

The Planning Inspectorate
Temple Quay House
Bristol
BS1 6PN

Project ref: M25 junction 10/A3 Wisley
interchange improvement –
TR010030

Our ref: WA/2019/126852/02-L01
Your ref: 20023020

Date: 26 November 2019

Dear Sir/Madam,

Application by Highways England for an Order Granting Development Consent for the M25 Junction 10/A3 Wisley interchange improvement project

Please find enclosed our comments for 'deadline 1' submissions for the M25 Junction 10/A3 Wisley interchange improvement project Development Consent Order application.

The Role of the Environment Agency

The Environment Agency has a responsibility for protecting and improving the Environment as well as contributing to sustainable development.

Our work helps to support a greener economy through protecting and improving the natural environment for beneficial uses, working with business to reduce waste and save money, and helping to ensure that the UK economy is ready to cope with climate change. We will facilitate, as appropriate, the development of low carbon sources of energy ensuring people and the environment are properly protected.

We have three main roles:

We are an **environmental regulator** – we take a risk-based approach and target our effort to maintain and improve Environmental standards and to minimize unnecessary burdens on business. We issue a range of permits and consents.

We are an **environmental operator** – we are a national organization that operates locally. We work with people and communities across England to protect and improve the environment in an integrated way. We provide a vital incident response capability.

We are an **environmental advisor** – we compile and assess the best available evidence and use this to report on the state of the environment. We use our own monitoring information and that of others to inform this activity. We provide technical information and advice to national and local governments to support their roles in policy and decision-making.

One of specific functions is as a Flood Risk Management Authority. We have a general supervisory duty relating to specific flood risk management matters in respect of flood risk arising from Main Rivers or the sea.

Ongoing engagement with the applicant

Since we provided our relevant representation response to you on 6 September (reference: RR-011), we have provided the applicant with a full summary of Environment Agency comments, queries and issues raised by our review of the application documents. Following this, we held a meeting with the applicant's agents on 8 October to discuss the matters raised in our summary. Most recently, we have received the applicant's responses to our comments on 6 November.

Cont/d..

For completeness, we will ensure that this ongoing engagement is reflected in the updated Statement of Common Ground that we will prepare with the applicant for the submission deadline of 18 December.

We have included the latest version of our 'comments, queries and issues' log with this response. The current version (3.0) has been updated by the applicant, but has not been fully reviewed or agreed by us at this stage, although a provisional review largely suggests agreement on the main issues still 'under discussion'.

Please do not hesitate to contact me if you require any further information. We look forward to continuing to work with the applicant to resolve any ongoing matters contained within our written representation, and to ensure the best environmental outcome for this project.

Yours faithfully,

Clark Gordon
Planning Specialist
Environment Agency, Thames area

Att Appendix A – Written Representations on behalf of the Environment Agency
M25 J10 - EA comment, query & issue summary table (v.3.0)

Appendix A

Written Representations on behalf of the Environment Agency

1.0 Summary of outstanding issues

1.1 Since we sent our relevant representation response (RR-011) for this application on 6 September, we have engaged with the applicant to address the queries and issues that we had with the DCO application documents as submitted.

1.2 Our latest position is summarised in the document attached with this response (*M25 J10 - EA comment, query & issue summary table (v.3.0)*), although this is still subject to final review by us, so we cannot at this stage state that we definitively agree with those matters marked as 'agreed' or 'under discussion'.

1.3 We intend to update the Statement of Common Ground that we have previously prepared with the applicant to reflect our latest position and summarise our ongoing engagement, for submission by the next application deadline of 18 December.

1.4 Following our most recent engagement with the applicant's agents, the vast majority of our queries and issues have been answered or addressed to our satisfaction. We understand there to be broadly two outstanding issues: changes to Requirement 10 (Bolder Mere) and updates to the Flood Risk Assessment.

2.0 Requirement 10 (Bolder Mere)

2.1 In reviewing the draft Order, our fisheries & biodiversity officer made the following request: *"Please can Requirement 10 (Bolder Mere) include the requirement to provide details of the Ground Investigations and Risk Assessment required for understanding GW [groundwater] flows and the potential impact that the piling works may have on Boldermere lake? Although this is mentioned in the REAC (which this requirement references), I feel it should also be mentioned specifically in requirement 10 as there could be a risk to WFD [Water Framework Directive] compliance if this is not properly addressed. Details of the new retaining wall should also be a requirement of Requirement 10 to ensure the necessary mitigation measures have been incorporated into the design."* This is identified as matter reference '016 (FT)' in the attached comments log.

2.2 We understand from reviewing the attached comments log that the applicant intends to provide a revised Requirement 10 for us to review. At the time of writing, we are awaiting the revised requirement.

3.0 Updates to Flood Risk Assessment

3.1 We would like to make clear that we overall agree with the conclusions of the Flood Risk Assessment (FRA) (reference: APP-046) for matters within our remit. We agree that fluvial flood risk issues have been satisfactorily addressed. This follows verbal confirmation at our meeting with the applicant's agents on 8 October and the comments provided by the applicant in the attached comments log, following the flood risk issues we raised following a review of the application documents.

