowance to the drainage design rather than the 20% currently reported. As the scheme has tested the drainage design with the 40% climate change allowance, we are aware there is capacity available within the attenuation features for this allowance.</p>			
		<p>Norfolk County Council adopted its Environmental Policy at the end of 2019. This included a commitment to move towards carbon neutrality across all sectors by 2030.</p>			

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
		<p>Emissions from the trunk road network would be included within this. In order to help meet the commitment in its environmental policies the council would want Highways England to commit to undertaking work across the trunk road network to understand in more detail the carbon emissions arising from use of this network and how these might be mitigated.</p> <p>The county council would want to work closely with Highways England to identify measures to reduce carbon emissions on the trunk road network, eg by installation of Electric Vehicle charging points to encourage electric vehicles, and understand how these will be brought forward, their impact on emissions reduction and how they dovetail with measures that local partners are taking on the local transport network and across other sectors.</p>			
Public Health		<p>The county council makes the following general comments in respect of its role as having public health responsibilities:</p> <ul style="list-style-type: none"> • Welcome reductions in driver stress for both general well-being and accident reduction potential • Easier and safer access across the A47 for pedestrian, cycling and equine modes of transport would be welcomed. <p>The council would want to ensure where possible that severed access for these non-motorised users where existing routes are cut off is still easy to reach</p>			

Issue	Document Reference (if relevant)	Norfolk County Council Comment	Highways England Response	Status	Date
		<p>and does not make physical activity and access to existing paths and networks more difficult• Severing of existing routes should as far as possible not result in increased traffic through villages and residential areas</p> <ul style="list-style-type: none"> • Residents currently or likely to be affected by noise, vibration and potential increased pollution are screened for impact and potential mitigating action • Highways England should give consideration to the possible impacts on agricultural and allotment lands through increased NOx and associated ozone generation. 			
Discharge of Requirements		<p>There are ongoing discussions with the applicant and the District Councils affected by this scheme as to how best the discharge of requirements should be undertaken. One option might be that there is a single “lead” Authority discharging the requirements. An alternative option would be that each local authority discharge those requirements within their respective area / statutory remit. It is understood that the applicant is prepared to fund the above “discharging” work given the significant resource implication.</p>			

APPENDICES



via e-mail
FAO: Nikki Rowley-Todd
Highways England – Project Manager

NCC contact number: [REDACTED]
Textphone: [REDACTED]

Your Ref: A47 Blofield
Date: 16/09/2020

My Ref: FW/2020 0688
Tel No.: [REDACTED]
Email: [REDACTED]@norfolk.gov.uk

Dear Mrs Rowley-Todd,

The Dualling of the A47 Blofield to North Burlingham and Associated Junction Improvement Works – Consultation Response to the Scheme Update

Thank you for your letter dated 9th September 2020 requesting consultation feedback on the scheme update. We have had a look through this letter and the attached document. We have also been indirect consultation with the Highways England design team at SWECO who have approached us on a number of occasions to discuss the design since 2018. A summary of the recent correspondence relating to this scheme in 2020 is given in the table below.

Date	LLFA Letter Ref	Content
17/08/2020	FW2020_0514	Initial review of the Drainage Strategy
04/08/2020	FW2020_0560	Initial review of the Flood Risk Assessment
16/08/2020	FW2020_0688	Consultation response to the scheme update
15/9/2020	FW2020_0695	Provision of pre-application flood risk information for two points within the scheme area.
16/9/2020	FW2020_0703	Consultation response

Flood Risk Assessment Comments

Within the Flood Risk Assessment (FRA), the LLFA guidance is not mentioned, even though the current Environment Agency guidance on the preparation of FRA clearly states that plans for managing surface water should be in line with guidance from the Lead Local Flood Authority and sustainable drainage principles.

The FRA discusses the surface water flood history and notes the 'high impact' flooding incident of 2019 which closed the western bound carriageway in Blofield. As a 'high impact' local flood event, the LLFA would expect further comment regarding the cause, impacts and remedial works within the body of the report. At present there are only limited remarks in the conclusion. A plan with the approximate location and extent of this specific flood would be considered appropriate for inclusion (either as a separate plan or on an existing plan). As some of the existing drainage systems are proposed to remain in use and unchanged, it would be appropriate to confirm whether the area of the flood is served by highway drainage that is proposed to remain unaltered. If these two areas overlap, it

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would be appropriate for the FRA to discuss whether the existing drainage system has been reviewed to confirm its current design capacity is acceptable.

