Leader of the Council

Martin Tett

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7th September 2018

Secretary of State for Transport
c/o Transport and Works Act Orders Unit,
General Counsel's Office,
Department for Transport,
Zone 1/18, Great Minster House,
33 Horseferry Road,
London SW1P 4DR

Dear Mr Grayling,

Ref: East West Rail Transport and Works Act Order Application - Response from Buckinghamshire County Council

Buckinghamshire County Council (BCC) welcomes the opportunity to respond to Network Rail's Transport and Works Act Order (TWAO) application for East West Rail Phase 2. BCC are in principle supportive of this scheme and are keen to see the project progress, however we have some significant concerns, particularly around Traffic and Transport that need to be addressed prior to TWAO approval. For this reason, BCC's response is that of a **HOLDING OBJECTION**.

As the strategic transport authority in Buckinghamshire, BCC recognises the significant connectivity benefits that the scheme will bring to the County and to the wider Oxford to Cambridge corridor. BCC is an active member of the East West Rail Consortium and we continue to work with our district colleagues at Aylesbury Vale District Council and Wycombe District Council in supporting the scheme.

The Council has actively engaged in the three rounds of public consultation which have preceded this application, stating both its support and the need to ensure the impacts of the scheme are fully assessed and comprehensively mitigated, particularly concerning traffic impacts during the construction period. Work to review the submitted application documents has been intensive and our detailed comments are appended. Due to new material having been submitted to us by Network Rail during the consultation period, it is likely we will also write with further detailed comments in the near future, which may include further holding objections.

BCC's comments as a landowner will be provided as a separate response. This will include concerns around a number of land parcels in the county. However, the Council considers the TWAO application should not include unrestricted powers to acquire land at Winslow, shown as the proposed station (parcel 0652). This land is in the ownership of Buckinghamshire County Council and was acquired for the purpose of accommodating the station and associated car

park. Neither do we agree with the power for temporary use of the land adjoining this site (parcel 0647). Our comments as owner of the highway are included at Appendix C.

The remaining issues for the Council, which have resulted in our response of holding objection, along with required amendments and additional conditions we propose to be attached to TWAO consent are summarised below. Detailed comments on the Environmental Statement can be found in Appendices A and B, and on the Scheme Drawings in Appendix C.

1. Holding Objections

Traffic and Transport

There are a number of concerns which must be addressed prior to TWAO approval. These are in relation to a number of areas, such as construction routes/HGV impacts, car parking and mitigation. Because of the extent of our concerns in this area, we have provided detailed comments in Appendix B.

The highway authority has significant concerns regarding the use of some unsuitable roads, and requires certainty that structure closures will not result in HGVs on unassessed parts of the network. It is imperative that measures are implemented that will enable HGVs associated with construction of the project, as well as existing users of roads, to travel along rural roads in a safe and suitable manner. The Construction Travel Management Plan (CTMP) currently does not provide mitigation to demonstrate there is adherence to agreed construction routing, and there are a number of locations that should be considered for further assessment.

The levels of HGVs expected and lack of mitigation for driver error is a serious concern, in addition to the fact that only one vehicle park is proposed (on M1 approach) with pressure on routes from M40. BCC is not convinced that the current number of compounds is safe and suitable access can be achieved. Additionally, the highway authority raises concerns regarding haul routes and why they have been proposed in some areas and not others.

Alongside issues such as junctions with capacity issues, traffic and works required prior to construction, and commitments to repair structures damaged as a result of EWR construction, BCC raises issues around car parking pressures and utilisation, particularly at Aylesbury and Aylesbury Vale stations such as that we would require review of parking and implementation of necessary mitigation. Cycle parking utilisation to ensure that it can accommodate future demand and meet the need of increased passengers using the train stations along the East West Rail (EWR) rail route is also an important issue for us, and consideration needs to be paid to quality of walking and cycling links to train stations.

We raise the issue that vehicles associated with the construction of EWR will use existing highways until the proposed highway works associated with construction of HS2 come online. BCC requires that EWR and HS2 work together in terms of developing their mitigation package and coordination of works within Bucks to limit the impact of two major projects being delivered in the same rural areas.

There is a lack of mitigation proposed to overcome highway safety concerns raised by the Highway Authority. Mitigation proposals put forward did not go far enough in order to satisfy BCC that safe and suitable access can be achieved and proposals during construction and operation would not have a severe impact on the highway network.

It is recommended that EWR and BCC work together to resolve the outstanding matters ahead of any examination given the overall transport benefits of the scheme. We would welcome a

Statement of Common ground be developed between the two parties on areas of agreement, including mitigation requirements.

Ecology

Despite previous requests, the submitted documentation does not contain any references towards achieving a net gain for biodiversity that we would expect from a development of this scale. On this basis BCC must object to the scheme as we believe this is a key environmental benefit, which has been promoted by EWR since the project's conception and they have communicated this as a benefit of the scheme.

Public Rights of Way

Within the submitted documents there are several instances where the scheme will significantly impact on public rights of way and the proposed mitigation is not acceptable to BCC. Therefore, BCC must respond with a holding objection unless these matters can be resolved prior to approval.

Geology, Soils and Land contamination

Regarding route section 2B, the land to the south west of Bletchley is designated as a Local Wildlife Site not BNS. It is therefore in need of retaining good water quality, and given its immediate adjacency to the works is at risk from soils and other pollution / contaminants arising from the works and the lines operation.

2. Proposed Conditions to be attached to TWAO consent

BCC have reviewed document NR08 Request for Deemed Planning Permission and request the following additional conditions be included:

Public Rights of Way

BCC accepts the need for the temporary closure of PROWs within the scheme boundary. Despite previous discussions with Network Rail to determine the extent of any additional temporary closures, the submitted drawings are not consistent in reflecting the extent of the temporary path closures outside of the scheme boundary. Therefore, BCC requests the following conditions be attached to the consent.

In relation to section 2.5.65 Temporary PROW diversions:
The County Council proposes that, where it is considered prudent to extend a temporary PROW closure beyond the Site Boundary that this will be determined and agreed by the County Council prior to the submission by NR of any PROW Temporary Traffic Regulation Order application to the County Council.

In relation to section 14.6.67 PROW on Construction Access Routes:
The County Council proposes that a new paragraph is included acknowledging the requirement to agree with the Highway Authority the degree and type of retained construction/surface treatment and /or reinstatement required on any PROW that will be utilised as a construction access/haul route. This will ensure that when the haul route is decommissioned the PROW is left with a construction/surface that is commensurate with its PROW status (reference: Bridleway TWY/1/1 and Restricted Byway MUR/18/1).

Cultural Heritage

BCC is supportive of the cultural heritage section of the submitted Environmental Statement. However we have been unable to access the Heritage Delivery Strategy and certain elements of the cultural heritage information are unclear. Therefore, BCC requests the following conditions be attached to the consent.

1. No part of the development, unless otherwise agreed, shall commence until the Heritage Delivery Strategy document has been produced and agreed with the Local Authorities concerned. This document will detail evaluation and mitigation measures for heritage assets including buried archaeology. These measures will include geophysical surveys, trial trenching and excavation.

2. Where archaeological evaluation is planned, no development, unless otherwise agreed, shall take place until a location specific written scheme of investigation has been submitted to and approved the relevant Local Authority.

3. Where archaeological remains of national importance are found, no development at that location shall take place until an appropriate methodology for their preservation in situ, where reasonably practical, has been submitted to and approved in writing by the relevant Local Authority. The methodology shall be implemented as approved.

4. Where archaeological remains are recorded by evaluation and are not of sufficient importance to warrant preservation in situ but are worthy of recording, the development at the relevant location shall be carried out in accordance with a written scheme of investigation which has been submitted to and approved by the relevant Local Authority.

3. Amendments and clarifications required

Cumulative Effects

Chapter 15 of the Environmental Statement refers to the HS2 Interface Area and includes an assessment that the cumulative effects of the two projects. It concludes there will be varying degrees of adverse effects on land use and agriculture, ecology, landscape and traffic and transport. BCC request that the mitigation proposed to address these assessment outcomes, specifically within the HS2 Interface Area, is made clearer. However BCC is supportive in principle of both projects and is actively working with EWR and HS2 to understand the potential opportunities for a more coordinated approach and agree a way forward.

This section also refers to amenity impacts on sports and leisure groups, residential amenity effects, property receptors, but does not seem to assess the human receptor impacts in relation to traffic and transport during the construction phase. This should be included/ clarified within this section as currently it is not clear what the cumulative impacts of the construction of these schemes will be on local communities.

Public Rights of Way

BCC requires that Network Rail manage the Public Right of Way crossing of the haul road to allow pedestrian access and to prevent the proposed temporary closure of Footpaths WAD/5/1, WAD/5/2, WAD/5/3 and FMA/3/1. BCC requires confirmation that this will be carried out.

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BCC require details of mitigation measures that will be undertaken to ensure that the public footpath No.4 Pounden will not be adversely affected by the proposed Compensatory Flood Storage Area and will be protected from waterlogging or flooding.

The County Council has previously made Network Rail aware that it requires the whole of the width of the access track at Verney Junction Overbridge, including the level verges/ margins alongside the surfaced width of the track to form the legal width of the PROW diversion (new route). This is required to ensure that pedestrian users have sufficient footpath width to allow them to avoid any large agricultural vehicles/machinery they may encounter on the overbridge and overbridge approaches access track.

BCC would like clarification and a potential amendment regarding the description of both the proposed extinguishment of Restricted Byway MUR/18/1 and the Proposed New Restricted Byway.

Ecology

The information submitted is not considered to be in sufficient detail for the applicant to fully demonstrate that the proposed railway will not adversely impact on ecological features. In this respect, BCC considers the submission to have been made prematurely and conclusions have been based on an incomplete data set. Without this information a complete understanding of the ecological impacts and subsequent mitigation, compensation and enhancements proposed is not possible.

Water Quality and Flood Risk

BCC request that the use of SuDS should be considered in more detail at Winslow Station given the importance of these systems in alleviating flood risk. However, we understand that this will be addressed at a later date through proposed Condition 13 Surface Water Drainage Assessment (as stated in document NR08 Request for Deemed Planning Permission).

I hope this provides a comprehensive summary of our remaining concerns and we are happy to provide further clarification as necessary. The Council looks forward to our continuous engagement with the EWR Alliance to bring this scheme forward

Yours sincerely,

Martin Tett
Leader
Buckinghamshire CC

Technical Appendices

Appendix A: Comprehensive review of the Environmental Statement (Document NR16)

Detailed comments are provided by BCC for the following chapters of the Environmental Statement:

1) Introduction
2) Project Description
3) Consideration of Alternatives
4) Scope of the EIA and overall methodology
5) Planning Policy
6) Land use and agriculture
7) Cultural heritage
9) Ecology (Joint review with AVDC)
11) Geology, soil and land contamination
13) Water quality and flood risk
14) Traffic and transport
15) Cumulative effects
16) Summary of mitigation

The following chapters have not been reviewed by BCC and are expected to be included in Aylesbury Vale District Council's (AVDC) response. Please contact Claire Britton, Economic Development & Delivery Manager Community Fulfilment. Aylesbury Vale District Council. Tel: 01296 585471

8) Air Quality
10) Noise and vibration
13) Landscape Visual Impact Assessment

For ease, our comments below are grouped under the chapters in the Environmental Statement.

Section Reviewed	***Project description***	
Document Reviewed	*Environmental Statement Volume 2i - Chapter 2*	
2.3.4 to 2.3.14	We propose that relevant photos of these sections, such as where the track is significantly above the surrounding landscape, are provided in the appendices and referred to	No objection - comment
2.4.4	We recommend that you include a disclaimer as set out in the Hybrid Bill such that further EIA may be required if impacts are now considered and assessed to exceed that set out in the HS2 ES	No objection - comment
2.4.5	We are pleased to see reference to the plan should HS2's combined earthworks proposal not go ahead	Support
2.4.42	We would suggest making reference to the works to be undertaken on highways outside the Project area and required for either construction vehicles or operational (maintenance) road vehicles	No objection - comment
2.4.57 to Table 2.9	We suggest setting out the approval/ licence process responsibilities	No objection - comment
2.4.65	With regards to ancillary infrastructure, we would encourage mention of further security measures such as CCTV	No objection - comment
2.5.5	It would be useful to explain further the 'balancing of work force requirement' here	No objection - comment
2.5.15	It is important that dates & times of unsocial hours are	No objection –

	consulted on and published early to allow residents and businesses to make alternative arrangements	comment
2.5.18	It would be useful to highlight the fact that a construction travel plan has been prepared and is to be submitted as an appendix to the ES	No objection - comment
2.5.24	We suggest adding as a preliminary to works that notification will be provided to adjacent landowners and parish councils in advance of works	No objection - comment
2.5.27	We encourage the addition of providing notification prior to use of access routes in the Touch Point locations	No objection - comment
2.5.104	We request confirmation that there will be no onsite/ at compound accommodation other than facilities for security staff	No objection - comment
2.5.106	It would be useful to include an indicative percentage of HGV to rail delivery and/ or a indicative reduction in HGV movements through use of rail	No objection - comment
2.5.65	2.5.65 States: It is proposed to that all PROW (Public Rights of Way) within the Scheme Boundary are to be subject to closure or temporary diversion whilst construction works are being undertaken within a given location, up to a maximum of five years. All temporary diversions and closures are shown on the Scheme Drawings in Volume 4. The County Council accepts the need for the temporary closure of PROW within the Scheme Boundary (including compounds, haul roads utilising PROW and environmental mitigation areas) and has previously held discussions with NR to determine the extent of any additional temporary closures for PROW that connect to, or are an extension of the paths that will be temporary closed within the Scheme Boundary Unfortunately the Volume 4. Scheme drawings are not consistent in reflecting the extent of the temporary path closures outside of the Scheme boundary as were previously discussed with BCC. For example, where it is considered prudent to extend a temporary closure beyond the Scheme boundary to an existing physical boundary or to that path's junction with another PROW/Highway, or to extend a temporary closure to include a section of PROW that will be extinguished as the result of a permanent PROW rail crossing diversion, or to extend a temporary closure where a PROW crosses an area where Environmental mitigation works are to take place. There may also be locations where additional temporary alternative footpath routes can be provided to maintain connectivity to the PROW network and to provide a route to the nearest available (open) public highway rail crossing structure where this is considered feasible, safe and proportionate. In light of this, the County Council proposes that, where it is considered prudent to extend a temporary PROW closure beyond the Site Boundary, or to seek the provision of additional alternative footpath routes, that this will be determined and agreed by the County Council prior to the	Holding objection Proposed condition of TWAO

	submission by NR of any PROW Temporary Traffic Regulation Order application to the County Council.	
2.7	We are pleased to see the inclusion of a decommissioning section	Support

Section Reviewed	***Consideration of alternatives***	
Document Reviewed	*Environmental Statement Volume 2i – Chapter 3*	
General	We are pleased to see that metrics including climate change and air quality have been used in the consideration of alternatives	Support
General	Whilst this chapter considers genuine alternatives such as 'do nothing' or the Oxford to Cambridge Expressway ,it is worth going into further detail to explain the choice of pursuing EWR taking into account the environmental consideration as required, such as air quality, noise and climate change	No objection - comment
3.5.37	We suggest including details of integration with HS2 construction traffic, especially around the HS2 interface area	No objection - comment
3.5.42	We are pleased that opportunities are being explored to re-use materials on site, reducing the volumes that are required to be brought to and from the project area	Support

Section Reviewed	***Scope of the EIA and overall methodology***	
Document Reviewed	*Environmental Statement Volume 2i – Chapter 4*	
General	It would be useful to have a summary (perhaps in a table) where the technical chapters have varied the methodology agreed at scoping stage, or confirm that the method has been followed as was set out. The technical chapters will need to include the justification as to why the agreed methodology has been varied	No objection - comment
4.3	We recommend that you make reference to the consultation report	No objection - comment
4.3.3 – 4.3.11	It would be useful to give examples of project changes and mitigations that have occurred due to each of the consultations	No objection - comment
4.4.2	We suggest stating that a review of the 2015 Scoping has confirmed no changes and ideally that all organisations have confirmed this	No objection - comment
4.7.5	It is important that the concepts of 'receptor' and 'resource' are applied consistently throughout the EIA	No objection - comment
Table 4.2	Please ensure that this has been applied consistently throughout the EIA	No objection - comment
4.7.14	EIA Regulations state that 'significant' effects should be assessed. It is therefore best practice to include minor significant effects, as these are still significant and may result in a requirement for mitigation or measure a beneficial effect	No objection - comment
4.7.18	There may be minor residual effects that are measurable and require mitigation. See comment above re inclusion of all significant effects in an EIA	No objection - comment

Section Reviewed	***Planning policy***	
Document Reviewed	*Environmental Statement Volume 2i - Chapter 5*	
Para 5.2.1	This chapter should be updated and amended to reference the paragraphs and chapters of the revised NPPF 2018 which was published in July 2018. BCC's emerging Minerals and Waste Local Plan includes a revised minerals safeguarding area – this should be included as part of the Environmental Statement assessed under	No objection – amendment required

	Chapter 11 - Safeguarding Mineral Resources.	
5.5 Local Transport Policy	BCC's Freight Strategy was adopted in June 2018 and highlights East West Rail as a major infrastructure scheme which requires the Freight Strategy to help manage freight movements associated with it.	Support
Table 5.1	To amend wording - Buckinghamshire Minerals and Waste Local Plan 2016-2036 – Proposed submission. To also include reference to policy 1 Safeguarding Mineral Resources. The MSA has been revised as part of the Buckinghamshire M&W Local Plan update and now includes areas within the north of the county.	No objection – amendment required