3.2 Our only outstanding concerns relate to the provision of sufficient information within the FRA as submitted to demonstrate that the conclusions of the FRA are sound. It has taken additional confirmation (whether written or verbally) to confirm some of the FRA issues that we raised in our comments log.

3.3 We therefore recommended to the applicant that the FRA should be updated to better demonstrate that the conclusions are sound. Albeit we acknowledge that the provision of this additional information will not affect the underlying conclusions of the report.

3.4 We are further satisfied that some matters we raised in our comments log will be addressed through submissions made through the protective provisions.

3.5 We believe that the comments in our comments log related to the provision of additional information are those referenced: 034 (JM), 035 (JM), 037 (LC), 039 (LC), 042 (LC) and 061 (CG).

3.6 We note that the applicant has listed some of these comments as 'under discussion' and some as 'agreed'. Should the Examining Authority determine that the FRA should be updated, the comments above are those that we feel need to be addressed in any updates.

M25 J10 – Development Consent Order application

Summary table of EA comments, queries & issues (Relevant Reqs stage – Sep 2019)

Comment ref	Comment, query or issue?	Topic	Document	Notes	HE action expected	HE/Atkins response	Status (Agreed/Under discussion)
001 (JG)	Query		CEMP (Draft Order)	This section suggests a CEMP will be produced and made available for consultation with relevant planning authorities; presumably this will include the Environment Agency for those components of the scheme that we have raised prior concerns about?	Confirm the mechanisms by which EA will be consulted on CEMP and/or whether EA could be listed in requirement 3 for consultation.	An updated CEMP will be produced by the contractor appointed to build the scheme and this will be developed and shared with EA and other parties. The works will be covered by the Protective Provision's and Highway England will submit detailed plans for EA approval which will include drawings and method statements.	Agreed.
002 (JG)	Comment	Bolder Mere	Draft Order	(5b) covers the concerns I raised previously : 'It would be useful to have an Ongoing maintenance plan/Adaptive environment management plan for Bolder Mere to set out more detailed plans for each mitigation measure and to monitor the effectiveness of the mitigation measures into	None.	Noted.	

				the future and adapt approaches accordingly if required'			
003 (JG)	Comment	Water Environment	Draft Order	(2c) suggests the water environment protection will be incorporated into the management plans. Monitoring and recording of compliance will be incorporated into these plans.	None.	Noted	
004 (JG)	Comment	Water Environment	Draft Order	Section 10.3 (3) states 'No part of Work No.5(c) is to commence until details of the surface water drainage and pollution control measures for that part of the A3 southbound carriageway adjoining the proposed Bolder Mere retaining wall, reflecting the results of a detailed drainage survey, have been submitted to and approved in writing by the Secretary of State, following consultation with the Environment Agency, Natural England and the relevant planning authority.' This is good to hear.	None.	Noted.	
005 (JG)	Comment	Consents	Consents and Agreements Position Statement	It appears they have considered what elements of the scheme may require permits from the Environment Agency and acknowledged that should the plans change they will approach the agency for appropriate permits.	None.	Noted.	

006 (JG)	Comment	Water Environment	CEMP	Surface Water Management Plan will be prepared- the document suggests ECPs will be developed for the final CEMP during the detailed design and construction planning phase- this will include surface water management plan and pollution prevention plans which may be of interest to us- these will be developed as part of the final CEMP during detailed design phase. Presumably these may help to address any outstanding question marks over their approach to the construction phase of the retaining wall at Bolder mere and risks to Bolder mere from construction runoff/siltation.	None.	Noted.	
007 (JG)	Comment	Bolder Mere	REAC	A construction phase Surface Water Management Plan will be produced to help address the impact and risk of deterioration in surface water quality- it will be important that this includes measures that ensure Bolder mere does not get impacted by construction at the North Bank of Boldermere.	Note requirement for details of <i>“measures that ensure Bolder mere does not get impacted by construction at the North Bank of Boldermere.”</i> in any SWMP.	The construction phase Surface Water Management Plan will include measures that will ensure that Bolder Mere is not adversely affected by works on the north bank of the waterbody.	Agreed.
008 (JG)	Comment	Water Environment	REAC	They propose to develop a detailed drainage design in agreement with the	None.	Noted.	