The groundwater flood risk is considered throughout the FRA and is indicated to be at a considerable depth below the surface. Yet within the FRA, no evidence or indication of the groundwater level is given. We are aware that groundwater has had further assessment and consideration in the EIA, the Groundwater Assessment and the Technical Note on the Deep Drainage. It is reasonable to expect the FRA to contain a summary of the existing ground water conditions and an assessment of the associated flood risk at and surrounding the site.

The site crosses some surface water flow paths. Some reference to the surface water flow paths has been made in the FRA. However, there are no plans with clearly marked up areas that identify the flow paths in conjunction with the proposed road and drainage design. This would be beneficial for assessing the interaction of the scheme with the flow paths and should be prepared.

In addition, the FRA does not report on the matter of surface water being redirected along existing flow paths as indicated in the drainage strategy. The LLFA would seek confirmation that the redirected flow does not increase the on-site and off-site flood risk. The further information the LLFA would seek to address this concerns is;

- identification of the redirected flow path;
- identification of the flow paths receiving the additional flow;
- the anticipated additional amount of overland flow; and
- the identification of off-site property likely to be impacted.

There is currently no reporting or summary of the pre-development and post-development runoff rates and the associated attenuation volumes within the FRA.

The FRA does not currently include an assessment of suitable SuDS options. The FRA indicates that infiltration has been selected as a means of surface water disposal. The LLFA is aware from the drainage strategy that infiltration testing has been undertaken. However, there is no discussion of the infiltration testing or its results in the FRA. As the surface water flood risk management approach depends on infiltration to dispose of surface water, it would be appropriate for the FRA to report on these results.

Furthermore, there is no recorded consideration of the SuDS in terms of water quantity, water quality, amenity and biodiversity.

A summary of the Planning Inspectorate scoping opinion response in the FRA states that

"SuDS schemes should be designed to provide for habitat enhancement."

However, there is no indication in either the FRA or the Drainage Strategy that habitat or environmental enhancement opportunities have been either sought or considered in relation to SuDS selection and design. A summary of enhancement opportunities considered relating to SuDS be included in the FRA.

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In relation to the drainage design, the FRA confirms that during consultation with the LLFA, it was requested that

"Drainage mitigation should provide sufficient attenuation for a 1 in 100-year event including an allowance for future climate change"

At present, some elements of the current drainage design do not meet these standards.

The FRA has not provided any information about the management of surface water flood risk during the construction phase. The FRA should be revised to contain information about the construction phase surface water management and any temporary measures that would be in place.

The FRA has not included any consideration of the future maintenance and management provisions proposed for the surface water management features and structures. This should be clarified in the revised FRA report.

Drainage Strategy Comments

As previously discussed in the FRA section, the LLFA had stated the requirement for the surface water drainage to attenuate the 1% AEP (1 in 100 year) plus climate change event. This is supported by the DMRB document CG 501 – Design of Highway Drainage Systems, NPPF and the SuDS National Technical Standards.

However, at present the drainage design does not meet this standard. The drainage strategy has stated it would only design the highway drainage systems up to a 2% AEP (1 in 50 year) storm. There is no mention of designing for the 1% AEP (1 in 100 year) plus climate change storm, rather than the 1% AEP storm with climate change allowance would be used to assess the risk.

In addition, the infiltration basin and the soakaways are stated as being design to a 10% AEP (1 in 10 year) storm with 20% climate change. The drainage strategy states that a "check for flooding in a 1 in 100 year storm with 40% allowance for climate change" would be performed rather than designing for the 1% AEP storm with climate change.

The LLFA have been clear in previous correspondence (which are appended to the drainage strategy) and in their policy guidance document (*Norfolk LLFA Statutory Consultee Guidance Document*) that they will seek the nationally accepted standard that restricts the surface water runoff from a greenfield site to the greenfield runoff. In addition, the correspondence appended to the drainage strategy clear states

"Any drainage mitigation for the should attenuate the post development runoff rate and volume to the equivalent pre development greenfield rate and volume up to the 1 in 100 plus climate change allowance."

Therefore, a suitably sized attenuation for the additional runoff volume for the 1% AEP storm plus climate change will be sought by the LLFA.