Section Reviewed	***Land use & agriculture***	
Document Reviewed	*Environmental Statement Volume 2i - Chapter 6*	
General	Overall the draft Environmental Statement effectively identifies the resources and issues and also addresses the impacts of the proposal whilst identifying reasonable mitigation	Support
General	The cumulative effect of the project on the various ecosystem services provided by agricultural and other land-uses should be recognised and the opportunities to safeguard, and potentially enhance these recognised. Examples of Ecosystem services which could be adversely affected at least locally include the erosion and loss of soils with consequent effects on water-courses and WFD targets, flooding and biodiversity and carbon storage	No objection - comment
6.3.51	Please clarify whether the worst case category was used on each occasion that a building/land had more than one use	No objection - clarification
6.6	While we appreciate that best practice will be adopted with regards to mitigation measures, the need to monitor and enforce adherence should be recognised	No objection - comment

Section Reviewed	***Cultural Heritage***	
Document Reviewed	*Environmental Statement Volume 2i - Chapter 7*	
General	We welcome Chapter 7 Cultural Heritage of the Environmental Statement; however, it is not as clear as it could be. Section 7.10 states that archaeological heritage assets will not be mitigated but outline details for archaeological mitigation is included in section 7.7. Section 7.3.28 states that an Archaeological Fieldwork Strategy will be produced. These issues were discussed with Atkins who are the authors of the cultural heritage documents and the forthcoming field work strategy. Atkins sent the following email over these issues: *"Following our meeting on Thursday 9th I can confirm that mitigation on archaeological remains will be undertaken as part of East West Rail.* *This mitigation is not explicitly stated within the EWR TWAO submission ES (unless specifically for Historic Building recording), but instead will be detailed in the Heritage Delivery Strategy document (Title to be confirmed), which will act as a WSI for the archaeological evaluation of the scheme. Where appropriate this will list mitigation details straight away, other mitigation strategies will be evaluation dependant, and our intention is that this document will explicitly state that mitigation will be undertaken but decided*	Proposed condition of TWAO

	following evaluation results and in consultation with the LPA Archaeological advisor." We welcome the above information but as the significant documents are not currently available and the current cultural heritage documents of the Environmental Strategy are not clear, we would recommend that the following conditions are attached to any TWAO consent: 1. No part of the development, unless otherwise agreed, shall commence until the Heritage Delivery Strategy document has been produced and agreed with the Local Authorities concerned. This document will detail evaluation and mitigation measures for heritage assets including buried archaeology. These measures will include geophysical surveys, trial trenching and excavation. 2. Where archaeological evaluation is planed no development, unless otherwise agreed, shall take place until a location specific written scheme of investigation has been submitted to and approved the relevant Local Authority. 3. Where archaeological remains of national importance are found, no development at that location shall take place until an appropriate methodology for their preservation in situ, where reasonably practical, has been submitted to and approved in writing by the relevant Local Authority. The methodology shall be implemented as approved. 4. Where archaeological remains are recorded by evaluation and are not of sufficient importance to warrant preservation in situ but are worthy of recording, the development at the relevant location shall be carried out in accordance with a written scheme of investigation which has been submitted to and approved by the relevant Local Authority. Reason: To record or safeguard any archaeological evidence that may be impacted by the scheme.	

Section Reviewed	***Ecology***	
Document Reviewed	*Environmental Statement Volume 2i Project Wide Ecology and Chapter 9*	
EWR ES Volume 2i Project Wide Ecology		
Overview	This review follows on from the one we undertook in April 2018. The April review concluded that the document submitted was incomplete with many gaps on information and survey. Residual impacts at the time had not been finalised due to incomplete data sets. This review has completed the residual impact assessment and made indications of compensation required. However, this has been completed without the benefit of a finalised set of survey data. Without this information a complete understanding of the ecological impacts and subsequent mitigation, compensation and enhancements proposed is not	

	possible and therefore a comprehensive assessment of the impacts to ecology from the project cannot be made with any certainty.	
	Data from previous survey effort still seems to be missing. The missing data would provide the consultees with greater confidence that the conclusions drawn during the assessment are appropriate.	No objection – to be resolved at a future stage
	The report still does not contain the references towards net gain for biodiversity we would expect of a development of this scale. This was something that was promoted by EWR from the projects concept and communicated as a benefit of this scheme.	Holding objection
	It was expected EWR's long term aspirations for the Ecological Conservation Sites (ECS) and other mitigation areas would be on an in perpetuity basis. It is understood that ECS site have been secured but it is unclear whether this is an adequate amount of land and is indeed to be managed in perpetuity. Where shortfalls of net gain are identified other approaches to mitigation and offsetting may be appropriate. For instance the use of NGO's such as BBOWT to buy and manage land need to be considered, especially in the River Ray project area (geographically very close to EWR and in a Biodiversity Opportunity Area).	No objection - comment
	Over all we acknowledge that the document is in a far more complete state that that submitted in April but it is disappointing that it appears to have been submitted prior to completion of an appropriate amount of survey information.	
SUDS	It is unclear if the Suds schemes have been designed in a way that optimises their ecological benefits and reduces their potential adverse impacts. This was raised during previous consultations and is important as many small water bodies and ditches currently occur within the existing disused railway bed.	No objection – to be resolved at a future stage
White Clawed Crayfish	An assumption has been made that there will be no residual effect on this species. No translocation is therefore proposed. This assumption has been made without knowledge of what the status is of this species in the affected area. Assumed populations do not provide adequate assurance that the species is properly protected as required under legislation.	No objection – to be resolved at a future stage
GCN	An assumption has been made that there will be no residual effect on this species, again with very little data available and assumptions made on population sizes. The whole route has been mapped for its habitat suitability for this species under the District Licence pilot. Use of this data should be considered to try and reduce the extent of assumptions made within the EIA chapters towards this species. Currently we do not think adequate data has been provided to fully determine the impacts on this species within the EIA.	No objection – to be resolved at a future stage

Barn Owl	Residual effects to this species have been acknowledged but securing the mitigation required is not adequately set out and needs to be addressed in a comprehensive way. Engaging the services of the Bucks Owl and Raptor Group will be the most appropriate way forward for this species.	No objection – to be resolved at a future stage
Bats	Level of data provided within this consultation is not adequate to assess the residual effects towards these species for example the activity surveys have not been completed on the existing bridge spans or trees with PRF along the line, so how can it be assumed that there are no important rare populations. No crossing or transect surveys have been carried so the impact of the line cannot be fully determined. The mitigation measures provided are not fine tuned to the actual requirements of the populations.	No objection – to be resolved at a future stage
Otter	Mammal passes are supported where identified. Again the incomplete survey data for this species is questioned.	No objection – to be resolved at a future stage
Invertebrates	This is an incomplete survey data set for these species. For example glow worms have not been included for assessment.	No objection – to be resolved at a future stage
Other Species	There are too many large gaps in survey data relating to most species and habitats listed as important ecological features. Therefore we do not feel a robust EIA has been finalised.	No objection – to be resolved at a future stage
Connectivity	To be resolved at a future stage once the surveys have been fully submitted	No objection – to be resolved at a future stage
Ponds	Only ponds within designated sites appear to have been surveyed for their habitats.	No objection – to be resolved at a future stage
Reptiles	There is a lack of information provided for Adders which were found on the redundant sections of tract during previous EWR surveys. Adders are now a rare species within the County.	No objection – to be resolved at a future stage
LWS/BNS	We do not think there has been adequate survey and subsequent mitigation in place to maintain the function of LWS / BNS that are being impacted by the EWR.	No objection – to be resolved at a future stage
Habitats	Open mosaic habitat on clay are an important feature in this area and provide key habitat for invertebrates, reptiles and plants. This should be a feature which is replaced. An assessment of loss of Habitat versus gain has been provided on an area basis rather than by use of a recognised biodiversity accounting mechanism which includes a valuation of habitat. This is essential to enable EWR to demonstrate net biodiversity gains.	No objection – to be resolved at a future stage

Section Reviewed	***Geology, soil and land contamination***	
Document Reviewed	*Environmental Statement Volume 1 and 2i - Chapter 11*	
EWR ES Volume 1 Non-technical summary.		
Summary of residual effects, page 37,	Given the scale of the earth moving and profiling that accompanies such a scheme it seems unlikely that the	No objection - comment

Geology, Soil and Land Contamination	process of railway creation, and its aftermath will have no effect on soils. Although the broad geology across the piece is fairly consistent (Geology and Soils, page 25) there are localised deviations from this. In the Swanbourne – Mursley area sand / alluvial lenses and soft wet mobile soils have clearly been an issue in the past. It seems more likely that works will, in places, affect local soils be it through revetments and stabilisation, or the redistribution of gained inert materials which may well differing form site "native" soils at that exact locale. The reuse of gained materials at certain locations is likely to affect aftercare, and ecology of communities establishing on them.	
Env Statement Vol 1: Non-technical summary. Summary of residual effects, page 37, Geology, Soil and Land Contamination	Remobilisation of old ballast materials in remediation areas will affect local soils and communities which develop on them, a factor being positively harnessed in the Salden area for specific, targeted, new butterfly and lizard habitat.	No objection - comment
Env Statement Vol 1: Non-technical summary. Summary of residual effects, page 37, Geology, Soil and Land Contamination	The new planned faux cutting in the Salden area, created as replacement habitat for locally significant butterfly, lizard and plant species will provide a positive benefit not only for the wildlife but also to study the local geology profiles if left with a bare cut finish not seeded.	No objection – to be resolved at a future stage
Env Statement Vol 1: Non-technical summary. Summary of residual effects, page 37, Geology, Soil and Land Contamination	The creation of platform access at Winslow station, along with potential interpretive materials within the new station itself, has the capacity to create a very positive outcome for the local and visitors' appreciation of north Bucks geology and its fascinating fossils.	No objection – to be resolved at a future stage
EWR ES Volume 2i: Project-wide Assessment		
Chapter 11 Geology, soils and land contamination. 11. Second para	The document states "The effect on ground stability and compaction during construction is a significant and permanent beneficial effect" this seems somewhat of a non-sequitur. It is beneficial for what? Is the ground compaction increased or decreased? This change might be good for bank stability if for example compaction is increased but then this would have a negative effect on surface and ground water percolation and hence possible flood implications. The statement appears to need better qualification.	No objection – amendment required
EWR ES Volume 2ii: Route Section Assessment		
Route Section 2A Chapter 11 Geology, soils and land contamination. Operation. 11.3.16	Directly contradicts text in Env Statement Vol 1: Non-technical summary. Summary of residual effects, page 37, Geology, Soil and Land Contamination. Is it, or is it not significant; and / or beneficial.	No objection - clarification
Ditto above reference for route sections 2B – 2E and HS2 interface	Ditto above comments	No objection - clarification
Route Section 2A Chapter 11 Geology, soils and land contamination. 11.4 Mitigation measures	Is it possible to instil a design and operational principle that it is possible, for suitable locations, to retain open faces of geology for study and public examination where there are not incompatible with safety / stability considerations. I.e. works at Winslow station may be able to retain a cut section, viewable from a permanent public space, where the underlying geology is visible and can be interpreted. This could be flagged as a unique and positive benefit.	No objection – to be resolved at a future stage
Ditto above reference for route sections 2B –	Ditto above comments	No objection – to be resolved at

2E and HS2 interface		a future stage
Route Section 2B Chapter 11 Geology, soils and land contamination. Important geological sites. 11.2.15	The land to the south west of Bletchley is designated as a Local Wildlife Site not BNS. It is therefore in need of retaining good water quality, and given its immediate adjacency to the works is at risk from soils and other pollution / contaminants arising from the works and the lines operation.	Holding objection

Section Reviewed	***Water Quality and Flood Risk***	
Document Reviewed	*Environmental Statement Volumes 2i Chapter 13, 2ii and 3 (appendices)*	
	General Comment	
We would ask that the applicant take into consideration the following comments as well as the technical note (**Appendix D**) outlining several areas within the project boundary with potential for surface water management opportunities. The technical note was submitted to EWR in March 2018.		
Section Reviewed	**Volume 1 Non-technical summary**	
Summary of residual effects, page 37, Water Quality and Flood Risk	It seems highly unlikely that such a major project as this will have nil long term effect on water quality or flood risk; be it positive or negative. At the very least new SUDs and other water remediation features should provide flood attenuation, and incumbent scrubbing of pollutants whatever their source be it rail derived or from adjacent land uses.	No objection – amendment required
	The documents statement within section on Ecology (page 36, ultimate point) that the scheme will "increase terrestrial and aquatic habitat for Great Crested Newts" there needs to be a balancing point in the Water Quality and Flood Risk section to cover positive habitats created, as a minimum.	No objection – amendment required
Section Reviewed	**Volume 2i Chapter 13 Water Quality and Flood Risk**	
13.2.33	Within Table 13.3 there is an assumption made that all impermeable areas will be drained in accordance with the EA's agreement on unrestricted discharge. Please can you clarify what this agreement is and if it is only viable when discharging to a main river? Any increase in impermeable area should be discharging at greenfield runoff rates so that there is no increased risk downstream. The LLFA would not accept unrestricted discharge rates.	No objection - clarification
13.6.48	The ground investigations undertaken do not include groundwater monitoring or investigation. We would recommend that ground water is monitored from October through to March in areas at risk, in particular east along the line from and including Winslow as groundwater is known to be unpredictable and variable here.	No objection – to be resolved at a future date
13.6.169	Infiltration tests will need to be undertaken in accordance with BRE 365 to ensure that infiltration is a viable option.	No objection – to be resolved at a future date
Section Review	**Volume 2ii Chapter 13 Water Quality and Flood Risk**	
13.3.8	If the intention is to use existing pipes and ditches then they should be surveyed to check condition and capacity.	No objection - comment
13.5.46 and 13.5.50	Even though these compounds are temporary, there should be no increased flood risk and the discharge rates should be restricted to greenfield with the use of SuDS to manage surface water.	No objection - comment
13.5.85 and 13.5.94	This paragraph states that the project will seek to ensure there is no increase in flood risk to existing vulnerable receptors. However this is misleading, under NPPF the project shouldn't increase risk of flooding on site or elsewhere, including all receptors existing and future.	No objection - comment
13.5.91 and 13.5.102	Please consider the following points for Table 13.14:	No objection –

	Mitigation measures for Hydrology & Flood Risk; • Recommended upstream storage for surface water routes where appropriate • The Drainage Design should prioritise SuDS and follow the SuDS treatment train and surface water drainage hierarchy. Specific LLFA guidance document should be followed and adhered to • Where surface water risk is high betterment should be considered for runoff rates • Where hardstanding is to be increased, permeable paving should be considered where appropriate • Where culverting has potential to increase flooding downstream undersized culverts should be considered to hold back water and create betterment The above recommendations should be explored and discussed with the appropriate LLFA on a case by case basis.	amendment required
13.5.1	For information the EA's Bear Brook and Upper Thame hydraulic model is currently being updated. The updated model should be used once it has been published.	No objection - comment
Section Review	**Volume 3 Appendix 13.1 Flood Risk Assessment**	
General	In the draft FRA the mitigation summaries for Sections 2A, 2B, 2E said that "where it is not possible to avoid increasing the groundwater flood risk, mitigation measures will be applied. Once groundwater has emerged above ground, mitigation measures are the same as for surface water flood flows – provisions of CFASs to mitigate for losses of floodplain storage" these section have now been taken out of the FRA, however the cumulative impact of groundwater and surface water needs to be assessed and mitigated.	No objection – to be resolved at a future stage
General	Displacement of groundwater and the potential to increase risk to receptors should be considered.	No objection - comment
General	I have not come across any mention of the groundwater flood risk in existing cuttings – this might be worth considering, especially in Winslow where there is water within the cutting all year round.	No objection - comment
2.1.3	As culverts were beyond the scope of RoFSW assessment, this could also mean that the risk of surface water flooding downstream of the culvert is underplayed.	No objection - comment
2.3.25	The Drainage Design should prioritise SuDS and follow the SuDS treatment train and surface water drainage hierarchy. Specific LLFA guidance document should be followed and adhered to	No objection – amendment required
2.3.33	SuDS should be considered in more detail at Winslow Station.	Proposed condition of TWAO
2.3.34	Discharge rates should be worked out on a site by site basis. The LLFA will not accept any rate greater than greenfield and it should be noted that flow control devices can be limited	No objection - comment
2.3.45	There could be options where holding water back in a controlled manner upstream and creating extra flood storage or wetland areas could be beneficial to the downstream	No objection - comment
2.3.60	We would also recommend that impacts on flow paths are considered and mitigated for if any of the compounds will affect flow routes.	No objection - comment
2.3.64/65	My comments on the draft about requirement for Land Drainage Consent have been incorporated however the section reference in 1.1.6 which doesn't fit in here.	No objection - comment
4.2.25	It is recommended that hydraulic modelling is undertaken for	No objection -

	those ordinary watercourses that have a significant risk of flooding shown by the RoFSW.	comment
4.3.15	Please consider the following points for Table 4.7: Route Section 2A – Summary of impacts and Proposed Mitigation Measures; • Recommended upstream storage for surface water routes where appropriate • The Drainage Design should prioritise SuDS and follow the SuDS treatment train and surface water drainage hierarchy. Specific LLFA guidance document should be followed and adhered to • Where surface water risk is high betterment should be considered for runoff rates • Where hardstanding is to be increased, permeable paving should be considered where appropriate • Where culverting has potential to increase flooding downstream undersized culverts should be considered to hold back water and create betterment The above recommendations should be explored and discussed with the appropriate LLFA on a case by case basis.	No objection – amendment required
4.3.23	Is a culvert crossing appropriate for Station Road? We support the need for a hydrological and hydraulic model for the ordinary watercourses recommended.	No objection - clarification
5.3.17	The realignment work should be done in consultation with BCC as LLFA.	No objection – to be resolved at a future stage
8.3.16	Please consider the following points for Table 8.6: Route Section 2E – Summary of impacts and Proposed Mitigation Measures; • Recommended upstream storage for surface water routes where appropriate • The Drainage Design should prioritise SuDS and follow the SuDS treatment train and surface water drainage hierarchy. Specific LLFA guidance document should be followed and adhered to • Where surface water risk is high betterment should be considered for runoff rates • Where hardstanding is to be increased, permeable paving should be considered where appropriate • Where culverting has potential to increase flooding downstream undersized culverts should be considered to hold back water and create betterment The above recommendations should be explored and discussed with the appropriate LLFA on a case by case basis.	No objection – amendment required
9	Although this is out of the scope of the FRA, it would be good to understand how BCC as LLFA will be consulted on works in this area and from which organisation will the communications be coming from.	No objection - clarification
11.2.5	Consideration of natural flood management techniques and SuDS to manage surface water, as a priority, is recommended.	No objection - comment
Section Review	*Figure 13.3 Flood Risk*	
A number of Compensation Flood Storage Areas (CFSA's) are located within areas of surface water flood risk. Ideally this should be avoided where possible and a sequential approach should be taken for their locations. The surface water flood risk shouldn't be displaced and therefore the CFSA's should be designed sufficiently for surface water and the compensation.		No objection – comment