				Environment Agency in relation to the treatment of road runoff pollutants.			
009 (JG)	Comment		REAC	They appear to have incorporated post construction measures for ecology surveys to determine impact/effectiveness of measures. This is something I had raised previously.	None.	Noted	
010 (CH)	Comment	Groundwater (quality) & land contamination		In essence to date there is little information that indicates the redevelopment provides a risk to the secondary aquifers on which it is located. It is noted in the report that additional site investigation work is required to determine groundwater quality and the nature of potentially contaminated sites such as Wisley Airfield. Provided this information is forthcoming we do not presently have any concerns with this site from a groundwater quality perspective.	Submission of GI assessments/data to EA as soon as is practicable.	Based on the current GI programme, it is anticipated that the interpretative report / GQRA will be provided to the EA at the end of June 2020. Highways England will notify EA in the interim of any issues should they arise.	Agreed.
011 (DH)	Comment	Flood Risk Activity Permits		If any of the surface water outfalls connect to a main river then Highways England will require a FRAP.	Note requirement for FRAP for outfalls to main rivers.	Noted.	
012 (SB)	Comment	Water abstraction licence	Consents and Agreements	I note that in 3.2.34 of 'Consents and Agreements Position Statement', a water	Note comment for early engagement with EA if	This is noted and the contractor will be made aware that if	Agreed.

			Position Statement	<p>abstraction licence is not expected to be required, because it is not expected that the construction works will need to abstract more than 20 cubic metres per day.</p> <p>It also states that: should circumstances change, it will be for Highways England's appointed contractor to obtain any necessary permits should the need arise.</p> <p>If circumstances do change regarding additional abstraction, please contact the Environment Agency as early as possible to ensure that the appropriate permit is in place.</p>	abstraction licence is subsequently required.	circumstances change, discussions with the Environment Agency regarding the requirement for an abstraction licence are to be held.	
013 (BD)	Comment	Groundwater (resources)		<p>With a groundwater resources perspective my main concern was the current lack of data to determine the groundwater levels and flow direction. These are all addressed in the documents I've reviewed and the "Requirements" included in the Draft Development Consent Order ensure that our interests will be protected.</p>	None.	Noted	
014 (FT)	Comment			<p>The documents reviewed appear to have identified the main risks and recommend appropriate mitigation and</p>	None.	Noted	

				enhancement measures for impacts to Stratford Brook, Bolder Mere Lake and ordinary watercourses within the scheme boundary.			
015 (FT) (linked to comment 001)	Query		CEMP (Draft Order)	Please can Requirement 3 (CEMP) include the requirement to consult with the EA prior to approval to ensure the appropriate mitigation measures are in place to protect receiving watercourses/waterbodies?	Confirm the mechanisms by which EA will be consulted on CEMP and/or whether EA could be listed in requirement 3 for consultation.	An updated CEMP will be produced by the contractor appointed to build the scheme and this will be developed and shared with EA and other parties. The works will be covered by the PPs and Highway England will submit detailed plans for EA approval which will include drawings and method statements.	Agreed
016 (FT)	Query	Bolder Mere	Draft Order	Please can Requirement 10 (Bolder Mere) include the requirement to provide details of the Ground Investigations and Risk Assessment required for understanding GW flows and the potential impact that the piling works may have on Boldermere lake? Although this is mentioned in the REAC (which this requirement references), I feel it should also be mentioned specifically in requirement 10 as there could be a risk to WFD compliance if this is not properly addressed. Details of	Confirm whether changes to Requirement 10 can be made as proposed.	To be discussed. Requirement 10_e to be amended and sent to EA for review.	Under discussion.

				the new retaining wall should also be a requirement of Requirement 10 to ensure the necessary mitigation measures have been incorporated into the design.			
017 (FT)	Issue	Stratford Brook	Draft Order	Requirement 12 (Stratford Brook) currently states that no part of the development comprising work No. 54 is to commence until details of the mitigation measures have been submitted and approved following consultation with the EA. This allows for work No.33b (i.e. the construction of the new Stratford Brook bridge) to be completed before the mitigation works (work No.54) have been agreed. Please can Requirement 12 be re-worded to ensure that no part of work No.33b commences until details of the environmental mitigation and enhancements works (No.54) have been approved following consultation with the EA?	Confirm whether changes to Requirement 12 can be made as proposed.	Highways England have proposed an amendment to Requirement 12 and this has been accepted by the EA.	Agreed.
018 (FT)	Query	Stratford Brook	Draft Order	Requirement 12 doesn't mention the requirement to carry out feasibility studies into improving fish and mammal passage within the existing Stratford Brook culverts, nor does it reference the WFD report where these	Confirm whether changes to Requirement 12 can be made as proposed.	Highways England have proposed an amendment to Requirement 12 and this has been accepted by the EA.	Agreed.

				are detailed. To ensure these feasibility studies are carried out and the recommendations of these studies implemented, please can requirement 12 reference these requirements. Requirement 12 should also reference the Landscape and ecology management and monitoring plan appended to Chapter 7 of the ES.			
019 (FT)	Issue	Stratford Brook	Draft Order	Requirement 12 should also reference the requirement to provide details of the bridge design as some of the mitigation for this structure will be embedded within the design.	Confirm whether changes to Requirement 12 can be made as proposed.	Highways England do not propose to amend Requirement 12 in this respect. The works will be covered by Protective Provisions (for the protection of the Environment Agency) set out in Schedule 9 of the Scheme DCO. Highway England will submit detailed plans for EA approval which will include drawings and method statements.	Agreed.
020 (FT)	Issue	Stratford Brook	Draft Order	Please can requirement 12 also include details of the proposed drainage attenuation pond downstream of the A3 and any new outfalls proposed along the Stratford Brook.	Confirm whether changes to Requirement 12 can be made as proposed.	Highways England do not propose to amend Requirement 12 in this respect. The works will be covered by the Protective Provisions (for the protection of the Environment Agency) set out in Schedule 9 of the	Agreed.