The LLFA recommends the attenuation provided in the infiltration basin and soakaways proposed drainage design is reviewed and brought into accordance with these standards.

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Furthermore, the drawings provide the soakaways and infiltration basin size and the drainage strategy report discusses the infiltration testing. However, no half drain times are made available at present. In future drawing and report revisions, the half drain times are expected to be provided.

The drainage design reviewed with the drainage strategy indicated the soakaways were very close to the infiltration as shown in drawing HE551490-GTY-HDG-000-DR-CD-30002. One of the soakaways is drawn very close beside the infiltration basin and the LLFA is concerned the performance of the soakaway and the basin could be reduced due to their close proximity to each other. Furthermore, the reasoning supporting the position of some of the soakaways is not apparent. Some soakaways are located behind residential properties some distance away from the road, while other soakaways are positioned to the south and south east of the infiltration basin with a large amount of space between the features. Please clarify the use of space in relation to the positioning of the soakaways and whether the distances between the soakaways, the basin and the properties are appropriate? The LLFA will await the submission of appropriate supporting evidence.

The use of swales as vehicle access ways is unusual due to pollution control and user safety issues. At present the "drivable swale" features are identified on the plans included in the drainage strategy. However, no outline design information has been provided about these features, such as a typical cross section. Further information is required about the design of these dual-purpose features that demonstrates they are both safe to the environment and the site users. The LLFA requests the provision of information regarding the maximum depth of water expected and the supporting environment assessment for the drivable swale at each location.

Within the drainage strategy there is mention of constraints to the drainage design to the proposed footpaths. However, it is not clear from the drainage strategy what these constraints are. Clarification of what the constraints are and the options that have been discounted for managing the runoff from the footpaths are requested by the LLFA.

The drainage strategy has identified that some drainage areas would remain unchanged on the existing carriageway, although these are not identified specifically report. For the existing drainage areas that would remain unchanged, the LLFA is interested in the water quality management aspects of these systems. While the surface water runoff maybe unaltered as there is no change in the impermeable area, there is an increase an expected increase in future traffic. Therefore, an increase in the future pollution and contaminates in the surface water runoff is expected. The LLFA is seeking confirmation whether an assessment of the water quality on these retained drainage areas has been undertake and requests the results. Further information is requested should any additional water treatment measures be included.

It is noted that vortex interceptors and dedicated spillage containment tanks have been mentioned in the initial design summary and on occasion through the report. However, there is no confirmation as to whether these features will be included in the scheme's design. Please clarify whether these features will be included in the design or not.

Within the drainage strategy, there has been minimal mention about any required remedial works within existing unchanged systems. The LLFA seeks confirmation from Highways

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England of any potential remedial works are considered necessary and whether they will be undertaking them within the project area and this scheme.

The drainage strategy indicates there was no ground investigation was conducted to the north of the eastern tie-in. At present, the design is reliant on historical infiltration rates and there is an intent to undertake infiltration test at detailed design stage. The LLFA can confirm that infiltration testing would be required in this location in accordance with BRE365. Please can you confirm in the drainage strategy when this is likely to occur.

The future maintenance and management provisions are proposed at a high level in the drainage strategy. This responsibility is proposed to be split between Highways England and Norfolk County Council. However, a few of the structures need further clarification about who is anticipated to be responsible for them in the future, such as the drivable swales, the dry culverts and drainage from the allotments. Clarification within the drainage strategy will be sought by the LLFA.

In addition, the drainage strategy has not provided any information about the construction phase drainage works that would be installed or any information regarding the phasing of the construction works. Further information within the drainage strategy about the construction phase drainage works and any temporary measures that would be in place is requested.

Groundwater Assessment Comments

To date, no Groundwater Assessment has been provided for review. It is noted that the current drainage strategy specifically mentions that the drainage strategy should be read in conjunction with other documents including the groundwater assessment.

Should you or your design team have any further queries, please contact the LLFA directly.

Yours sincerely,

Sarah

Sarah Luff
Strategic Flood Risk Planning Officer

Lead Local Flood Authority

Disclaimer

We have relied on the accuracy and completeness of the information supplied to us in providing the above advice and can take no responsibility for incorrect data or interpretation, or omissions, in such information. If we have not referred to a particular issue in our response, it should not be assumed that there is no impact associated with that issue.