East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council

Section Reviewed	***Cumulative effects***	
Document Reviewed	*Environmental Statement Volume 2i - Chapter 15*	
Overall chapter comments	The chapter refers to human receptors; however the ES does not include a separate topic chapter for human health. BCC would question whether the impact of the scheme proposal on human health, for both construction and operational phases, has been sufficiently considered. As stated in previous consultations, BCC suggest further consideration is given to human health.	No objection - comment
Overall chapter comments	The chapter should revise how it sets out the impact of construction and operational phases of the scheme as the impacts of both phases are unclear.	No objection - comment
15.6.2	This paragraph states that no significant cumulative intra-project effects have been identified for the following topics (topics are listed), but it is unclear as to how the chapter has come to the conclusion on this outcome.	No objection - comment
15.6.33	Traffic and transport – this section does not provide a clear overview of the construction and operational effects of the project on traffic and transportation, and how the conclusions in this section were derived at.	No objection - comment
Human receptors, page 19	This section of the chapter refers to amenity on sports and leisure groups, residential amenity effects, property receptors, but does not seem to assess the human receptor impacts in relation to traffic and transport during the construction phase. This should be included within this section as it is not clear what impact construction of the scheme will have on local communities.	Holding objection – see Traffic and Transport comments
15.7	This section refers to HS2 Interface Area and includes an assessment that the cumulative effects of the two projects will have varying degrees of adverse effects on land use and agriculture, ecology, landscape and traffic and transport. The mitigation for these assessment outcomes specifically to the HS2 Interface Area is unclear.	Holding objection – see Traffic and Transport comments

Section Reviewed	***Summary of mitigation***	
Document Reviewed	*Environmental Statement Volume 2i – Chapter 16*	
General	It is important that the mechanism by which mitigation can be delivered is highlighted in detail. For example, will impacts on schools or PROW be addressed as part of a S106 agreement?	No objection – clarification
General	As part of the monitoring process, it is important to highlight which party has clear roles and responsibilities. This may involve engagement with the relevant local authorities	No objection - comment

Appendix B: Comprehensive review of the Traffic and Transport Chapter, Environmental Statement (Document NR16)

The following comments set out issues that have been identified with the Transport Assessment (Volume 3 Appendices of the Environmental Statement) Appendix 14.1. Whilst the Highway Authority is broadly supportive of the scheme there are a number of issues that need to be addressed before the Council can be satisfied with the transport impacts of the proposal. These are set out in detail below.

The structure of the Highway Authority's response broadly mirrors that of the Transport Assessment.

Chapter 4 - Baseline Conditions

Chapter 4 of the Transport Assessment reviews the baseline conditions, which has been developed in consultation with Buckinghamshire County Council. This chapter sets out the existing transport conditions, including rail infrastructure, rail stations, the highway network and level crossings.

Existing railway station car parking usage

The Highway Authority has concerns regarding the car parking utilisation shown in Table 4.2. Aylesbury Vale Parkway utilisation seems very high (90%). A recent survey undertaken as part of the Berryfields Development showed only 35% occupancy, suggesting that the figures used in the Transport Assessment are inaccurate.

Furthermore both Buckinghamshire County Council and Oxfordshire County Council have asked for cycle parking data to be included. Surveys should be provided indicating the current cycle parking utilisation to ensure that it can accommodate future demand and meet the need of increased passengers using the train stations along the East West Rail (EWR) rail route.

EWR has advised that new surveys are going to be undertaken at the train stations after the school holidays. The Highway Authority will need to be provided with these survey results, as this will inform the operational assessment and subsequent comments.

It should be noted that Transport for Buckinghamshire's Parking Team have highlighted existing parking pressures on the other side of Bourg Walk bridge to the southwest of the line resulting from commuter parking from the train station.

Level Crossings

Many of the crossings are private to facilitate rights of way access across the line therefore it is assumed that discussions have taken place with individual landowners. Please refer to comments issued by BCC Rights of Way team in relation to the Public Footpaths and Bridleways that will be affected.

Pedestrian and Cycle access at Stations

Walking and cycling isochrones have been provided for Aylesbury and Aylesbury Vale Stations. The isochrones demonstrate the distance which can be walked or cycled from the station within 20 minutes. These do not consider the quality of the routes to and from stations, and some of these routes are unlikely to be utilised in the hours of darkness. Further consideration needs to be paid to the quality of the walking and cycling links to the train stations.

Chapter 5 – Survey Data

Chapter 5 of the Transport Assessment provides a summary of the survey data used to inform the analysis within the Transport Assessment and includes both primary and secondary traffic surveys and multimodal surveys.

Primary Traffic Surveys

Manual Classified Counts have been undertaken to determine the vehicle movements by classification at junctions. The Manual Classified Counts have been undertaken in neutral months in accordance with WEBTAG. The surveys were only however undertaken on a single day and usually the Highway Authority would request 2 days of survey data. The flows associated with the Manual Classified

Counts should therefore be cross referenced with the Automatic Traffic Count data to ensure that the flows are reflective of a normal day.

Secondary Traffic Surveys
Local Highway Authority data and HS2 data have been used. Whilst the Highway Authority understands the need to avoid abortive costs, it is concerned with the use of survey data over 3-4 years old as this does not follow best practice. Having reviewed figures 14.4 A-E the Highway Authority has concerns regarding the following survey locations in Buckinghamshire:

- Manual Classified Count (2013) – Winslow – A413/Little Horwood Road (this forms part of the HGV construction routing)
- Manual Classified Count (2014) – Winslow – A413/Great Horwood Road (this forms part of the LGV construction routing)
- Manual Classified Count (2013) – Aylesbury – Griffin Lane/Gatehouse Way

EWR has advised that they are going to review these locations and provide feedback to the Highway Authority whether this impacts on their assessment and if further data collection is required.

Multi-Modal Surveys
The methodology and scope of the multi-modal and passenger surveys has been agreed with the Highway Authority. The multi-modal specification has been designed to take into consideration train passengers parking off-site and walking to the railway station to continue their onward journey, which is particularly important in Aylesbury where the existing train station car park is close to capacity. It is noted that the passenger survey data collected has been used to manually adjust the mode share results from the multi-modal surveys. Whilst the results from the multi- modal passenger surveys have not been submitted as art of the TWAO, the Highway Authority has now been provided with this dataset.

The Multi-Modal surveys show that Aylesbury Train Station has a much higher percentage of passengers accessing the station by car when compared to the national average mode share from the National Passenger Survey (22% vs 11% NPS). The majority of passengers arriving by car in the am peak park off site (19%), indicating that people are either using the local highway network or alternative car parks. In addition walking (42% vs 56% NPS) and cycling (2% vs 4% NPS) is significantly lower, indicating that whilst a number of homes are accessible within 20m walk or cycle of the station this is not an attractive option.

Aylesbury has an existing cycle network which has a number of areas that could be improved to provide links to all areas of the town, which fall within a suitable distance for cycling to the station.

Chapter 6 – Road Safety Assessment
Chapter 6 of the Transport Assessment has reviewed road safety based on five years of collision data provided by the relevant local highway authorities.

Assessment Methodology
To identify locations within the construction and operational study area, a series of heat maps have been produced. These are contained in Figure 6 however it appears that the following areas within Buckinghamshire have been omitted:

-Winslow
-Drayton Parslow
-Mursley
-Charndon
-Poundon
-Edgecott

The heat maps for these areas has been requested from EWR and are required to allow a final assessment to be undertaken by the Highway Authority.

Detailed collision analysis has only been undertaken if locations meet the following criteria:

- If there was a 'fatal' collision within the five year analysis period
- If there were 15 or more collisions within the five year analysis period.

The Highway Authority has questioned this methodology and has asked EWR for justification in relation to how they came up with these criteria. Furthermore it is unclear how the criteria have been applied in relation to an area (e.g. 15 or more collisions over 200m or 2 miles).

It should be noted that some of the rural roads are lightly trafficked and are not necessarily used by HGV's, it is therefore important to consider any patterns across links and junctions to understand if this would be exacerbated by the proposed construction traffic. In addition the collision history has not been considered in the assessment of the location of new access points onto the local highway network. Further work is required in order to support the locations proposed and outlined in Appendix H Construction Strategy and Appendix G Construction Access Drawings.

Construction Baseline assessment

It appears that EWR have not looked at collision trends across key construction corridors such as the A41, A413 and A421 in Buckinghamshire. This is particularly important given the increase in HGV traffic being proposed along these routes.

The detailed construction analysis consistently refers to driver error and therefore no mitigation is proposed. The Highway Authority is concerned with this approach given that this fails to consider a number of other factors such as speed perception, gradients, failure to look properly, poor turning manoeuvres, or loss of control on slippery surfaces. In addition there is an assumption that no improvements could be made to mitigate such collisions from occurring. The highway authority maintains that mitigation measures can be implemented that can raise awareness of hazards and reduce the risk of collisions. These can take the forms of, coloured surfaces to highlight junctions and hazards, vehicle activated signing, high friction surfacing, relining or refreshing lining to improve visibility.

As a result of the road safety assessment the Highway Authority is of the view that the following junctions and links require further assessment and/or mitigation:

- **A41 Corridor** - Junctions along the A41 that are to be used for construction traffic should have red surfacing applied to hatching areas to highlight the increased risks associated with these junctions. A right turn lane should be provided for junctions along the A41 to allow safe refuge for vehicles turning. Radius of junctions should be modified in such a way as to remove the need for vehicles joining A roads to over shoot the centre line. Where accesses are temporary they are to be planed out and removed following completion of the works.

- **A413 Corridor** – Junctions along the A413 that are to be used for construction traffic should have red surfacing applied to hatching areas to highlight the increased risks associated with these junctions. A right turn lane should be provided for junctions along the A413 to allow safe refuge for vehicles turning. Radius of junctions should be modified in such a way as to remove the need for vehicles joining A roads to over shoot the centre line. Where accesses are temporary they are to be planed out and removed following completion of the works.

- **A413/Vicarage Road/Sheep Street** - This junction requires mitigation to highlight the running lanes in each direction to maintain lane discipline around the bend. Additional protection is required on the inside of the bend to protect the pedestrian footway from overrunning of vehicles.

- **Padbury Road/A421/Lower End staggered junction –** This junction requires mitigation to highlight the hazards around turning movements. This could be in the form of coloured surfacing, vehicle activated signing, high friction surfacing, relining and/or refreshing lining.

- **Blackgrove Road/Waddesdon Hill/A41** – it is noted that this junction is to be upgraded as part of HS2 and for the purpose of this assessment it is considered committed. This route cannot be used by EWR construction traffic until the works to this junction have been carried out or alternatively a temporary scheme provided.

- **A421 Corridor between Tingewick Bypass and Bourton** – In particular the junction at Tingewick Road, the roundabouts at Gawcott Road, Osier Way and junction of A421, with the A413 east of Buckingham town. Safety mitigation on the approaches to these junctions should be considered particularly mitigation against the risk of collisions within queuing traffic. This could take the form of coloured surfacing, vehicle activated signing, high friction surfacing, relining and/or refreshing lining.

- **A413 between A421 and Lace Hill -** The A413 leaving Buckingham has a number of sensitive locations along it, including a supermarket, long distance bus stops and a well-used pedestrian route to local schools. A safety scheme is required to ensure safety all of road users during construction.

- **A421 and A413 roundabout and approaches** – The junction operates at or above capacity for much of the time, and is heavily used by HGV's. Safety mitigation on the approaches should be considered particularly mitigation against the risk of collisions within queuing traffic. This could take the form of coloured surfacing, vehicle activated signing, high friction surfacing, relining and/or refreshing lining.

- **A413/Lenborough road junction** – the heat maps indicate a number of collisions have occurred in the vicinity of the junction. The proposed construction routing would considerably increase the number of right hand slow turning movements and therefore this needs further consideration.

- **A413 Padbury** –The A413 through Padbury passes close to the local primary school and has significant numbers of children walking to the school. A safety scheme is required to ensure safety all of road users during construction.

- **Whaddon Road** – the heat maps indicate a number of collisions at the point in the network where the Haul Route for B5 compound is to be accessed and therefore this needs further consideration.

- **Fleet Marston** – the heat maps indicate a number of collisions at the point in the network where E5 compound is to be accessed and therefore this needs further consideration.

- **Blackgrove Road** – the heat maps indicate a number of collisions at the point in the network where E4 compound is to be accessed and therefore this needs further consideration.

- **Main Street Mursley** – The Highway Authority is of the view that mitigation should be provided to ensure that safe access is maintained through the village centre for all road users during construction. This should include a review of parking restrictions.

- **Drayton Road, Mursley Road/Bletchely Road Jucntion** – This junction requires mitigation to highlight the hazards around turning movements. This could be in the form of coloured surfacing, vehicle activated signing, high friction surfacing, relining and/or refreshing lining.

- **A421 corridor between Little Horwood Road, Shucklow (junction 27) and A421, Winslow Road (Junction 26)** – Junctions along the A421 that are to be used for construction traffic should have red surfacing applied to hatching areas to highlight the increased risks associated with these junctions. A right turn lane should be provided for junctions along the A421 to allow safe refuge for vehicles turning. Radius of junctions should be modified in such a way as to remove the need for vehicles joining A roads to over shoot the centre line. Where accesses are temporary they are to be planed out and removed following completion of the works.

- **A41 – Jackson Road to Rabans Lane** - Parking restrictions should be sought on the A41 between Jackson Road and Rabans Lane in Aylesbury.

Chapter 8 – Construction Strategy

Chapter 8 of the Transport Assessment outlines the proposed construction strategy and is core to the methodology and outcomes of the assessment. The project will use the local highway network to access various points along the route known as touch points and these are classified as compounds, local access points or structures. The following principles have been applied:

1. HGV trips for plant and material deliveries will travel directly to the compound, local access point or structure via designated routes
2. LGVs will be used to travel between compounds and local access points between compounds and for some deliveries from the wider highway network
3. Staff and operatives will travel to compounds only and be ferried from compounds to local access points using LGVs

The above principles will need to be adequately secured in the Construction Traffic Management Plan, as part of the TWAO.

Compounds
There is currently only one vehicle park proposed (near M1 junction 13) to be used to hold HGV's while they wait to access other compounds at the right time. The Highway Authority requires clarification why a vehicle park is only proposed on the M1 approach and not all approaches (such as that from the M40), given the proposed routing and location of compounds.

It is noted that there are approximately six times the number of vehicles approaching the A413 from the west as from the M1. The Highway Authority considers that if EWR have deemed a compound to be suitable for the M1 junction, then the M40 should be provided with a vehicle park taking into account the fact that they identify greater pressure on this route.

It should be noted that the Highway Authority has particular concerns regarding the following compounds due to the ability to provide safe and suitable access in accordance with the National Planning Policy Framework (NPPF):

Verney junction B2 – the proposed HGV routing to local access points, structure and compounds in this area is considered to be a **significant** issue and the mitigation proposed is not sufficient to overcome this concern, Verney Road is an unclassified rural road and due to the alignment there is poor forward visibility coupled with inadequate highway boundary to provide sufficient passing places and widening. The maximum daily HGV movements predicted are 233, with an overall duration of 20 months. On this basis the Highway Authority is not satisfied that safe and suitable access can be achieved.

The Highway Authority has previously questioned why a haul route has not been considered between compounds B1-B4, given the number of compounds, structures and access points in such close proximity.

The tracking provided as part of the TWAO shows that it is not feasible to take access from the local highway network. EWR need to re-consider the provision of a haul route in this location or more radical options such as closing parts of Verney Road to the travelling public, shuttle one way working and holding areas for HGV's. The Highway Authority recommends that EWR engage as soon as possible to find an acceptable solution.

Furze Lane B3 – It is predicted that Furze Lane will be subject to a maximum of 296 daily HGV movements, of which 160 continue south of the railway bridge. These routes are to be used for an overall duration of 11 months. The Highway Authority is not satisfied that safe and suitable access can be achieved.

The road has already been widened to 5.5m where possible within existing highway boundaries. Due to highway constraints the road cannot be widened further. It should be noted that drawings previously provided by EWR have shown localised widening, which is within land under third party control.