						Scheme DCO. Highway England will submit detailed plans for EA approval which will include drawings and method statements.	
021 (FT)	Issue		REAC	The REAC should reference the WFD report, as well as the ES.	Confirm whether proposed changes to REAC can be made.	This will be included in the updated CEMP when prepared	Agreed
022 (FT)	Comment		REAC	The design of bridges and culverts should also adhere to Volume 10 of Highway England's Design Manual for Roads and Bridges.	Update REAC accordingly to reflect DMRB requirements.	This will be included in the updated CEMP when prepared	Agreed.
023 (FT)	Comment		REAC & CEMP	Environmental actions relating to fish, biosecurity and a feasibility assessment for non-native invasive species in Boldermere should ideally be included in the REAC and outline CEMP, although these are covered in the ES.	Update REAC & CEMP accordingly.	This will be included in the updated CEMP when prepared	Agreed
024 (FT)	Comment	Drainage outfalls		Outfalls should ideally be set back from the existing bank line of a channel, rather than being flush as to minimise the impact on the receiving watercourse.	To be noted for outfall designs.	Noted. We propose to share standard details on outfall designs towards the start of the detail design process (i.e. early 2020)	Agreed
025 (FT)	Comment	Stratford Brook culverts	LEMP	We would want to ensure the final LEMP includes	Update LEMP accordingly.	These measures will be included in the final	Agreed.

				measures to assess the success of the potential impoundment lowering/fish passage improvement associated with the existing Stratford Brook (South) culvert.		LEMP which will be updated during detailed design stage.	
026 (FT)	Comment	Stratford Brook culverts	LEMP	The objective for 7.8 should also be to improve fish and mammal passage through the existing A3 culverts.	Update LEMP accordingly.	The objective will be updated in the final LEMP	Agreed
027 (FT)	Comment	Flood Risk Activity Permits	Consents and Agreements Position Statement	I understand that they want to disapply FRAPs for the new Stratford Brook bridge, strengthening of the existing A3 culvert, 4 new outfalls and other drainage works. I don't have any objections to this providing the Requirements outlined in the DCO are strengthened as per my comments above.	None (covered by previous comments).	Noted.	
028 (FT)	Query	Stratford Brook crossing	WFD Assessment	Paragraph 5.4.3 of the WFD report states that "the bridge deck should run perpendicular to the watercourse (to reduce shading)". I'm slightly concerned that the bridge deck isn't running perpendicular to the watercourse and that this could necessitate the need for bed and bank reinforcement later down the line. I'm guessing they haven't got	Provide justification for non-perpendicular layout of Stratford Brook crossing.	The planform of Stratford Brook at the New Stratford Brook Underbridge is shown on Sheet 1 of the Scheme Layout Plans (APP-012). Structure details for the bridge are provided on page 57 of Engineering Drawings and Section (APP-014). The bridge crosses a sinuous reach of the brook.	Agreed.

				many options. The applicant should provide justification for this alignment.		Fitting this multi-curve meander shape into the rectangular shape of a bridge is a challenge that has principally been addressed by designing a bridge with a very wide span. The abutments of the span are broadly parallel with the most likely (downstream) progression of the meander under the bridge, lowering the risk of the river making contact with the bridge into the future. The design represents a sensible balance between accommodating the needs of the water environment with the alignment and constructability of the road.	
029 (FT)	Comment	Stratford Brook crossing	WFD Assessment	Paragraph 5.4.3 also states that "bed and bank protection should only be used where a real risk to life or critical infrastructure is apparent". This should be re-worded – the requirement for bed and bank protection should be avoided through good design, i.e. by aligning the bridge deck so that it's perpendicular to the watercourse.	Update WFD Assessment paragraph 5.4.3 as proposed.	This is written as generic guidance. There will always be circumstances, particularly in high energy or constrained environments, in which protection cannot be avoided and will be required to protect life and critical infrastructure.	Agreed.

						Highway's England will review the means by which amendments to the WFD can be made during the DCO process if considered necessary. Suggest re-wording to "bed and bank protection should only be used where an erosion hazard cannot be avoided (for instance by relocating an abutment or pier) and a real risk to life or critical infrastructure is apparent".	
030 (JM)	Comment	Flood risk	Flood Risk Assessment (FRA)	This FRA could have been much more detailed to enable the reader to better understand flood risk impacts and how they are going to be managed. The issues identified are I'm sure resolvable but I feel the FRA does need updating so that the impacts on flood risk arising from this DCO proposal are more easily understood by a general reader.	None.	Noted	
031 (JM)	Comment	Flood risk	FRA	We are generally pleased that the FRA confirms that there will be no increase in fluvial flood risk associated with this proposal. Both the construction and post scheme	None.	Noted	

				impacts have been assessed and mitigation proposed.			
032 (JM)	Comment	Flood risk	FRA	The main focus for Thames Area in relation to this scheme is the works around the crossing of the Stratford Brook. We have reviewed and signed off modelling which was carried out previously by Highways England to assess the likely impact of a new bridge in this location. This modelling has been submitted in support of this DCO and confirms that the new bridge crossing the Stratford Brook does NOT increase flood risk.	None.	Noted	
033 (JM)	Comment	Flood risk	FRA	There is reference to upgrading and straightening an existing culvert on the Stratford Brook under the slip road. Has this been included as part of the modelling exercise to assess likely impacts? This needs to be confirmed within the FRA.	Update FRA accordingly.	The culvert is only to be strengthened, not straightened. The FRA para 2.4.13 incorrectly referred to straightening however as confirmed in the same paragraph, the internal dimensions of the culvert will not be affected. No modelling has therefore been carried out.	Agreed.
034 (JM)	Issue	Flood risk	FRA	It's extremely frustrating that more drawings have not been included as appendices to this FRA to explain the works in this area in more detail. We would of at the very least expected a layout drawing	Update FRA accordingly.	If the opportunity arises during Examination for the FRA to be updated, additional drawings can be added. It is understood that this is a recommendation	Agreed.

				showing existing and post development situation, with flood extents overlain to show clearly that flood risk was not being increased. This would have been extremely useful for the reader.		from the EA to improve the readability of the FRA, but not an issue that precludes the EA from agreeing with the FRA conclusions.	
035 (JM)	Issue	Flood risk	FRA	We therefore recommend that the FRA is updated to include more information clearly demonstrating the reader that flood risk is not increased in the Stratford Brook area.	Update FRA accordingly.	Given the notes in comment 032, it is understood that this is a recommendation from the EA to improve the readability of the FRA, but not an issue that precludes the EA from agreeing with the FRA conclusions.	Under discussion.
036 (LC)	Comment	Flood risk	FRA	I do take issue with the flood risk assessment (FRA) that has been undertaken which I believe is limited in detail.	None.	Noted.	
037 (LC)	Issue	Flood risk	FRA	The FRA has focused only on areas within the site boundary that encroach within flood zones 2 and 3. Whilst these flood zones inform policy, I would have expected all areas within the extent of a 1:100 return period event with a 70% allowance for climate change to be assessed for design and mitigation purposes, as stipulated in the guidance on flood risk assessments: climate change allowances (assumption of essential infrastructure with	Update FRA accordingly.	The approach adopted is to use the 1 in 100 with 35% climate change uplift as the design standard for the Scheme; and then run the 70% climate change uplift as a sensitivity to ensure no new risks. This is consistent with the updated DMRB guidance LA113 (LA113 suggests using the Central allowance for design and the	Under discussion.

				<p>expected lifespan ending in the “2080’s” epoch). On occasion, this extent can be greater in scale than the current flood zone 2, which could result in development outside this flood zone being unassessed in regards to flood risk. Although I don’t anticipate this being the case for this proposal, I would still have expected justification of this approach within the FRA.</p>		<p>Scheme has used the Higher Central allowance).</p> <p>This is the approach approved for the Stratford Brook modelling.</p> <p>For the Scheme as a whole, FZ2 has been used as a surrogate for the 1 in 100 flood extent including a climate change. There are no earthworks, or above ground works, within the red line boundary that would reduce or alter the floodplain storage within FZ2. It is also the case that there are no significant earthworks near to the FZ2 extent, so if FZ2 is an underestimate of the 1 in 100 flood extent including 70% climate change allowance, the Scheme will not have an adverse impact on the floodplain.</p> <p>Given the agreed design criteria is the 1 in 100 event including 35% climate change allowance, and there is</p>	
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						only a very low risk that the Scheme will impact on the 1 in 100 flood extent with a 70% uplift, and if it does it will be only toward the end of the design life of the Scheme, it is considered that it was not proportionate to quantitatively assess the 70% climate change uplift for the scheme with the exception of Stratford Brook.	
038 (LC)	Issue	Flood risk	FRA	The FRA regularly refers to “the floodplain” (e.g. “no works within floodplain”, clear span bridge over the floodplain) without defining what event this floodplain would result from (e.g 1:100, 1:100 + CC, 1:1000). This is particularly concerning for the north-most area of the site boundary in close proximity to the River Mole, as unspecified “drainage attenuation measures” are proposed outside of “the floodplain”. Without knowing what these measures would be or whether they have been assessed against climate change, there’s the potential that they may increase risk elsewhere in future flooding.	Update FRA accordingly.	Floodplain refers to the FZ2. The FRA refers to drainage attenuation measures in the northern area of the scheme. There was provision for drainage attenuation pond located south of the southbound offslip onto Painshill Junction, however this has now been removed from the design. No earthworks or above ground structures are proposed within FZ2 in this location.	TBC