The tracking provided as part of the TWAO shows that it is not feasible to take access from the local highway network. EWR need to re-consider the provision of a haul route in this location or more radical options such as closing parts of Furze Lane to the travelling public, shuttle one way working and holding areas for HGV's in order to make this route feasible. The Highway Authority recommends that EWR engage as soon as possible to find an acceptable solution.

The railway bridge is controlled by temporary traffic signals. The current housing site is required to deliver a more permanent installation of these signals. It is noted that Winslow Town Council seeks a revision to the TWAO for refurbishment of the bridge to deliver a deck carrying a 5.5m two-way carriageway and a single 1.8m footway on the eastern side. This is not something which EWR are proposing currently, however the Highway Authority would support this change if it is achievable.

Newton Longville Compound B5 – it is predicted that Whaddon Road will be subject to a maximum of 97 daily HGV movements, with an overall duration of 18 months. This equates to one movement every 6 minutes during the peak construction period. It is unlikely that the Highway Authority will find it acceptable for vehicles to be stacked on the highway as this leads to safety and convenience issues. Further details on the operation of this area are required and should form part of the Framework CTMP.

Bletchley Compound B6 – It is proposed that this compound will be EWR headquarters for the duration of the Project. Due to the high number of staff the Highway Authority requires a specific Travel Plan for this site with agreed access routes. In addition the Highway Authority has concerns about the impact on the location of this compound on traffic through Newton Longville and this has not been adequately addressed within the Transport Assessment.

It is predicted that Bletchley Road will be subject to a maximum of 202 daily HGV movements, with an overall duration of 18 months. This will equate to one movement every three minutes, during the peak construction period. The Highway Authority expects to see a safe method of control to be deployed to manage the wide range of vehicle types accessing this compound. Further details on the operation of this area required and should form part of the Framework CTMP.

Touch points
Detailed comments on the touch points and construction routes are provided later in this response and take into account the vehicle generation and the information at Appendix H (construction route assessment) and Appendix G (site access drawings). It should be noted that we have been unable to agree the construction routes with EWR prior to submission off the TWAO due to lack of information. This is the first time the Highway Authority has been provided with a complete route assessments.

Proposed Haul Routes
To gain access to some of the locations along the route short sections of haul routes have been proposed. It is understood the use of haul routes has been reduced to save on overall scheme costs, however it is unclear why haul routes have been proposed in certain areas and not others. Especially when there are short links with a number of touch points (either local accesses or structure accesses along the same route) that would benefit from a haul route.

In particular the highway authority are surprised that a haul route has not been considered at Verney Junction where there are significant highway constraints, which make accessing the touch points, including the satellite compounds extremely difficult.

The haul route and main compound entrance at Newton Longville do not appear to be aligned. The Highway Authority considers that these should be aligned to allow simple movement between the two accesses without turning movements. It would also facilitate the most efficient deployment of temporary or semi-permanent traffic signals.

Proposed Construction Timings
Table 8.4 sets out the daily profile of construction activity. It is proposed that HGV trips will occur throughout the working day from 07:00-18:00 and are assumed to occur at a broadly constant frequency across the whole day, with arrivals and departures occurring in the same hour. The Highway Authority has raised concerns with EWR regarding how this will be controlled, particularly due to the absence of layover points or stacking areas. EWR has advised that they will look to implement a Logistics Management System, which allows routes and delivery times to be specified and tracked. This would provide a level of assurance regarding the accuracy of the assessment.

The Highway Authority supports the use of a Logistics Management System, but requests information on how this will operate, noting that use of hand held devices while driving is not legal. The Highway

Authority makes the assumption that this will work on a data push system to a sat nav type device. This needs to be secured in the Framework CTMP.

The daily profile of staff and operatives is based on the start and finish times and therefore also needs to be secured in the Framework CTMP or as a requirement of the TWAO.

Temporary Road Closures and Highway Diversions
An assessment of the impact of the structure closures on the HGV construction routes need to be undertaken, especially on traffic through Marsh Gibbon to the Poundon Compound (A3). While this is indicated as having limited impact, as it is for a limited time, locally this is considered to have a high impact in terms of local safety due to the nature of the roads through Marsh Gibbon and the fact it goes past a school. The Highway Authority require certainty from EWR that the structure closures will not result in a diversion of HGV's and LGV's on unsuitable parts of the network. This needs to be secured in the Framework CTMP.

The closures shown in Chapter 14 of the Transport Assessment do not specify the diversion routes, dates or durations. While the Highway Authority has no objection in principle to closures being implemented for engineering delivery, the diversions and programming will be subject to applications through the Network Management team. To ensure that street work conflicts do not impact on the programme the Highway Authority advises that these works are noticed at the earliest possible opportunity through ETON. The Highway Authority also expects EWR to coordinate works requiring closures with High Speed 2 where possible, to avoid unnecessary disruption to the travelling public.

Diversion routes for road closures have not been assessed by the Highway Authority as these have not been submitted. These routes will be assessed at the point of application if not submitted before. The Highway Authority expects that EWR will apply the principles that have been set out through the TA and Framework CTMP when planning these routes.

The Highway Authorities Public Transport team have been consulted on the proposed routing and road closures and at this point have no concerns to raise. It should however be noted that any closures that will be in place for an extended duration may well present a requirement for further mitigation and the Highway Authority reserves its position in this regard.

Chapter 9 – High Speed 2
This assessment is based on information made available from High Speed 2 Limited. Unfortunately, not all information is readily available at this stage and is currently being developed in detail by individual main work contractors, including HGV routes and vehicle numbers.

Construction of HS2, in particular the HS2/EWR interface, is programmed to commence this year with the main civil works programmed to start in May 2019 and programmed to run for approximately 5 years (up to 2024). Works in the interface area are due to be completed by August 2020. HS2 have a number of proposed temporary road closures and highway diversions, however for the purpose of this assessment it is assumed that the proposed construction routes for EWR will be accessible throughout the duration of the construction phase.

It is assumed that the vehicles associated with the construction of EWR will use the existing highway until the proposed highway works associated with the construction of HS2 come online. The Highway Authority does have concerns with this approach particularly in relation to the following:

- **A418 Oxford Road Overbridge** – a new overbridge is to be constructed over the proposed HS2 line along the A418 Oxford Road, which will require traffic management on the A418 to facilitate tie-ins. The Highway Authority would want to limit the use of this proposed construction route whilst traffic management is in place.
- **A41 Bicester Road Overbridge and Blackgrove Road** – a new overbridge is to be constructed over the HS2 line along the A41 Bicester Road. The new overbridge will tie into the existing Blackgrove Road to the north of the A41. The existing A41/Blackgrove Road junction has a serious collision history and the Highway Authority would not accept the use of Blackgrove road as construction route until the HS2 works are carried out or a safety mitigation scheme is implemented by EWR.

- **West Street and School Hill Overbridges** – closure of School hill for approximately 18-24 months and West Street 12-18 months. The diversion takes traffic past the access to the haul road for Green Lane (A4) and along the construction route (Main Street and School Hill). If these closures occur during the use of the Green Lane compound then temporary safety mitigation may be required by EWR.

It should be noted that as part of HS2, Station Road Quainton is to be diverted across a new bridge. This has not been considered in the cumulative assessment and EWR need to address this point within the Framework CTMP

If the proposed works associated with HS2 fail to be completed before EWR commences then temporary routing or mitigation may be necessary and will need to be agreed with the Highway Authority. This needs to be secured in the Framework CTMP or as a separate requirement of the TWAO.

Given the stage of both schemes and noting the ongoing work being undertaken by HS2, the Highway Authority requires EWR and HS2 to work together in terms of developing their mitigation package and co-ordination of works within Buckinghamshire to limit the impact of two major projects being delivered in the same rural areas.. The Highway Authority understands that a haul road is being proposed by HS2 from Blackgrove Road to Steeple Claydon and would like to see a commitment for EWR to engage with HS2 around the possibility of sharing the haul road for construction purposes. This could go some way to mitigating the impacts on the local road network. This needs to be secured in the Framework CTMP or as a separate requirement of the TWAO.

Chapter 10 – Cumulative Impact Approach

The methodology is unclear from insert 10.1, please can an explanation be provided. It appears that both scenarios are showing the cumulative future baseline for construction and operation scenarios however they have been derived through different methodology (e.g. strategic model data vs survey data/TEMPRO).

Appendix J sets out the cumulative development assessment and includes a list of planning applications that have been considered, and a summary of those sites that have been included in the assessment of the construction and operational phases of the scheme.

TRICS® trip generation rates have been provided for business park use and privately owned housing units. Information should be provided on how the trip rates were derived.

AV1 Land at Buckingham Road, Winslow

Peak hour operational trip rates have been obtained from the Transport Assessment for the Station development at Land at Buckingham Road site in Winslow. Peak hour trip generation rates have also been provided for the residential element of the development at Land at Buckingham Road in Winslow. It is not clear how the construction traffic flows have been derived.

AV2 Furze Lane, Winslow

Trip generation data for the residential element of the Furze Lane site in Winslow has been obtained from the Transport Assessment for the site. It is not clear how the construction trip generation has been derived. It is not clear what is meant by 'peak hour trips have been distributed out to 3 vehicles/1HGV per movement'. This should be clarified.

AV6 Land South of A421, Newton Longville

Operational trip generation and distribution has been presented for this development, with information obtained from the SWMK Transport Assessment. It is not clear how the construction trip generation has been derived and this should be clarified.

CH1 Skimmingdish Lane

It has been assumed that 50% of the site will be constructed by 2020. Trip generation and distribution data has been obtained from the DTA Transport Assessment.

MK6 Duncombe Street, Bletchley

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Trip generation rates have been provided for this site in Bletchley from the Transport Assessment, although it has been excluded from the analysis.

MK7 Land to the South of Princes Way and West of Albert Street, Bletchley
Residential trip generation rates have been provided from the Transport Assessment developed for the site. However it is unclear where the construction trip generation has been derived and this should be clarified.

MK18 Land North of Cranfield Road, Woburn Sands (Land at Newport Road, Wavedon)
Trip generation and distribution have been derived from the Transport Assessment for the site, although it was scoped out of the analysis.

DC02 Rookery South Energy from Waste
Trip generation and distribution for the construction phase have been derived from the Transport Assessment for the site, although the development has been scoped out of the analysis.

PA4 Steeple Claydon
Trip generation rates have been derived for the construction and operational traffic associated with the proposal. Trips associated with the operational phase have been derived using TRICS® data, but it is unclear how construction trip generation has been calculated and this must be clarified.

PC2 - Bicester
Trip generation rates have been derived for construction traffic associated with site Policy Bicester 12 from the adopted Cherwell Local Plan. It is not clear whether this is included in the analysis or not. It is not clear how the construction traffic trip generation has been derived. Operational phase flows are assumed to be included within the model. These matters should be clarified.

PC3 - Bicester
Trip generation rates have been derived for construction traffic associated with proposal. It is not clear how the construction traffic trip generation has been derived. Operational period flows are assumed to be included within the model. These matters should be clarified.

PA3 - Proposed Vale of Aylesbury Local Plan Site WIN01, Winslow
Trip generation rates have been derived for trips associated with the construction and operational phases of the proposal. It is not clear how the trip generation for the construction phase has been derived; the residential trip generation has been calculated using TRICS®. The construction phase traffic generation calculations should be clarified.

Chapter 11 –Construction Trip Generation
Chapter 11 of the Transport Assessment provides a summary of the methodology and assumptions used to calculate the construction trip generation at each construction location as detailed in Appendix I. EWR has provided information on the trip generation for each compound, local access point and structure based on the amount of work required at each location. A timeline of activities and proposed construction routes for heavy goods vehicles, light goods vehicle and car trips have also been produced.

HGV Trips
Both Buckinghamshire County Council and Oxfordshire County Council have requested that HGV trip generation by fully evidenced and justified. Paragraph 11.3 of the Transport Assessment now sets out how the HGV trip generation has been derived, with further evidence provided in Appendix I.

The total number of HGV trips required for earthworks has been based on an earthworks model to determine the quantity of materials required to be imported. The number of vehicles required for structural work has been based on typical volumes of concrete and structural fill for each structure, while the number of vehicles required for constructing culverts and drainage is based on the length of the route and an assumed drainage depth of 2m. This information has then applied to the timeline of activities.

The total HGV numbers were then translated into peak daily numbers taking into consideration the duration of construction activities. The peak hour trips were converted using the assumptions set out in Chapter 8 of the Transport Assessment in relation to constructions timings.

The calculations that have been undertaken should be provided, however the Highway Authority is broadly satisfied with the proposed methodology.

Staff and Operative Trips
The Stafford Area Improvement Project has been used as a case study to inform the likely number of construction operatives and staff, further developed by the resourced construction programme. Some detail should be provided on how the information from the two sources was used, and the result of the analysis.

The peak hour trips were converted using the assumptions set out in Chapter 8 of the Transport Assessment in relation to construction timings. Whilst this appears to be a reasonable approach, the number of trips generated by the proposal between 06:00-07:00 and 18:00-19:00 hours is more than double the number generated between 08:00-09:00 and 17:00-18:00. Consideration should therefore be given to the impact during the development peak hours.

The number of LGV trips has been estimated on the basis of the number of HGV trips and the number of staff and operative trips. Information should be provided setting out how the analysis was undertaken.

The Highway Authority is broadly satisfied with the proposed methodology, however has requested a sensitivity test using TRICS® data for the Bletchley compound, given the size and nature of the compound. The Bletchley compound is likely to be the main headquarters for the duration of the project and will operate as an office base. This assessment has not yet been provided.

Appendix I Construction Strategy and Trip Generation
A series of spreadsheets have been provided giving data for a daily period, the AM peak and the PM peak. Three spreadsheets have been provided for each time period. It has been assumed that they relate to HGVs, LGVs and staff trips respectively, although the sheets are not labelled and should be clarified.

The first sheet lists a monthly schedule of numbers relating to each compound, structure or access point. It has been assumed that this is the vehicular trip generation associated with each access point, although this should be clarified. The second sheet shows a distribution of trips from each access point onto each link while the third sheet shows the resulting trip generation on each link by month, although this should be clarified.

Page 23 of the appendix shows a table which it is assumed comprises the number of staff trips associated with each touch area by month. As staff trips have been assumed to travel directly to compounds only, it is not clear why some trips are shown to structures (79.7, 79.4 etc).
Additional labelling and clarification should be provided on the spreadsheets that have been provided.

Construction Traffic Assignment
Once trip generations for each of the construction locations were determined these were distributed onto the Local Highway Network, based on the construction programme and identified routes on the road network. This has provided a cumulative assessment of trips at all locations over each month of the construction period. Please refer to comments on Construction Routing later in this response.

HGV Routing Assumptions
HGV routing assumptions are based on a ‘just in time’ construction to avoid stock piling and double handling of material. The Highway Authority has raised concerns with EWR regarding how this will be controlled, particularly due to the absence of layover points or stacking areas. EWR has advised that they will look to implement a Logistics Management System, which allows routes and delivery times to be specified and tracked..

It should be noted that there are no planned HGV trips between compounds and local access points. This needs to be secured in the Framework CTMP, as a requirement of the TWAO.

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LGV Routing Assumptions
LGV's will be used to ferry workers and tools from compound to local access points and structures, a principle supported by the Highway Authority. The LGV construction routes have not been agreed with the Local Highway Authority and have only been provided as part of the TWAO submission. LGV routes have been identified by EWR between compounds and local access points and the Highway Authority has the following concerns:

- **LGV routing through Quainton**
  The Highway Authority has concerns regarding LGV traffic being routed through Quainton, however the maximum total of movements is predicted to be 8 a day. Whilst this cannot be considered severe in the context of the NPPF, a review of LGV routing is required, to where possible avoid residential areas. Furthermore these routes should not be promoted for use by staff and operatives.

- **LGV routing through Waddesdon**
  The Highway Authority has concerns regarding LGV traffic being routed through Waddesdon given the restricted width due to parking on Quainton Road and the junction of Quainton Road/A41. It is however noted that the maximum total of movements is predicted to be 8 a day. Whilst this cannot be considered severe in the context of the NPPF, a review of LGV routing is required, to where possible avoid residential areas. Furthermore these routes should not be promoted for use by staff and operatives.

- **LGV routing through Winslow**
  The Highway Authority has concerns regarding LGV traffic being routed on Verney Road in Winslow. It is however noted that the maximum total of movements is predicted to be 15 a day. Whilst this cannot be considered severe in the context of the NPPF, a review of LGV routing is required, to where possible avoid residential areas. Furthermore these routes should not be promoted for use by staff and operatives.

- **LGV routing through Steeple Claydon**
  The Highway Authority has concerns regarding LGV traffic being routed through Steeple Claydon. It is however noted that the maximum total number of movements is predicted to be 8 a day. Whilst this cannot be considered severe in the context of the NPPF, a review of LGV routing is required, to where possible avoid residential areas. Furthermore these routes should not be promoted for use by staff and operatives.

- **LGV routing through Newton Longville**
  The Highway Authority has concerns regarding LGV traffic being routed through Newton Longville. The maximum total number of LGV movements is predicted to be 30 a day. The Highway Authority is of the view that LGV's should use the haul road being provided to gain access to the relevant compounds and access points in this area, rather than the Local Highway Network.

The Highway Authority seeks an assurance that the LGV routing will be reviewed in line with the above comments and agreed at a future date with Buckinghamshire County Council. It should be noted that due to the relatively low numbers, this will not have a significant effect on the capacity assessments that have been carried out at the junctions.

Staff and Operatives Trip Assignment
The Highway Authority recognises that not all person trips will result in vehicle trips and a 1.5 car occupancy rate has been applied to take this into account. This approach is accepted for all compounds, except Newton Longville, where a sensitivity test should be undertaken using TRICS® given that it will be the main office base.

Staff and operative traffic has been distributed based on a 50 mile radius from a nominal centre point of the project (Claydon Junction). This is based on the assumption that the majority of personnel will limit their daily commute to less than an hour, where their home is further than this they are likely to lodge in the local area. This area has been assessed based on population centres and area of available rental/lodgings and distribution of workforce is outlined in table 11.5. Through the

Construction Workforce Travel Plan, regular surveying of compounds should be undertaken to understand the home location of staff and operatives for future projects.

Staff and operatives have been assigned on the whole road network rather than designated routes. The assessment is therefore based on traffic dispersing using village routes, as a worse-case. It is recognised by the Highway Authority that designating routes for personnel travelling to and from work cannot be enforced. EWR will however need to minimise the impact of construction personnel through rural village communities through the Construction Workforce Travel Plan. It is expected by the Highway Authority that all movements associated with this proposal should be encouraged to use the agreed construction routes. Routing and control of staff and operative traffic needs to be discussed and agreed with the Highway Authority as part of the Construction Workforce Travel Plan. It is expected that regular surveys will be undertaken as part of a monitor and manage approach.

Chapter 12 – Operational Trip Generation

Chapter 12 of the Transport Assessment considers the operational effects of the project in terms of reduced journey times and removal of vehicles from the highway network as well as the additional passengers at the stopping stations along the route.

The Highway Authority recognises that the project will provide significant transportation benefits across the region, in particular providing an alternative and sustainable mode of travel between Aylesbury and local centres of Oxford and Milton Keynes. Analysis has been undertaken using the rail model, which indicates that the scheme has the potential to remove 1,400 to 1,800 vehicles from the road network on average per day.

The project will however generate additional passenger demand at the stopping stations within the study area, including Aylesbury and Aylesbury Vale Parkway station. The projected passenger demand for the existing stations by 2031 is shown in table 12.2:

Table 12.2 2031 Passenger demand increases

Station	AM peak			PM peak			Daily		
	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
Bicester Village	146	63	210	73	144	217	982	940	1922
Winslow	173	48	221	49	133	182	917	916	1833
Bletchley	128	62	190	64	141	205	963	822	1785
Milton Keynes	220	77	297	109	175	284	1191	1411	2602
Woburn Sands	9	51	60	25	14	39	272	169	441
Ridgmont	7	2	9	5	2	7	35	34	69
Bedford	166	71	237	82	162	244	1102	1065	2167
Aylesbury Vale Parkway	2	9	11	5	3	8	49	37	86
Aylesbury	113	50	162	56	113	169	768	722	1491

The Highway Authority has requested that EWR include a full multi-modal assessment of passenger demand increase, as currently only car has been considered as per table 12.3:

Station	AM peak			PM peak		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Ridgmont[16]	2	1	3	1	1	2
Bedford	99	36	134	26	96	122
Aylesbury Vale Parkway[17]	2	1	3	1	2	3
Aylesbury	47	24	71	29	54	83

Aylesbury

The projected increase in passengers at Aylesbury is 1491 daily, with 162 in the AM peak and 169 in the PM peak. This is a significant increase in numbers of people accessing the train station.

It is noted from the baseline assessment that existing car parking at Aylesbury station is close to capacity, with an average occupancy rate of 93%. The Transport Assessment states that 'without an increase in car parking, the additional passengers would use more sustainable modes of travel to the station'.

The Multi-Modal surveys show that Aylesbury Train Station has a much higher percentage of passengers accessing the station by car when compared to the national average mode share from the National Passenger Survey (22% vs 11% NPS). The majority of passengers arriving by car in the AM peak park off site (19%), indicating that people are either using the local highway network or alternative car parks. The Highway Authority is of the view that the Transport Assessment has failed to consider the impact of car parking on the local highway network and within existing car parks in the town centre, all of which are within walking distance of the station. Transport for Buckinghamshire's Parking Team has identified an existing pressure to the south and west of the station, which would be exacerbated by the EWR proposal. As a result, the Highway Authority would expect EWR to fund a review of parking in this area and implementation of necessary mitigation such as a residents parking scheme.

In addition walking (42% vs 56% NPS) and cycling (2% vs 4%NPS) is significantly lower, indicating that whilst a number of homes are accessible within 20m walk or cycle of the station this is not an attractive option. If more passengers are to be encouraged to use sustainable transport it is considered necessary to improve the quality of the links to and from the station.

Aylesbury Vale
The projected increase in passengers at Aylesbury Vale is considered to be negligible in terms of its impact on surface access only attracting 86 additional passengers a day (11 in the AM peak and 8 in the PM peak) therefore no further assessment or mitigation is considered necessary.

Chapter 13- Construction Phase Assessment
Chapter 13 of the Transport Assessment has predominantly focused on the impacts of the construction phase in terms of junction capacity. The Highway Authority has also reviewed the construction routes in terms of safety and suitability to accommodate the number and type of vehicles proposed. The comments below should be reviewed alongside Appendix Bi and Appendix Bii to this response.

Assessment Methodology
During scoping discussions it was requested that construction impacts were assessed at junctions where construction trips were predicted to have a greater than 5% impact in either peak hour on any approach arm. It should be noted that the Highway Authority has not agreed to discount locations where there are fewer than 30 or 50 peak hour construction trips. Most of the construction areas in Buckinghamshire are on rural and village local roads that have very low traffic volumes so any increase in traffic locally could be considered significant.

Construction Assessment Year
The construction assessment year has been agreed. The Highway Authority is however concerned that the strategic model data provided to EWR has not been used in the assessment of construction impact. The Highway Authority would like to see a sensitivity test undertaken using the strategic model data for Aylesbury as a comparison, taking into account the level of changes in terms of development and strategic infrastructure, which would not be accounted for within TEMPRO growth factors.

Construction Traffic Trips on Approach Arms
It is noted that for staff and operative trips that two way staff trips have been used, which is appropriate given that the majority will arrive in the AM peak and depart in the PM peak. The Transport Assessment however notes 'the staff and operative construction trips were then investigated further and refined on a junction by junction basis'. Further information is required in relation to the process undertaken and the changes applied before the Highway Authority can agree to this approach.

Peak Hour Construction Impacts – initial assessment
Based on the initial assessment the Highway Authority is of the view that the following **additional junctions** need to be assessed:

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Junction	Highest % increase	AM EWR movements	PM EWR movements	EWR Comments (Appendix M)	Highway Authority Comments
J018 – Tingewick Road/Main Street	9% increase pm	88 movements on A421 am	190 movements on A421 pm	Typical traffic condition information available does not indicate junctions suffer from existing congestion'.	This is not considered acceptable and the Highway Authority does not concur with the findings Whilst it is noted that the peak construction trips only occur over 3 months along the A421, the overall duration is 17 months, which is considered to be significant.
J019 – A421/ Radcliffe Road	9% increase pm	88 movements on A421 am	190 movements on A421 pm		
J20 A421/Tingewick Road	9% increase pm	88 movements on A421 am	190 movements on A421 pm		
J025 – A421/Padbury Road	33% increase pm	40 overall movements a	188 overall movements pm	'Typical traffic condition information available does not indicate junctions suffer from existing congestion'.	This is not considered acceptable and the Highway Authority does not concur with the findings Whilst it is noted that the peak construction trips only occur over 5 months along the A421, the overall duration is 17 months, which is considered to be significant The Highway Authority also has concerns relating to capacity at priority junctions along this route
J026 – A421/Winslow Road	10% increase pm	45 overall movements	213 overall movements		
J027 – A421/Little Horwood Road/Shucklow	10% increase pm	45 overall movements	229 overall movements		
A413/Lenborough road Padbury	This junction does not appear to have been assessed in the TA. With a maximum predicted daily traffic movement using Lenborough Road of 295 and 405 on A413 this is considered necessary, particularly given safety concerns relating to capacity at priority junctions along this route.				
A413/Thornborough Road Padbury					
J055 – A413/Furze Lane	66% increase	56 overall movements am	84 overall movements	It is noted that this junction is not to be assessed given low existing flows.	The Highway Authority has safety concerns relating to capacity at priority junctions along this route
J057 – A413/Great Horwood Road	10% increase	29 overall movements am	64 overall movements	Not assessed in Appendix M	The Highway Authority has safety concerns relating to capacity at priority junctions along this route
J080 – A41/Weedon Road/Bicester Road/Gatehouse Road	9% increase	20 overall movements am	96 overall movements pm	Impacts only above threshold on A4157 Haydon Road	This is not considered acceptable and the Highway Authority does not concur with the findings

				Approach arm and only for PM peak period. Peak of construction trips only over 4 months. No Further assessment proposed.	Whilst it is noted that the peak construction trips only occur over 4 months, the overall duration is 11 months, which is considered to be significant This junction is known to have existing capacity constraints and given the increase in overall movements through this junction proposed as part of EWR, further assessment is required.
J119 – A413/Buckingham Road/Elmhurst Road/Weedon Road		17 overall movements	94 overall movements	Not assessed in Appendix M	This junction requires assessment due to known existing capacity constraints and given the overall movements through this junction proposed as part of EWR
J120 – A418 Beirton Road/Elmhurst Road/Douglas Road	3%	13 overall movements	75 overall movements	Not assessed in Appendix M	This junction requires assessment due to known existing capacity constraints and given the overall movements through this junction proposed as part of EWR
J155/156 A418/High Street Wing	31%	13 overall movements	81 overall movements	Not assessed in Appendix M	This junction requires assessment due to known existing capacity constraints and given the overall movements through this junction proposed as part of EWR
J161 – A413/Main Street Padbury	12%	38 overall movements	52 overall movements	Not assessed in Appendix M	The Highway Authority has safety concerns relating to capacity at priority junctions along this route

Junction 147 has assessed the Sheep Street/A413 in Winslow however no assessment has been undertaken at the junction between the A413 and Little Horwood Road, which is proposed as a construction route. Given the assessment shows that Little Horwood Road is to have a predicted maximum of 154 daily HGV movements and 45 LGV movements an assessment of peak hour movements is required in order to determine whether local junction modelling is required.

Peak Hour Junction Assessments:

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A number of capacity assessment have been undertaken to determine the impact of the construction phase on site access junctions and off-site junctions along the route of the rail link.

Peak hour junction assessments were undertaken using industry standard junctions 9 capacity models. The junctions were assessed in two scenarios:

1. Construction Future Baseline – without the EWR construction trips
2. Construction Future Baseline – with the EWR construction trips

It should be noted that the Transport Assessment refers to the site accesses as 'controlled' junctions, at this stage no signals have been proposed and this statement should be clarified.

Junction layout plans have been requested and have not been provided by EWR, so it has not been possible to undertake a detailed check of geometry as input in to the junction models. This information should be provided to allow a comprehensive assessment to be undertaken. It is also noted that queue length survey data and the raw traffic survey data has not been provided so it is not possible to confirm that the junction models have been correctly calibrated. A review of the modelling has been undertaken with the information available and on the basis of the limitations identified here..

Site Access Junctions:
A capacity assessment has been undertaken at each of the compound site accesses. The majority of the compounds within Buckinghamshire are to be accessed off the rural road network (except Compound E5) where background traffic flows are relatively low and therefore the majority of the junctions work well within theoretical and practical capacity.

Compound A3 – Marsh Gibbon
Compound A3 is served by way of a priority junction with Station Road. The junction has been modelled in the AM and PM peak and the results show that there will be no capacity issues.

Compound A4 – Green Lane
Compound A4 is served from Green Lane at an existing crossroads junction formed with Bicester Road and Main Street. The junction has been modelled in the AM and PM peak and the results show that there will be no capacity issues.

An additional access is proposed from Main Street, Charndon. The junction has been modelled in the AM and PM peak and the results show that there will be no capacity issues.

Compound B1 – Steeple Claydon
Compound B1 is served by way of a priority junction with Station Road, east of Steeple Claydon. The junction has been modelled in the AM and PM peak and the results show that there will be no capacity issues.

Compound B2 –Verney Junction
Compound B2 is served by way of a priority junction with Verney Road. The junction has been modelled in the AM and PM peak and the results show that there will be no capacity issues.

Compound B3 – Furze Lane
Compound B3 is served by way of a priority junction with Furze Lane, west of Winslow. The junction has been modelled in the AM and PM peak and the results show that there will be no capacity issues.

Compound B4 – Little Horwood
Compound B4 is served by way of a priority junction with Station Road, south of Little Horwood. The junction has been modelled in the AM and PM peak and the results show that there will be no capacity issues.

Compound B5 – Newton Longville
Compound B5 is served by way of a priority junction with Whaddon Road, west of Newton Longville. The flows in the PM peak 2020 cumulative situation appear to have been entered incorrectly and visibility conditions at the junction have not been entered into the model. The results of the model

suggest that the junction can operate well within capacity, however the model should be updated in view of the comments above.

It should be noted that the modelling does not take into account the temporary signals proposed for the Haul route crossing. Temporary signals are not as efficient as a permanent signals installation, and therefore can have a significant impact on capacity. This will need further consideration in the Framework CTMP.

Compound E3 – Quainton
Compound E3 is served by way of a priority junction with Station Road, south of Quainton. The junction has been modelled in the AM and PM peak and the results show that there will be no capacity issues.

Compound E4 – Waddesdon
Compound E4 is served by way of a priority junction with Blackgrove Road, north west of Aylesbury. The junction has been modelled in the AM and PM peak and the results show that there will be no capacity issues.

Compound E5 – Fleet Marston
Compound E5 is served by way of a priority junction with the A41, to the north west of Aylesbury. The junction has been modelled in the AM and PM peak and the results show that there will be no capacity issues.

Whilst no capacity constraints have been identified, it is important to refer to the Highway Authority comments relating to the site accesses in terms of design and safety, which is set out in detail later in this response.

Haul Route Crossing Points
It is noted that the haul route crossing points are proposed to be managed with temporary four way signals. The Highway Authority is of a mind that these should be considered on their individual merits Signals being used will inherently introduce delay to the network to allow for the provision of intergreen timings. Temporary signals are also at risk of theft and vandalism and so should only be deployed where all other options have been shown to not be suitable. Each location should be assessed to determine the most appropriate method of control for the operation duration, and local traffic volumes.

Compound A3 Marsh Gibbon - should be assessed in conjunction with the restricted movement space under the bridge. Any signals should consider the need for a shuttle arrangement through the bridge and works area.

Compound B1 - Steeple Claydon - programming needs to be considered as to when the haul road will be in operation prior to, or following the construction of the Queen Catherine Road diversion. If the Haul Road comes into operation after the diversion then no signals would be required.

Compound B4 - Little Horwood - Station Road should be considered under the same terms as the haul roads, and consideration given to closure to general traffic. The access point is not shown on the works drawing.

Compound B6 - Bletchley - this location is considered to be requiring temporary signals, however the access drawings indicate that the haul road and the compound access are not aligned. The Highway Authority considers that these should be aligned to prevent the need for a long shuttle between stop lines on the Bletchley Road. The Highway Authority consider that as this location is going to be heavily used for the duration of the construction period a permanent signals installation should be considered, and then removed at the decommissioning of the compound.

If signals are still to be considered the most appropriate form of control the Highway Authority expects that they will be operational during working hours only and then removed to a secure location in hours when the site is not open. This will need further consideration in the Framework CTMP.

Off- Site Junctions

J021 A421/Gawcott Road/Embleton Way

J021 is a roundabout junction where the A421 meets Gawcott Road and Embleton Way to the south of Buckingham. No mapping has been provided and therefore the geometry has not been checked, however the flows have been entered correctly.

The results for 2020 show that the junction approaches capacity without the construction trips on the A421 east approach, a situation that deteriorates with the additional construction trips. Peak construction trips will pass through this junction for an 8 month period.

Table 13.25 J021 junction capacity assessment summary

Junction/ approach	Weekday AM peak				Weekday PM peak			
	MAX RFC		MAX Q		MAX RFC		MAX Q	
	CFB	CFB + EWR2	CFB	CFB + EWR2	CFB	CFB + EWR2	CFB	CFB + EWR2
Arm A – Embleton Way	0.21	0.22	0.3	0.3	0.20	0.22	0.3	0.3
Arm B – A421 (E)	0.90	0.94	8.5	12.6	0.99	1.09	26.0	76.7
Arm C – Gawcott Road	0.42	0.44	0.8	0.8	0.31	0.35	0.5	0.6
ARM D – A421 (W)	0.57	0.60	1.5	1.7	0.72	0.79	2.8	3.9

The junction assessment results show that significant increases in queues are experienced on the A421 eastern approach arm. It is also noted that no queue length survey data has been provided for this junction, so it has not been possible to determine whether the model has been correctly calibrated against observed queues.

The impact on this junction is not considered to be acceptable and further work needs to be carried out in order to address this issue.

J022 A421/Osier Way

Junction 022 is a roundabout where the A421 meets Embleton Way and Osier Way to the south of Buckingham. The junction has been modelled using the ARCADY module of Junctions9. No mapping has been provided so it has not been possible to check the geometry, however the pedestrian crossing on the A421 east approach has not been included in the analysis. This crossing needs to be built into the junction model as it will have an impact of the operation of the junction.

The results suggest that the A421 approaches to the junction are close to capacity in the 2020 base situation, a situation that deteriorates with the additional construction trips. The peak number of construction trips will travel through the junction for around 8 months, after which the scheme will have no impact on the junction.