				Considering this, we may wish to request further details on these measures.			
039 (LC)	Issue	Flood risk	FRA	Whilst stating that climate change has been accounted for, the FRA fails to state what this entailed (i.e what allowance was used). Reading the model report in the appendix I am aware that 35% and 70% allowances were modelled, but this only applies to the proposed bridge over the Stratford Brook. The reader is therefore left unsure whether an appropriate assessment of climate change impacts has been performed for the entire proposal.	Update FRA accordingly.	As commented, the Stratford Brook flood model assessed 35% and 70% climate change factors. See further detail in response to comment 037. No other earthworks were identified within the floodplain (i.e. FZ2 or FZ3) that would require quantitative analysis and assessment of climate change impacts. The climate change factors for the drainage design is detailed in the drainage strategy.	Agreed,
040 (LC)	Issue	Flood risk	FRA	Generally speaking, the FRA is vague on detail when it comes to the works being proposed, particularly for the western-most area of the site boundary in close proximity to the River Wey, where they simply indicate that there are "proposed works". Observing the engineering drawings (2.9, Sheet 10) works to gantries and the existing embankment are proposed. I	Update FRA accordingly.	The "proposed works" refers to the scheme as a whole. Therefore, the FRA is confirming that the Scheme will not affect this watercourse. If it is possible to update the FRA during the DCO process, 'proposed works' will be changed to read 'the scheme in this area'.	Agreed.

				would question whether any dimensional changes will result from these works which could increase flood risk elsewhere, although I state again I've got limited knowledge of what's being proposed, which I would have expected even at this stage of the application.			
041 (LC)	Issue	Flood risk	FRA	Whilst attempting to address flood risk to third parties, the FRA fails to address whether the development being proposed would be "operational and safe in times in flood", as is required by table 3 of the guidance on flood risk and coastal change and associated notes. This is particularly applicable for the proposed bridge over the Stratford Brook (assuming this is still essential infrastructure, should still address resistance regardless). Observing the design and local topography, I would preliminarily anticipate that the development would meet this standard, although I would certainly have expected the FRA to address this.	Update FRA accordingly.	The hydraulic modelling report contained as an appendix to the FRA confirms the freeboard between the peak water level and the soffit of the bridge is greater than 1.5m in all scenarios tested. The bridge deck will therefore be significantly above the flood level and operational and safe in times of flood.	Agreed,
042 (LC)	Issue	Flood risk	FRA	Whilst the FRA reaches conclusions regarding impacts on flood risk, it	Update FRA accordingly.	The FRA clarifies that the Scheme will not encroach into the	Agreed,

<p>(linked to comment 034)</p>				<p>provides only limited evidence to support these conclusions (e.g. Detriment mapping from modelling, technical explanation) which makes it difficult for the reader to validate them.</p>		<p>floodplain and therefore it will not affect flood extents nor flood flows. As there is no interaction with the flood environment, there is no impact (not even a zero value impact) to report.</p> <p>More detailed maps can be provided showing the interaction between floodplain (FZ2 & 3) and the Scheme if there is the opportunity to update the FRA during the DCO process.</p>	
<p>043 (LC) (linked to comment 033)</p>	<p>Comment</p>	<p>Flood risk</p>	<p>FRA</p>	<p>Details on the “culvert straightening” required as part of the slipway expansion at the Ockham A3 junction. I have no details on the existing design and limited details on the proposed, so can’t fully assess whether the compilers conclusion that flood risk won’t be impacted by straightening is accurate. Preliminarily I’d suggest that the straightening is unlikely to cause an issue looking at local receptors and having a basic understanding of what impact straightening a culvert would have on fluvial flows.</p>	<p>Confirm exact nature of A3 culvert works taking place. Update FRA if required.</p>	<p>The culvert will only be strengthened and will not affect the dimensions of the culvert. The reference to straightening was a typo error in the reporting in the FRA.</p>	<p>Agreed,</p>

044 (LC) (linked to comment 019)	Comment	Flood risk	FRA	The proposed crossing of the Stratford Brook, which we have agreed will not cause an unacceptable increase in flood risk, is proposed “at present”, which insinuates the design could be subject to change. If the design does change then we need to be able to assess the details of this prior to commencement.	Confirm the mechanisms by which the EA will be consulted on bridge design and/or confirm whether Requirement 12 can be updated to reflect bridge design submission details.	Any updated designs will be submitted as part of the supporting information for Protective Provision approvals.	Agreed.
045 (LC) (linked to comment 043)	Query	Flood risk		Stratford Brook culvert straightening – How will the watercourse be diverted to allow works (i.e overland pumping)? Will there be any impact on flow rates of the Stratford Brook? Would this increase risk during a flood event or otherwise?	Confirm responses to queries and/or confirm where/when this information will be published.	The culvert will only be strengthened, not straightened.	Agreed.
046 (LC)	Query	Flood risk		Stratford Brook crossing – How will embankments be constructed? How will the risk of materials entering the watercourse be mitigated? Will the works endanger bank stability?	Confirm responses to queries and/or confirm where/when this information will be published.	The approach embankments for the bridge are proposed to have slopes of 1V:2.5H, with a maximum height of 5m which reduces away from the location of the bridge. Approach embankments will be constructed by removing any possible soft river alluvium from under the proposed earthworks and compacting imported granular material in	Agreed