Table 13.26 J022 junction capacity assessment summary

Junction/ approach	Weekday AM peak				Weekday PM peak			
	MAX RFC		MAX Q		MAX RFC		MAX Q	
	CFB	CFB + EWR2	CFB	CFB + EWR2	CFB	CFB + EWR2	CFB	CFB + EWR2
Arm A – Embleton Way	0.18	0.19	0.20	0.30	0.11	0.12	0.10	0.10
Arm B – A421 (E)	0.86	0.89	6.20	8.20	0.86	0.93	6.20	12.60
Arm C – Osier Way	0.15	0.16	0.20	0.20	0.61	0.67	1.70	2.10
ARM D – A421 (W)	0.90	0.94	9.10	13.10	0.93	1.02	11.50	36.70

The junction assessment results show that it will experience operational issues, particularly on the A421 western approach where there is a significant increase in queueing with the addition of construction traffic. It is also noted that no queue length survey data has been provided, therefore it has not been possible to check whether the model has been calibrated correctly against observed queues.

The impact on this junction is not considered to be acceptable and therefore further work needs to be carried out in order to address this.

J023 A421/London Road/A413

Junction 023 is a roundabout junction where the A421 meets London Road and the A413 to the south of Buckingham. No mapping has been provided and therefore it has not been possible to check the geometry used in the model, however the entry width on the A413 south approach appears to be low and the pedestrian crossings have not been included in the model. The pedestrian crossings need to be built into the model as this will have an impact on how the junction operates.

The model suggests that the junction will operate over capacity on the A413 south approach in 2020 without the construction trips in both peak periods, and the additional trips will extend the queuing on this approach. Peak construction trips on this approach are forecast to last 3 months, with peak construction trips on the A421 western approach lasting up to 8 months, after which time the scheme will have no impact on the junction.

Table 13.27 J023 junction capacity assessment summary

Junction/ approach	Weekday AM peak				Weekday PM peak			
	MAX RFC		MAX Q		MAX RFC		MAX Q	
	CFB	CFB + EWR2	CFB	CFB + EWR2	CFB	CFB + EWR2	CFB	CFB + EWR2
Arm A – London Road	0.51	0.53	1.20	1.20	0.56	0.59	1.4	1.5
Arm B – A421 (E)	0.83	0.85	5.20	5.80	0.76	0.83	3.4	5.0
Arm C – A413 (S)	1.27	1.32	132.30	157.30	1.01	1.09	25.1	59.7
ARM D – A421 (W)	0.68	0.70	2.30	2.60	0.96	1.02	17.1	43.4

The junction assessment results show that the junction will be subject to significant increases in queueing, particularly on the A413 southern approach and also the A421 western approach. It is also noted that no queue length survey data has been provided so it has not been possible to confirm whether the model has been calibrated correctly against observed queues.

The impact on this junction is not considered to be acceptable and therefore further work is required in order to address this.

J107 Quainton Road/A41
Junction 107 is a priority junction where the A41 High Street meets Quainton Road. It has been modelled using the PICADY module of Junctions9. No mapping has been provided and it has not therefore been possible to check the geometry used in the model, however, given the road markings, the lane width of the major road appears to be high, and the pedestrian crossing on the A41 has not been included in the model. The pedestrian crossing needs to be built into the model.

The results of the analysis suggest that the junction can operate well within capacity with the scheme. The model will however need to be re-run once lane widths have been confirmed and the pedestrian crossing included.

J108 Blackgrove Road/A41
Junction 108 is a staggered crossroads where the A41 meets Blackgrove Road and Waddesdon Hill. The junction has been modelled using the PICADY module of Junctions9. No mapping has been provided and so it has not been possible to check the geometry, however the number of pcus that can queue on the main road without blocking appears to be high.

The results of the assessment show that both of the side roads operate near or over capacity without the construction trips, with the queues and delay extending with the additional development trips.

It is argued that proposed improvements as part of the HS2 construction works should be able to accommodate the additional temporary traffic associated with the construction of the route. Details of these improvements need to be provided and it should be demonstrated that they are adequate to accommodate construction traffic. Information is also required relating to the timing of these improvements and when the construction traffic is likely to be using the junction to ensure that the improvements are going to be in place in adequate time.

Table 13.30 J108 junction capacity assessment summary

Junction/ approach	Weekday AM peak				Weekday PM peak			
	MAX RFC		MAX Q		MAX RFC		MAX Q	
	CFB	CFB + EWR2	CFB	CFB + EWR2	CFB	CFB + EWR2	CFB	CFB + EWR2
A41 (E)	0.11	0.11	0.1	0.1	0.17	0.17	0.2	0.2
Waddesdon Hill	0.91	0.98	5.5	7.2	1.79	2.09	75.2	94.6
A41 (W)	0.26	0.27	0.4	0.4	0.10	0.11	0.1	0.1
Blackgrove Road	1.35	1.43	35.6	42.3	0.95	1.30	5.4	16.1

J111 A41/Paradise Orchard/Aylesbury Vale Parkway Station
Junction 111 is the roundabout junction of the A41 with Paradise Orchard and Aylesbury Vale Parkway station. It has been modelled using the ARCADY module of Junctions9. No mapping has been provided so it has not been possible to check the geometry, however the pedestrian crossing on the A41 has not been included in the assessment. The pedestrian crossing will need to be built into the model as this will have an impact on the junction performance.

The results of the analysis suggest the junction can operate within capacity in 2020 both with and without the construction traffic. When peak hour conditions at this junction are observed on the ground

it is evident that the junction is subject to significant queueing, particularly heading into Aylesbury. It is recognised that the queueing may not be a result of the performance of this particular junction, it is more likely a result of the performance of this part of the network as a whole. It is known that the issues along this part of the corridor extend back from Jackson Road past the Aylesbury Vale Parkway Station roundabout junction, On this basis, this whole part of the network requires further consideration. It is vital that the junctions are correctly calibrated against the observed queues to ensure a representative assessment.

Table 13.31 J111 junction capacity assessment summary

Junction/ approach	Weekday AM peak				Weekday PM peak			
	MAX RFC		MAX Q		MAX RFC		MAX Q	
	CFB	CFB + EWR2	CFB	CFB + EWR2	CFB	CFB + EWR2	CFB	CFB + EWR2
Arm A – Paradise Orchard	0.48	0.48	1.00	1.00	0.12	0.13	0.20	0.20
Arm B – A41 (E)	0.73	0.74	2.90	3.00	0.76	0.77	3.40	3.60
Arm C – AVP Station Access	0.03	0.04	0.00	0.00	0.05	0.06	0.10	0.10
ARM D – A41 (W)	0.65	0.66	2.10	2.10	0.76	0.81	3.40	4.40

J135 A41/Broadway (Grendon Underwood)
Junction 135 is a priority junction where the A41 meets The Broadway to the south of Grendon Underwood. It has been modelled using the PICADY module of Junctions9. No mapping has been provided and therefore it has not been possible to check the geometry, however the number of PCUs that can stack in the right turn lane before the junction is blocked appears to be high.

The results of the analysis show that the junction will operate well within capacity in 2020 with the additional construction traffic. The junction however has known safety concerns.

J137 Kingswood/Grendon Road/A41
Junction 137 is a staggered junction where Kingswood Lane and Grendon Road meet the A41.It has been modelled using the PICADY module of Junctions9. No mapping has been made available and it has not therefore been possible to check the geometry, however the flows have been checked and are correct.

The results of the analysis show that the junction can operate well within capacity in both peak periods both with and without the additional construction trips. The junction however has known safety concerns.

J176 A41/Station Road
Junction 176 is a priority junction where the A41 meets Station Road to the north of Westcott. No mapping has been provided and so it has not been possible to check the geometry.

The results of the analysis show that the junction can operate well within capacity in both peak periods with the construction traffic. The junction however has known safety concerns.

Construction Routes
Chapter 8 of the Transport Assessment states that construction routes have been chosen based on the following principles:

1. Construction traffic will use the widest and most direct routes to access either the M1 or M40 motorway
2. Construction traffic will seek to avoid travelling through villages and residential areas where practicable

3. Construction traffic will seek to avoid routes that pass sensitive receptors such as schools where practicable
4. Construction traffic will seek to avoid routes that are winding or involve many turning manoeuvres where practicable

Whilst the Highway Authority supports these principles, it should be noted that due to the location of the line a number of the construction routes directly impact on villages and are along routes that are not designed or constructed to accommodate HGV traffic.

The Transport Assessment has highlighted that it is **'imperative that measures are implemented which will:**

1. **Enable HGV's associated with the construction of the project to travel along the rural roads in a safe and suitable manner**
2. **Enable the existing users of the roads to continue to use the in a safe and suitable manner"**

Temporary Highway Works have been identified including a series of passing places and road widening measures based on the following methodology:

- Vehicle tracking along the Construction Access Routes from A-road to compound; and compound to access point
- Identification of locations where two vehicles cannot pass each other (pinch points)
- Where pinch points are identified, inter-visible widening at a maximum spacing of 200m.

The TWAO has highlighted the locations where passing places and junction improvements are required as shown in Appendix H of the Transport Assessment, albeit no detail mitigation has been provided at this stage. The Highway Authority is therefore unable to comment on the acceptability of the mitigation proposed in terms of design and whether the works are achievable on the ground and reserves its positon.

The Highway Authority is of the view that the measures proposed do not go far enough to meet the above imperative. Appendix H shows that there are lengths of highway with up to 500m between passing places, with identified conflict points between HGV and cars. These drawings need amending to include additional mitigation sites to comply with the methodology set out in the Transport Assessment.

The Highway Authority also has concern that the measures proposed do not give enough consideration to the environment within which these routes are located. The line passes through rural parts of Buckinghamshire where agriculture is the dominant land use activity. As such there will be times of year when there will be increased levels of farm traffic on the network which will have a bearing on the ability of the rural roads to accommodate the HGV movements at the rate that are indicated in the Transport Assessment. The passing bays and widening will need to be designed in order to allow HGVs to pass farm vehicles.

Where there are narrow bridges and structures, it is proposed to install temporary traffic lights. Para 8.2.27 does not specify structures where this mitigation is proposed and this has not been identified in the scheme drawings either. The Highway Authority requires clarification on which locations are proposed to have temporary signals to enable an assessment of the suitability of this mitigation to be undertaken and included in the Framework CTMP.

It is noted that EWR currently propose for the passing places and localised widening to be temporary in nature. The Highway Authority would in general be happy to adopt new assets providing they have been constructed to full specification and are required for traffic management and safety reasons. This should be considered on a site specific basis with the Highway Authority. This should be secured as part of the Framework CTMP.

Construction Route Assessment

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The following section provides detailed comments on the suitability of construction routes proposed through Buckinghamshire, taking into account the following factors:

1. Ability to accommodate the type of vehicles proposed.
2. Impact on the safe operation of the route.
3. Ability of the route to continue to be used in its existing form by other highway users.

This takes into account the tracking provided in appendix G and H. The tracking provided in Appendix H of the Transport Assessment covers large areas, which does not show a sufficient level of detail. To make a full assessment the Highway Authority requires expanded sections of the tracking for the following areas:

- Poundon – Main Street to Green Lane
- Marsh Gibbon compound approaches
- A41 /Edgecott Road junction
- Edgcott Road through Grendon Underwood
- Edgcott village
- Junction of Werner Terrace and School Hill Charndon
- Charndon Main Street /School Hill
- A413 junction with Lenborough Road Junction at the West end of Sandhill Road
- Steeple Claydon = Buckingham Road/Sandhill Road
- Sandhill Road to Verney Junction
- Winslow, Furze Lane
- Winslow, Little Horwood Road access points
- Mursley, Main Street junction with Whaddon Road.

The Highway Authority notes that the tracking drawings provided have been carried out using a large tipper truck that is 2.45m wide. The Framework CTMP however suggests that trucks of 2.6m wide are to be used for the construction phase. The Highway Authority seeks clarification on the size of vehicles to be used

There are sections of the tracking drawings that do not show two HGV's using the network but an HGV and a standard car. It is understood that two sets of tracking have been carried out but only those included within Appendix H and submitted as part of the TWAO have been reviewed. Amended tracking drawings are required showing tracking for two HGV's based on the correct dimensions for the construction routes within Buckinghamshire and appropriate mitigation identified.

Detailed tracking comments can be found in Appendix Bii of this response. The Highway Authority has however provided a high level summary below:

County Boundary to Marsh Gibbon Compound A3
It is noted that local concerns have been raised by Poundon Parish Council and local residents. This route will be subject to a maximum of 156 HGV daily movements, with an overall duration of 19 months. The Highway Authority recognises local concerns, however is unable to object to this route being used on safety grounds provided appropriate mitigation is secured.

- Passing places have been proposed, however the distance between some of them exceeds the 200m maximum outlined in the CTMP Framework.
- Poundon - Main Street junction requires consideration as it centres on a sensitive location with the pub on the corner.
- No mitigation has been proposed between the Green Lane Compound access and a point 500m to the west of the junction. Approaching the compound A3 Marsh Gibbon additional mitigation is required to allow for shuttle operation between the compound and the north side of the bridge with space to pass at any stop/give way point. Consideration should be given to the proposed haul route signals and their interaction with the need to manage vehicles through the constrained point under the bridge.

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In principle the Highway Authority does not object to the use of this route for construction subject to the detailed design of the mitigation and the implementation of the CTMP, particularly in relation to abnormal loads.

A41 to Charndon

This route will be subject to a maximum of 16 daily HGV movements, with an overall duration of 9 months.

- From the junction of the A41 there is a long section of unnamed road with no proposed mitigation. The tracking shows that there is insufficient width for HGV's to pass.
- Turning vehicles must be able to safely clear the junction before being opposed to ensure the safe operation of the A41 corridor.
- Through the villages of Grendon Underwood and Edgcott there are lengths in excess of 200m without intervisibility between proposed passing places. Through Edgcott a one way system could be considered with the additional junctions assessed to remove conflicts within the village centre.
- Additional mitigation should be proposed at the junctions of School Hill with Werner Terrace and Main Street Charndon.

It is noted that Charndon Parish Council continues to be concerned with the use of School Hill. The location of the compound in this area has changed, resulting in the majority of HGV traffic (maximum of 78 HGV's a day) accessing the site from Main Street Poundon. The Transport Assessment assumes a maximum of 9 HGV's a day using the route from the A41. Temporary, passing bays and localised widening has been proposed to mitigate the impact of EWR construction traffic along this route.

Link ID 145 (School Hill)	Pre Consultation	Post Consultation (TWAO figures)
Daily HGV	64	16
Daily LGV	38	23
Daily Staff and Operatives	34	6
Daily Total	136	44

The Highway Authority is aware that EWR have directly responded to the concerns raised by Charndon Parish Council. On the basis of the overall duration and the maximum daily HGV generation, the Highway Authority does not object in principle to the use of this route for construction subject to the detailed design of the mitigation and the implementation of the CTMP, particularly in relation to abnormal loads.

A421 Buckingham and A413 to Lenborough Road

The A413 leaving Buckingham has a number of sensitive locations along it, including a super market, long distance bus stops and a well-used pedestrian route to local schools. The Highway Authority is of the view that EWR should consider safety mitigation in this area due to the increase in HGV movements being of the order of 170% compared to existing 12 hour traffic flows.

In principle the Highway Authority does not object to the use of this route for construction subject to the detailed design of the mitigation and the implementation of the CTMP, particularly in relation to abnormal loads.

Lenborough Road between A413 Buckingham Road to Sandhills Road junction

This route will be subject to a maximum of 233 daily HGV movements, with an overall duration of 20 months. This equates to one movement every 2.5 minutes of a 10 hour day during the peak construction period.

- The Highway Authority has concerns that this route will be subject to high risks in the event of a vehicle breakdown or road traffic collision.
- The Highway Authority has concerns regarding the operation of the junction between the A413 Buckingham Road and Lenborough Road given the volume of HGV's using this priority junction. A right turn lane is considered to be required at this location with sufficient stacking space for a minimum of two HGV's.

- The Highway Authority is concerned that mitigation on the narrow bridges along this route will lead to grouping of HGV's which may render passing bays too short to accommodate grouped vehicles passing.
- In order to ensure that HGV's do not divert through Padbury, additional mitigation is required at the junction of Lenborough Road with Main Street to ensure that the primary route at the junction is along the line of the construction route by changing the priority. The junction of Sandhills Road and Herds Hill is an open crossroads, which will be subject to a maximum of 329 HGV movements per day. Mitigation should be provided at this location to improve junction safety and operation.

In principle the Highway Authority does not object to the use of this route for construction subject to the detailed design of the mitigation and the implementation of the CTMP, particularly in relation to abnormal loads.

Sandhills Road Junction to Steeple Claydon
It is noted that local concerns have been raised regarding the use of Queen Catherine Road in Steeple Claydon and residents would prefer that HGV's avoid the village and use an alternative route to the south, The use of an alternative route would increase HGV movements through the villages of Grendon Underwood and Edgcott along with increased turning movements at the junction with the A41.

This route will be subject to a maximum of 96 daily HGV movements, with an overall duration of 17 months. The Highway Authority recognises local concerns, however is unable to object to this route being used on safety grounds provided appropriate mitigation is secured.

- The Highway Authority considers that protective mitigation should be provided at the junction of Queen Catherine Road with Buckingham Road in Steeple Claydon and widening where the tracking analysis demonstrates the need.

- The Highway Authority seeks clarity on the timing of the operation of the haul route relative to the completion of the diversion of Queen Catherine Road. If the diversion can be completed prior to the use of the haul route then signals would not be deemed to be required, so long as access to the stopped up Queen Catherine Road is shown to be available for HGV's.

In principle the Highway Authority does not object to the use of this route for construction subject to the detailed design of the mitigation and the implementation of the CTMP, particularly in relation to abnormal loads.

Sandhills Road Junction to Verney Junction
The proposed HGV routing to local access points, structure and compounds in this area is considered to be a **significant** issue and the mitigation proposed is not sufficient to overcome this concern, Verney Road is an unclassified rural road and due to the alignment there is poor forward visibility coupled with inadequate highway boundary to provide sufficient passing places and widening**.** The maximum daily HGV movements predicted are 233, with an overall duration of 20 months. On this basis the Highway Authority is not convinced that safe and suitable access can be achieved.

A413 Lenborough Road to Winslow
This route will be subject to a maximum of 370 daily HGV movements which is an increase of over approximately 170% based on current HGV volumes. The Highway Authority has concerns for this section of the network through Padbury Village, particularly given the proximity of the school to the A413. The route is to be in use for 21 months and so the Highway Authority considers safety mitigation in Padbury to be necessary.

The Highway Authority also considers that the A413 junction with Furze Lane requires further mitigation to improve safety. Given the maximum daily number of HGVs turning into and out of the junction, a right turn lane capable of holding at least two HGV's is considered necessary on the A413.

In principle the Highway Authority does not object to the use of this route for construction subject to the detailed design of the mitigation and the implementation of the CTMP, particularly in relation to abnormal loads.

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A413 to Furze Lane

It is predicted that Furze Lane will be subject to a maximum of 296 daily HGV movements, of which 160 continue south of the railway bridge. These routes are to be used for an overall duration of 11 months. The Highway Authority is not convinced that safe and suitable access can be achieved. The road has already been widened to 5.5m where possible within existing highway boundaries. Due to highway constraints the road cannot be widened further. It should be noted that drawings previously provided by EWR have shown localised widening, which is within land under third party control.

A413 Winslow to Little Horwood Road

This route will be subject to a maximum of 154 daily HGV movements, with an overall duration of 9 months to serve the local access points off Little Horwood Road.

- Based on 2017 Manual Classified Count data at the junction of Little Horwood Road with the A413, this would represent a 147% increase in HGV volumes on the A413 through Winslow. The Highway Authority requires protective mitigation for the junction of the A413 with Vicarage Road to be provided by EWR. There is a known issue with over-running due to the bend at this junction and a safety mitigation scheme is required to protect existing highway users.
- The Highway Authority has concerns that the three local accesses cannot be operated at the predicted rate of vehicle movements (approximately one every eight minutes during the peak construction period). The duration of entry, unload and wash down before leaving is expected to leave vehicles waiting on the highway which is unlikely to be acceptable.
- Mitigation is proposed along Little Horwood Road, however the Highway Authority require further details showing how the proposed mitigation will be achieved within the existing highway boundary.
- The route under the railway line at 'the White House' has limited forward visibility and a method of control is likely to be required (e.g. signals or stop/go boards).
- Beyond access point 90.0, Little Horwood Road is not suitable for HGV traffic. The Highway Authority expects EWR to design the access in such a way as to mitigate against traffic turning north.

In principle the Highway Authority does not object to the use of this route for construction subject to the detailed design of the mitigation and the implementation of the CTMP, particularly in relation to abnormal loads.

Routes to Compound B4 Little Horwood

It is predicted that Station Road will be subject to a maximum of 231 daily HGV movements, with an overall duration of 17 months. This would equate to one movement every two and half minutes during the peak construction period. The Highway Authority has concerns that although the compound is of significant size the number of movements will lead to stacking of vehicles on the approach routes. Vehicles waiting outside the compound on the highway are unlikely to be acceptable to the Highway Authority. Further details on the operation of this area required and should form part of the Framework CTMP.

Two routes are proposed for access to and from this compound. The first being the Whaddon Road from the A421. Whilst the Highway Authority does not object in principle to the use of this route for construction tracking has not been provided for this route. EWR need to assess this route and where necessary propose suitable mitigation measures.

The second route uses local routes through Mursley, Stewkley and on to the Stoke Hammond Bypass. This route will be subject to a maximum of 116 daily HGV movements, with an overall duration of 17 months.

- The Highway Authority has concerns regarding the Bletchley Road, Newton Road, Main Road, Drayton Road junction. This is known to have an accident history and therefore the Highway Authority considers that this junction should be reassessed and suitable mitigation proposed.
- The Drayton Road is also shown to have width restrictions that make passing impossible along most of its length. Additional passing places should be provided. The junction of High

Street North and Bletchley Road in Stewkley requires further assessment due to the visibility constraints and the demonstrated tracking. Mitigation should be provided to ensure that two HGV's can negotiate the junction safely without conflict with a vehicle that is not visible at the beginning of the manoeuvre.

- The Highway Authority also considers that EWR should consider temporary parking restrictions within Mursley village to ensure that there remains free flow of traffic through the village given the levels of on street parking in the area.
- The Highway Authority is of the view that safety mitigation should be provided on Main Street in Mursley to ensure that safe pedestrian access is maintained through the village centre during construction.

In principle the Highway Authority does not object to the use of this route for construction subject to the detailed design of the mitigation and the implementation of the CTMP, particularly in relation to abnormal loads.

A41 between Waddesdon and Aylesbury

The Highway Authority is of the view that this route can accommodate the additional vehicles associated with EWR construction (subject to the resolution of the capacity issues identified elsewhere in this response). The Highway Authority does however have concerns relating to turning movements onto and off the A41.

- Mitigation at Black Grove Road has previously been raised and is expected to be completed through HS2 works. Should this not be in place prior to commencement additional mitigation would be required.
- Right turn movements on the A41 between Black Grove Road and the overbridge at Aylesbury Vale Parkway station require right turn lanes to allow safe movements into and out of the compounds and access points. If these accesses are not to remain post construction then any safety scheme elements will need to be removed from the highway.

In principle the Highway Authority does not object to the use of this route for construction subject to the detailed design of the mitigation and the implementation of the CTMP, particularly in relation to abnormal loads.

Route to Compound E4 Waddesdon

No mitigation has been proposed for Blackgrove Road between the A41 and compound E4, however the tracking analysis shows that there are two stretches of the route that do not allow HGV's to pass. The Highway Authority considers that mitigation should be provided in these areas. The Highway Authority has particular concern that HGV's should not be in a position where they cannot clear the A41 junction before reaching a point that they cannot pass another vehicle. This requirement stands with or without the works by HS2 in the area.

In principle the Highway Authority does not object to the use of this route for construction subject to the detailed design of the mitigation and the implementation of the CTMP, particularly in relation to abnormal loads.

Route to Compound B5 Newton Longville

it is predicted that Whaddon Road will be subject to a maximum of 97 daily HGV movements, with an overall duration of 18 months. This equates to one movement every 6 minutes during the peak construction period. It is unlikely that the Highway Authority will find it acceptable for vehicles to be stacked on the highway. Further details on the operation of this area are required and should form part of the Framework CTMP.

In principle the Highway Authority does not object to the use of this route for construction subject to the detailed design of the mitigation and the implementation of the CTMP, particularly in relation to abnormal loads.

Highway Structures

Transport for Buckinghamshire's Structures team has reviewed the proposed construction routing and have provided the following principles, which will need to be secured through the Transport Works Act Order:

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The Highway Authority expects that EWR will provide mitigation to protect the condition of highway structures from both wear to the fabric and damage to above ground elements.

The Highway Authority expects EWR to provide through the CTMP survey data in in accordance with BD63/17 and the record condition of the structures at the beginning of the construction period. The type of survey for each inspected structure is to be agreed with the Highway Authority's structures team prior to inspection. The different inspection types that may be required are;

Safety
General
Principle
Special
Inspection for Assessment

EWR should allow sufficient time to complete the inspections prior to use of the construction routes.

The Highway Authority will inform EWR of any structures that are deemed to require mitigation prior to use as an HGV route. The Authority notes that some of the routes use historic bridges and may require additional protection of the historic structures. The use of temporary mitigation should be considered in these instances.

For structures that are deemed to be at risk of structural damage or wear the Highway Authority will require monitoring to be undertaken at regular intervals through the construction period at the expense of EWR. For all structures that are deemed to need an increased frequency of inspection, the additional cost shall be borne by EWR.

The Highway Authority seeks commitment from EWR to secure through the TWAO and Framework CTMP to carry out repairs to structures that are required as a direct result of being damaged by EWR construction traffic, either by carrying out the works themselves to the standards of the Highway Authority or by funding the Highway Authority to commission the works. Any repair works are to be completed within a time period agreed with the Highway Authority at the time of a damage inspection.

At the end of the construction period EWR will fund a final inspection of the Highway Authority's structures and any deterioration that significantly shortens the operational life of the structure over that of normal use will be made good at the expense of EWR. These inspections will be carried out in accordance with BD63/17 and will follow the same inspection regime as the pre-commencement inspection.

The Highway Authority notes that EWR intend to create additional highway assets to enable the creation of passing bays and other mitigation. The Highway Authority requires these to be constructed to a standard that it deems to be suitable for the purpose intended. Any structure created as part of EWR mitigation package that is to be a permanent change to the highway must be constructed to the Highway Authorities standards and inspected by the Highway Authority prior to being used. It shall then be inspected again at the end of the construction periods and any defects being made good before being handed over to the Highway Authority as a permanent asset.

It should be noted that structural culverts are those which have an internal diameter greater than 900mm. If any such structural assets are intended to be handed over to the Highway Authority as a permanent asset an Acceptance Inspection will be required in accordance with the requirements of BD63/17.

The Highway Authority requires EWR to inform the Buckinghamshire County Council's Technical Approval Authority immediately of any defect that becomes apparent in a structure through the construction period and the CTMP should detail how EWR will manage their traffic should this eventuality arise.

The Highway Authority expects that there will be a number of narrow bridges where mitigation will include the provision of temporary traffic management to allow clear passage and protection of the structure. It is expected that this will be outlined within the CTMP and the detailed design stage.

Before such temporary traffic management measures are implemented the Highway Authority requires the structures team and the ITS team to be in agreement that the mitigation is acceptable.

Where abnormal loads are required to use structures this will be considered as part of the Highway Authorities issuing of movement orders.

It is the Highway Authority's view that the Framework CTMP should be updated to reflect the above principles and secured as part of the TWAO.

Highway Asset Management
Transport for Buckinghamshire's asset management team has reviewed the proposed construction routing and have provided the following principles, which will need to be secured through the Transport Works Act Order:

Survey Requirements

EWR should commission the following on all identified construction routes, at a time agreed by the Highway Authority before construction commences:

- Detailed visual surveys (DVI)
- Video survey
- Coring (every 500m)
- Deflectograph surveys

The results of these surveys should be interpreted and submitted by EWR to the Highway Authority for agreement. The report should consider overall condition and residual life. Commentary for discussion should be presented with a prediction on the ability of each route surveyed to perform during the construction period with the proposed increased traffic loading, taking into account:

- The traffic loading (Million Standard Axles) for the next 20 years should be calculated based on current use.
- The additional loading (MSA) from the construction routes should be calculated.

The presented results should be agreed by the Highway Authority. DVI and Video surveys will need to be repeated after a construction route has ceased to be used.

Works Required Prior to Construction
It should be noted that from an asset management position there may be some roads, which will require complete reconstruction before the can be used as construction routes. This will not however be determined until the initial Deflectograph surveys and coring are completed.

Based on the initial surveys each road will be assessed as:

- In reasonable condition – no initial works
- Localised minor works and patching required
- Will not remain in a useable condition through the course of use a construction route – may need major works

If routes are shown to be unable/ unsuitable to perform during construction then EWR should propose mitigation measures that consider the proposed loading, for agreement with the Highway Authority. The agreed works should be implemented before commencement of construction. Options include reconstruction, localised strengthening, overlay and inlay.

The work should be planned to allow for construction traffic and normal loading, so as the surface/edge remains defect free during the construction period.

Inspection/Monitoring Requirements
The Highway Authority will assess each route against their network hierarchy given its new use to determine if increased inspections are required. The routes that require increased frequency in inspection will be agreed between EWR and the Highway Authority. EWR will be required to pay for these extra inspections above the normal inspection frequency.

Maintenance Requirements
Benchmark data on safety defect numbers will be agreed by EWR and the Highway Authority before commencement of work. Any safety defects that are shown to be as a result of increased loading and above the benchmark figure should be paid for a the expense of EWR (at a rate to be agreed by the Highway Authority and EWR before commencement).

If work is required or even requested by EWR over and above the normal safety defect category (e.g. patching/resurfacing) to allow construction, that is not currently programmed or scheduled in our 4 year plan this will be paid at the expense of EWR.

Remedial Works Required After Construction
A final set of DVI and Video surveys will be undertaken and agreed by the Highway Authority. Deterioration will be assessed based on the difference between the initial survey and the final survey taking account of reasonable deterioration. EWR will fund the repair of any deterioration.

Winter Maintenance Implications
The Highway Authority will assess each route against the winter maintenance hierarchy given its new use to determine if winter treatment is required. The routes that require precautionary salting or snow clearance will be agreed between EWR and the Highway Authority. EWR would be required to pay for any additional work, subject to available resources.

Calculating the Impact on the Life of the Asset
For all the routes subject to increase in loading, a contribution should be agreed with the Highway Authority that can be drawn on to fund major maintenance works at the appropriate times in the life cycle.

The contribution should be paid to the Highway Authority before commencement and will need to be calculated using the Traffic Loading (MSA) for the next 20 years based on current use in comparison to the calculated additional loading (MSA) for each of the construction routes. From this information an assessment can be made of the percentage of the life taken by the construction traffic and therefore what EWR is required to fund in terms of reconstruction costs.

Staffing Costs
All of the Highway Authority's costs in reviewing and agreeing the above will need to be met by EWR.

It is the Highway Authority's view that the Framework CTMP should be updated to reflect the above principles and secured as part of the TWAO.

Access Points
Chapter 8 of the Transport Assessment states that the site accesses have been designed to enable HGV's associated with the construction phase of the project to access/egress the site to the local highway network in a safe and suitable manner.

The following section reviews the suitability of the access points that connect with the publically maintained highway, taking into account the following:

- Whether access points have sufficient visibility consummate with the speed of the road
- Whether access points can accommodate the type of vehicles that will be using them based on vehicle tracking

Detailed access comments can be found in Appendix Bi of this response. The Highway Authority has however provided a summary of the key issues below:

19 access points including main works compounds have been identified, these access points have been reviewed by the Highway Authority in context of the proposed use and the existing nature of the setting of each access point.

As part of the opening of new access points onto the highway, temporary 30mph speed limit has been proposed to manage vehicle speeds. This has not been discussed with the Highway Authority and

there is a concern that visibility splays are reliant on these being implemented due to land constraints. The length of the sections of carriageways which the speed limit change is to be applied has not yet been identified. It should be noted that any change in speed limit will require a Temporary Traffic Regulation Order (TTRO). HS2 have already implemented temporary speed limit changes in this manner and there have been serious issues with non-compliance. The Highway Authority therefore needs to be satisfied that any speed limit reduction is appropriate based on the location and nature of the road.

Tracking at the access points show that vehicles would over-run, with alignments being tight or unmanageable, as illustrated at access points 90.0 (Horwood Road) and 89.1 (Moco Farm). It has however been identified on each plan the theoretical achievable visibility's splays, it has been noted by EWR on several drawings that the level of visibility identified cannot be achieved due to the vertical alignment in the area. The Highway Authority requires Design Manual for Roads and Bridges (DMRB) to be used for calculating the stopping sight distances (SSD) on the basis that the main vehicle using the access points will be HGV's that have a greater stopping time.

Taking this into consideration based on a speed of 30mph (50kpm) the Y distance or splay that is required is 70m. The Highway Authority requires each access point to be reassessed to ensure the correct level of visibility can be achieved.

Currently the access arrangements are considered to be unacceptable to the Highway Authority and additional design work and mitigation is required.

Chapter 14- Operation Phase Assessment

Chapter 14 of the Transport Assessment considers the operational impacts associated with the EWR line, including impacts on the local highway network, at existing level crossings, car parking provision at railway stations and public right of ways.

Within Buckinghamshire only Aylesbury Train Station has been included in scope of the operational assessment, this is as the forecast increase in total passengers for Aylesbury Vale Parkway Train Station is relatively modest as set out below:

Station	AM total	PM total	Daily
Aylesbury	162	169	1491
Aylesbury Vale	11	8	86

It should also be noted that Winslow Train Station has not been included in this assessment as this was subject to a separate Planning Application 13/02112/AOP determined by Aylesbury Vale District Council consented on the 5th August 2013. The Highway Authority is satisfied that Winslow Train Station has already been assessed.

Assessment Methodology

During scoping discussions it was requested that operational impacts were assessed at junctions where construction trips were predicted to have a greater than 5% impact in either peak hour on any approach arm.

The projected increase in passenger demand by 2031 resulting from the opening of the EWR line has been considered in relation to the highway network, using 2017 base turning movements from survey data. It is assumed that trip patterns will be broadly similar based on unconstrained station car parking. Whilst this represents a worst case scenario in terms of access to and from the station, it does not consider the potential for additional car parking to occur on nearby residential roads. Furthermore no assessment has been undertaken of non-car modes of travel, which is required.

Data Sources

It is noted that the forecast operational baseline year of 2031 has been formed using survey data and TEMPRO growth factors. This would not take into account the level of changes in terms of development and strategic infrastructure that are anticipated to occur in and around Aylesbury, which would not be accounted for within TEMPRO growth factors. It is therefore likely that the analysis presented does not reliably assess the traffic levels on the network.