						<p>layers of about 300mm to a compacted specification (likely 95% MMDD) to the required height using standard earthwork equipment, such as 12 tonne vibrating roller.</p> <p>There are number of techniques that can be used to prevent embankment materials entering the watercourse. At this stage we envisage a combinatory of geotextiles, placed on the slope toe to prevent fluvial scour and the removal of fines, and general revegetation may be used.</p> <p>All local existing bank profiles effected by the proposed works will be accessed during detailed design. It is not currently expected that any significant mitigation will be required but this will be determined following the detailed analysis during detailed design.</p>	
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047 (LC)	Query	Flood risk		River Mole floodplain habitat creation – How dense will the planting be? Will this impact flood flows and subsequently flood risk? What species will be planted and how close to the watercourse will they be planted? Will bank stability be endangered as a result? This also should be considered for any other unspecified environmental works within the floodplain or close to the watercourse, such as environmental works along the Stratford Brook.	Confirm responses to queries and/or confirm where/when this information will be published.	Noted. Planting regimes to be developed during detailed design.	Agreed.
048 (LC)	Query	Flood risk		Site compounds, particularly main compound around Stratford Brook (see temporary works plan, sheet 1), plant and materials – Whilst recommended to not be situated in flood zone 3, these compounds could still be quite close to watercourse banks where floodplains are small (e.g. Stratford Brook downstream of culvert). Will bank stability be endangered?	Confirm responses to queries and/or confirm where/when this information will be published.	The site compounds are more than 8 m from the river banks.	Agreed.
049 (LC)	Query	Flood risk		Other temporary works, including fencing, facilities, roads and earthworks not referred to in FRA (see temporary works plan) - Will fencing be suitably permeable to floodwaters? Will other works endanger bank stability	Confirm responses to queries and/or confirm where/when this information will be published.	Details of the temporary works will be confirmed during detailed design stage. Where works are planned within the floodplain, the temporary works	Agreed.

				(I note that these are not recommended to be outside flood zone three so could be in very close proximity to watercourse).		<p>details and method statements will be issued as part of the FRAP consent/ protective provisions submission supporting information.</p> <p>Fencing: The fencing details will be clarified during the detailed design stage and will be agreed with the adjacent landowner. If necessary to demarcate the land boundary, fencing can be a post and 2 rail fence that would be suitably permeable for flood water.</p>	
050 (LC)	Query	Flood risk	ES (Drainage Strategy)	Outfalls (referred to in environmental statement appendix 8.1: Drainage Strategy) – Outfalls will be “suitable”. Does this definition regard bank integrity, fluvial flows and ultimately fluvial flood risk?	Confirm responses to queries and/or confirm where/when this information will be published.	“Suitable” here refers simply to the type and location of the outfall. Details of the outfalls’ design and construction will be confirmed during the detailed design stage.	Agreed.
051 (LC)	Comment	Ordinary watercourse culverting	FRA	Although I do have concerns regarding the lack of detail about proposed modifications of culverts carrying ordinary watercourses, I suggest the LLFA would be in the best	Ensure communication with the relevant LLFA/s on matters related to culverting of ordinary watercourses.	Noted	

				position to comment on these works.			
052 (LC)	Comment	Compensation / replacement land		I've noted that "land compensation/replacement" areas are proposed within flood zones 2 and 3. Whilst being unsure exactly what this term entails, I wish to raise the possibility of these areas being provided to current landowners within the site boundary who may then wish to introduce uses not compatible with the guidance on flood risk and coastal change.	None.	Replacement land here refers to 'common land' and will not therefore be used by landowners.	Agreed.
053 (JP)	Issue	Protective Provisions	Draft Order	Applicant has not used our 'model' Protective Provisions and have not explained any changes made to our model PPs (e.g. indemnity clauses have been deleted). Currently published PPs are unacceptable to us.		The EA have agreed to Highways England's amendments to the Protective Provisions (31 October 2019).	Agreed.
054 (CG)	Comment	Construction compound	Works Plans	Construction compound looks to be >10m from Stratford Brook, which is positive.	None.	Noted.	
055 (CG) (linked to comment 045)	Query	Culvert works		Some documents refer to "culvert straightening" under A3 slip road – need to check this as we were advised that there were no works happening to the culvert –	Confirm exact nature of A3 culvert works taking place.	We confirm that Work No 6 (a) is as defined in the draft DCO (APP-018) "works to <u>strengthen</u> the existing	Agreed.

				work 6 (a). It is described as “culvert strengthening” in the Order. We understood only works happening are to the ‘slab’ above the culvert.		culvert at Stratford Brook”.	
056 (CG)	Query	Stratford Brook crossing	Engineering Drawings	Plans for S.B. bridge don’t show mammal ledges	Consider updates to engineering drawings of bridge to show mammal ledges to be incorporated.	These are preliminary design drawings. They will be superseded by detail design drawings that will show mammal ledges. The Scheme is committed to providing the ledges in Section 7.4.38 of the Biodiversity Chapter of the ES (APP-052) and in Appendix F of the WFD assessment (AP-045) as measure SB_c). The measure is also carried through to the Register of Environmental Actions and Commitments for the Scheme, which in turn forms part of the Outline Construction and Environmental Management Plan (APP-134).	Agreed.
057 (CG) (linked to comment 053)	Issue	Protective Provisions	Draft Order	Protective Provision for EA (PDF pp. 122-125) – deemed approval is still within section 19(3)(b), rather than deemed refusal.		The EA have agreed to Highways England’s amendments to the Protective Provisions (31 October 2019).	Agreed.

058 (CG)	Issue	Stratford Brook mitigations		There needs to be a time limit on submission of 'feasibility studies' for additional mitigation.	Confirm whether a time limit for the submission of feasibility studies can be incorporated into the Order.	The studies will be included in the project programme to be completed in time to inform the detailed design	Agreed.
059 (CG) (linked to comment 057)	Issue	Protective Provisions / Flood Risk Activity Permits	Draft Order	Para 3.2.7: "... <i>The Environment Agency has confirmed that it is in-principle content that the DCO should include this disapplication subject to the use of the Environment Agency's standard protective provisions. Highways England is in discussions with the Environment Agency accordingly. The draft DCO at schedule 9 (TR010030/APP/3.1) includes protective provisions for the benefit of the Environment Agency.</i> " – note that they have not used our standard PPs, so not currently agreeing to disapply FRAPs.		The EA have agreed to Highways England's amendments to the Protective Provisions (31 October 2019).	Agreed
060 (CG) (linked to comment 020)	Issue	Stratford Brook	WFD Assessment / Draft Order	Para 5.3.3 [WFD Assessment] states that " <i>Agreement on the details of the drainage or road runoff at Bolder Mere (BL2) and Stratford Brook Underbridge</i>	Confirm whether changes to Requirement 12 can be made as proposed.	Highways England have proposed an amendment to Requirement 12 and this has been accepted by the EA.	Agreed.

				(SB1) are further secured under Requirements 10 and 12 of the Development Consent Order for the Scheme (application document TR010030/APP/3.1).” – note that Requirement 10 does, but Requirement 12 doesn’t.			
061 (CG)	Issue	Flood risk	FRA	Para 2.4.14 – “Therefore, the proposed works would be above the existing level of the road, which is assumed to be set above the flood level at this location, and therefore would neither be at risk from flooding, or impact on flood risk elsewhere.” – why assumed and not demonstrated?	Update FRA accordingly.	From inspection of lidar data and flood extents, the level of the road is above the flood levels. This will be updated in the FRA if the opportunity arises.	Agreed.
062 (CG)	Issue	Flood risk	FRA	FRA doesn’t seem to have taken any account of construction compound (FZ2).	Update FRA accordingly.	Compound outside FZ3 therefore no fluvial flood compensation issues. Flood issues dealt with through appropriate construction practices.	Agreed.
063 (CG) (linked to comment 022)	Comment		CEMP	Stratford Brook enhancements adhering to guidance: list does not include Highways England’s DMRB (PDF pp 79 - Table Appendix G. .1: REAC Part 1: Schedule of environmental mitigation commitments)	Update CEMP accordingly to reflect DMRB requirements.	Reference to the DMRB will be included in the updated CEMP when produced.	Agreed.

064 (CG)	Issue	EAPs	CEMP	<p>RD1.9, 1.10 & 1.11 – Ch. 8, section 8.9 – SuDS scheme approval, construction phase SW Management Plan, drainage design & runoff rates</p> <p>Surface water management is not within our remit (unless specifically related to protection of ground or surface waters)</p> <p>(PDF pp 88 - Table Appendix G. .2: REAC Part 2: Environmental Action Plan – Actions required before start of construction (i.e. during detailed design stage or before construction)).</p>	Amend EAPs to consult relevant authority on these matters (most likely LLFA/s).	Noted, these matters will be referred to the appropriate authority	Agreed.
065 (CG)	Issue		REAC	PDF page 12 states climate change allowance at 20%, which is no longer the correct figure to use.	Amend document (and any associated documents) to reflect the correct climate change allowance.	Noted – the climate change allowance will be revised in the updated CEMP/REAC	Agreed.
066 (CG)	Comment		Statement of Common Ground	Broadly covers our issues (except Order PPs), but some finer detail needs to be added to some of the headings (esp. flood risk).	SoCG to be updated to reflect issues raised in this table.	To be updated following meeting on 08.10.19.	Agreed.