Percentage Impact Assessment
The following junctions have been considered within Buckinghamshire:

1. A41/Station Way

Based on the multi-modal surveys and passenger questionnaire the following arrival and departure profile by car has been derived:

	AM arrivals	AM departures	AM Total	PM arrivals	PM departures	PM Total
Aylesbury	47	24	71	29	54	83

An initial assessment has been undertaken based on the projected percentage increase in passenger demand by car. It should be noted that there is a predicted 54% increase in traffic on Station Way during the AM peak, which is considered to be significant.

Junction modelling has been undertaken using industry standard Junctions 9 software. The results are shown in the table below:

Table 14.3 A41/ Station Way junction capacity assessment summary

Junction/ approach	Weekday AM peak				Weekday PM peak			
	MAX RFC		MAX Q		MAX RFC		MAX Q	
	B 2031	B+D 2031	B 2031	B+D 2031	B 2031	B+D 2031	B 2031	B+D 2031
A41	0.55	0.56	1.40	1.40	0.47	0.48	1.00	1.00
Station Way	0.05	0.08	0.10	0.10	0.34	0.38	0.60	0.70
Friarage Road	0.46	0.46	0.90	1.00	0.55	0.56	1.30	1.40

The junction modelling undertaken indicates that the junction will operate well within acceptable capacity thresholds during the AM and PM peak periods in both 2031 without EWR and 2031 with EWR. It should be noted that junction layout plans have been requested and have not been provided by EWR, so it has not been possible to undertake a detailed check of geometry.

The junction modelling is not considered representative of current known conditions at this junction. The ARCADY model has assumed clear exit onto the A41, which in reality is not the case. The main issue with the A41/Station Way roundabout junction relates to interaction with the A41/Walton Street roundabout and the A41/Station Way signals resulting in blocking back of traffic through the junction. Current traffic conditions and site observations highlight issues with vehicles exiting Station Way at peak times and this is not reflected in the current junction model.

Queue length surveys should be undertaken in order to validate this model to ensure it is representative of existing conditions. This would ensure that any future forecast year assessments accurately reflect the operational impacts of the proposal.

It should be noted that the Highway Authority has previously raised concern with the limited scope of the operational assessment and is of the view that following junctions also need to be considered, due to the projected increase in vehicular traffic and the linear nature of the A41 that means traffic does not naturally disperse:

1. A41/Station Way (signalised junction)
2. A41/Walton Street (roundabout)
3. A41/Station Way (roundabout)
4. A41/A418 (roundabout with signals controlled crossings on the approaches)

It is likely that these junctions will also need to be validated based on queue length surveys due to the interactions between the junctions along the corridor.

Chapter 16 - Cumulative Assessment

Chapter 16 of the Transport Assessment provides a cumulative assessment of the impacts associated with the construction and operational phases of the Project, using strategic model data provided by the relevant local authorities.

Paragraph 16.2.1 suggests that these contain Local Plan development site traffic trips. It should be noted that the data provided from the Aylesbury Strategic Model only included committed developments and strategic infrastructure projects.

The A41/Station Way junction (Aylesbury Railway Station) has been assessed using the flows from the Aylesbury Strategic Model. The summary table is provided below:

Table 16.34 A41/ Station Way junction capacity assessment summary

Junction/ approach	Weekday AM peak		Weekday PM peak	
	MAX RFC	MAX Q	MAX RFC	MAX Q
A41	0.31	0.50	0.62	1.80
Station Way	0.06	0.10	0.87	6.20
Friarage Road	0.73	2.90	0.72	2.80

The modelling indicates that the junction is predicted to operate over capacity in the PM peak, with an RFC of 0.87 and a queue of 6.20 vehicles. Whilst EWR consider the increase in queues to be marginal this does not take into account the base model is not validated and therefore is likely to be underestimating the impact of the Project on this roundabout junction. A revised cumulative assessment needs to be undertaken, using a validated model as set out above. It is likely that mitigation is required at this junction, to ensure that vehicles can safely exit the Station Way arm of the junction.

Chapter 14.5 Level Crossings

Chapter 14.5 of the TA assess the impact the proposal will have on vehicle queuing and delay at level crossings which are proposed to remain in operation. It also considers the impact that the closure of level crossings will have on vehicles, pedestrians, cyclists and public transport users.

It should be noted that there are no proposals to close any public highway level crossings in Buckinghamshire, nor are there any level crossings in Buckinghamshire which will remain operational following implementation of the project. As such, the Highway Authority has no comments to make. It should be noted that Buckinghamshire's Public Rights of Way team have responded separately in relation to the impacts on the rights of way network.

Permanent Works

As part of the scheme there are significant changes proposed to the highway network, including:

1. Replacement bridges
2. Realigned carriageway
3. New maintenance access points

There has been an ongoing discussion with Transport for Buckinghamshire in relation to the proposed permanent changes to the network. The detailed design of the permanent works needs to be undertaken in consultation with the Highway Authority and secured by way of condition as part of the TWAO.

Fly Tipping

East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council

The County Council has concerns regarding the potential for fly-tipping to increase in the north of Buckinghamshire as a result of the permanent works, including maintenance access points. The following comments should be taken into account as part of the design of the permanent works:

1. All designs need to avoid opportunity for fly tipping. At a number of locations the maintenance access points gates appear to be located some distance up the track away from the main road. These should be positioned to minimise the area available for fly tipping. No assessment has been undertaken in the Transport Assessment in relation to maintenance activities, as such it is unclear how often and what type of vehicles will be using the access point. The location of the gates needs to be discussed and agreed on a site by site basis.

2. Further information is required in relation to the permanent Network Rail compound and access point at Queen Catherine Road, including how regularly it will be used, number of vehicles and hours of working. The County Council's Fly Tipping Enforcement team is concerned about fly tipping on the old 'Queen Catherine Road', which is being retained as public highway for access purposes. In order to identify what potential mitigation may be required, the council needs to understand what security measures will be put in place by Network Rail (e.g. CCTV, motion activated lights, roaming patrols).

The detailed design of the permanent works needs to be undertaken in consultation with the Highway Authority and adequately address the issue of fly tipping. The council considers it appropriate in the absence of any mitigation, for EWR to fund an additional surveillance camera to allow for effective enforcement of fly tipping in areas where there is historically not been an issue.

Chapter 15 - Mitigation

Chapter 15 of the TA sets out details of the mitigation measures proposed for both the construction and operational phases of the project.

Construction activities are to be managed in line with the Construction Traffic Management Plan Framework, which forms part of the Code of Construction Practice (CoCP). The CoCP is contained in Appendix 2.1 and the CTMP Framework in Appendix 2.2. The Highway Authority has assessed these documents and is of the view that they lack substance and do not offer any certainty regarding mitigation. Given the level of impacts on the local road network and rural communities of Buckinghamshire, the Highway Authority considers that further work needs to be undertaken at this stage.

The Highway Authority is of the view that the Framework CTMP needs to be strengthened, in order to provide a sound basis on which to consider the TWAO, with clear commitments. The Highway Authority would ultimately seek that a condition be imposed in relation to the submission and approval of the final CTMP and its implementation, however questions whether the Framework is a sound document to base this on. Detailed comments on both documents are provided below

Code of Construction Practice

The CoCP acts as an environmental management system framework, under which the construction of the Project will be undertaken in relation to the environment. It is stated that the CoCP is to be approved with the relevant local planning authorities, for avoidance of doubt this should include the County Council. The CoCP currently does not contain sufficient detail and omits key information such as details/references to the construction phase mitigation measures. The CoCP needs to be further developed with relevant stakeholders before approval can be granted.

Construction Environmental Management Plan

The environmental management requirements for construction set out in the CoCP are to be implemented through the Construction Environmental Management Plan. Paragraph 1.4.3 states that the Construction Environmental Management Plan will be devolved during the detailed design stage and will only be approved by Network Rail and not be any external body. The Highway Authority is concerned with this approach and would expect an opportunity to reviewed the contents of the CEMP and provide comments as appropriate.

Community Consultation and Engagement

A community relations manager is to be appointed who will serve as a liaison between the EWR Alliance and the community through the construction phase. They will be supported by a community relations officer. The level of resourcing should be reviewed and if necessary additional personnel brought in to ensure that local issues that may arise during the construction period are adequately addressed.

It is noted that a 24 hour project helpline is proposed that will receive and process enquiries received regarding construction activities. This should include highway queries relating to routing and construction traffic. It would not be acceptable for the Highway Authority to have to manage this on behalf of EWR, particularly noting resource availability. It should be noted that at this stage delivery vehicles are not going to be branded or liveried, therefore the Highway Authority is concerned about the ability of EWR to monitor and manage complaints.

Notification of Works
Paragraph 2.1.5 states that advance notifications of works will be based on targeted communication strategies developed in consultation with representatives of the most affected communities. The Highway Authority want to be aware of communication being issued, particularly where the works impact on the travelling public.

Working Hours
It should be noted that the Transport Assessment has been undertaken based on a 10 hour working day, with 95% of operatives arriving before 7. This needs to be reflected in the CoCP.

It is noted that non-standard working hours regime will be used to take advantage of day light hours for activities that may be seasonal or weather dependent. Activities outside of core working hours could impact on the local highway network and the Highway Authority would wish to be consulted prior to works taking place.

Paragraph 3.1.8 sets out that deliveries to site shall be undertaken during standard working hours, however it is noted that in some instances special requirement may be needed for deliveries to be undertaken outside of these times due to abnormal loads. Such loads would require movement orders and will need to follow the agreed HGV routing. This should be detailed in the CoCP for avoidance of doubt.

Site Layout and House Keeping
A comprehensive list of measures are to be employed to reduce the likelihood of an environmental incident or nuisance occurring. Whilst this list is extensive the Highway Authority requires wheel washing to be included.

Air Quality
Paragraph 5.1.8 states measures will be put in place to avoid site runoff of water or mud. It has not yet been identified what these measures are however it should be noted that the Highway Authority will not accept private surface water runoff from private land onto the publically maintained highway.

Measures Specific to Track Out
The points raised here are very important as it is a legal requirement to ensure mud is not tracked onto the highway. If mud is tracked onto the highway then the site must act in the most appropriate manner to remove the mud from the highway. If the Highway Authority considers that the level of sweeping is insufficient, then it should have the ability to direct EWR to undertake more regular cleansing as appropriate to ensure highway safety.

Traffic and Transport This paragraph should be based around the information as set out in the Framework Construction Management Plan. The following comments in relation to the CTMP should therefore be taken into account in the CoCP.

Framework Construction Traffic Management Plan
The Framework Construction Traffic Management Plan (CTMP) is an outline document which sets out the framework to assist in the writing of the fully detailed Construction Management Plan. This document has been reviewed by the Highway Authority and the subsequent comments set out points

of clarification, unaddressed issues and additional information that need to be provided as part of both the framework and the detailed Construction Traffic Management Plan.

In paragraph 1.1.2 it states that a draft detailed CTMP will be submitted for review prior to the commencement of use of the strategic compound. The CTMP should be submitted before any construction activity is undertaken for approval by the relevant Highway Authorities. It is noted that the CTMP Framework 'will not change', however the Highway Authority is not satisfied with the content of the Framework and believe this needs to be developed further.

Construction Access Routes
It is noted in paragraph 2.1.3 that 'HGV's and LGV's will be limited to the routes agreed with the Highway Authority. The Highway Authority has raised concerns with a number of the construction access routes that need to be addressed before approval can be granted.

Within the Transport Assessment and the Framework CTMP there is no mention made of how EWR will manage the event of an HGV break down (or other blockage) on the network. Much of the network has been shown to be constrained with few alternative routes. Management of HGV's in the locality and on the approach will be essential to maintaining the network and enabling swift recovery of stranded vehicles. The Highway Authority expects to see EWR's proposals as to how this will be managed within the detailed CTMP.

The staff and operatives will not have any restrictions on the routes to office/welfare locations, as they cannot be controlled or enforced. As part of the compound specific travel plans the most appropriate routing will be identified, to limit the impact on villages along the route. It should be noted in the Framework CTMP that the travel plans have not been approved and will need to be submitted for agreement by the Highway Authority.

In paragraph 2.1.6 it states that EWR has considered the impact of other committed development and HS2. The Highway Authority has raised a number of comments relating to the interface between HS2/EWR projects that need to be taken into account as part of the Framework CTMP.

Paragraph 2.1.8 states that at roads and junctions where physical constraints mean that considerable works would be required to provide clearance for HGVs, these routes have been prohibited. No details have been provided as to how vehicle routing is to be managed or controlled. This is of concern to the Highway Authority as well as local residents.

Haul Routes
The Highway Authority has raised a number of comments relating to the haul roads that need to be taken into account as part of the Framework CTMP, in addition to the following points:

Paragraph 2.2.5 states that where haul roads meet with the highway network then signals are to be erected. It has currently not been demonstrated that signals are needed at these locations.

Paragraph 2.2.6 states that haul road crossing points will not be used to enter the Project off the highway. This statement needs clarification, noting the Highway Authority would look to restrict or reduce the number of access points on the local highway network. It is the Highway Authority's view that the haul road should be used for access to/from the Bletchley compound to avoid unnecessary impacts on Newton Longville.

Touch Points
The Highway Authority has raised a number of comments relating to the proposed access points that need to be taken into account as part of the Framework CTMP, in addition to the following points:

Paragraph 2.1.7 states that there is to be vehicle parking near M1 Junction 13, which will be used to hold HGVs while they wait to access other compounds at the right time. No mention however is made of how vehicles accessing via the project via the M40 will be managed, noting the greater proportion of HGV traffic accessing from this direction.

In paragraph 2.1.8 it states that the local access points will be predominantly used to access the project from the highway network. Deliveries may come from adjacent compounds or direct from the

external supply chain. Wherever the deliveries come from they need to be using the routing agreed with the Highway Authority and should be detailed in the Framework CTMP accordingly.

Vehicles using Construction Access Routes
Section 2.2 provides an illustration of a typical 40t HGV which has an overall width of 2.6m at the wheel base. The tracking drawings for the construction routes have been produced with a vehicle width of 2.4m. Clarity is required to the size of vehicles to be used and the tracking updated accordingly.

Control Measures on the Highway
The Framework CTMP does not provide sufficient information on control measures, particularly noting the number of HGV movements proposed on the local highway network. This section needs to be expanded to include:

- Logistics Management System
- Vehicle tracking and branding
- Traffic Management Plans
- Enforcement of construction routes

Information is required to be added to the Framework CTMP on how third party companies will be informed of the routing agreement in place, also the timings of deliveries to ensure that the daily HGV flows are evenly distributed though out the day, as per the Transport Assessment. It was indicated at a meeting with the EWR Alliance that a new computer system is to be used which links directly to an App on a mobile phone device where timing and delivery routes can be sent directly to the drivers. Use of a handheld mobile phone is not legal while driving and therefore this is not considered to be acceptable. Fixed satellite navigation systems would be considered acceptable provided there is no requirement on the driver to interact with the system and all information is on a 'push basis' to the vehicle.

The Highway Authority wishes to see firm commitments as part of the Framework CTMP as this forms an essential part of the mitigation.

Abnormal Loads
Paragraph 3.2.1 sets out the in some instances the vehicles used due to the weight and size will be classed as an abnormal load, and will be subject to Movement Orders. These Orders are required to be using the HGV construction routes only unless otherwise agreed by the Highway Authority.

Within paragraph 3.2.2 it states that abnormal loads will be routed into the Project via the compounds where access is generally on to more suitable highway infrastructure. Where reasonably practicable these abnormal loads will then be moved within the Project Area. It is unclear how this would work and further detail is required.

Temporary Road Closures
The Highway Authority has raised a number of comments relating to temporary road closures that need to be taken into account as part of the Framework CTMP. It should be noted that EWR will need to allow sufficient time for the approval of all traffic management, road and lane closures by the Network Management team.

Temporary Highway Works
The Highway Authority has raised a number of comments relating to temporary highway works that need to be taken into account as part of the Framework CTMP. It should be noted that the scope of works required has not yet been agreed by the Highway Authority and will be subject to detailed design.

The Framework CTMP suggests that at passing bays, a guiding principal will be that construction traffic gives way to other highway users and that construction vehicles heading towards site compounds/access points will have priority. It is unclear how this will be signed, communicated and managed.

Whilst the works are described as temporary, the Highway Authority may require the works to be permanent rather than be reinstated to the existing condition. This should be considered on a case by case basis.

Site Access Signage
A signage strategy is required as part of the Framework CTMP for approval by the Highway Authority, which should include signage of vehicles to the compounds and access points as well as prohibited routes. Whilst the Highway Authority supports the use of signage, access points should be designed where possible to restrict HGV movements to avoid the use of inappropriate/prohibited routes.

Control Measures at Touch Points
The Highway Authority has raised a number of comments relating to the proposed access points that need to be taken into account as part of the Framework CTMP, in addition to the following points:

Paragraph 4.1.1 it states that all works, accesses and visibility shall be designed in line with the Local Highway Authority standards or DMRB. The Highway Authority is in agreement with this principle, taking into account the type of vehicles associated with the construction of this Project, however the visibility splays at the access points currently do not meet the standards set out in the DMRB and are based on the assumption of a temporary 30mph speed limit.

In paragraph 4.1.2 states that all compound entrances will be designed so that vehicles can pull off the highway, waiting bays will also be proposed so as not restrict access and hold other vehicles on the highway waiting to access the site. This has not yet been included as part of the temporary works mitigation drawings and will need to be submitted for approval by the Highway Authority, including revised tracking.

In paragraph 4.1.3 states that the security provision will be set back to allow vehicles to pull clear of the highway, this should be based on the maximum length of a HGV that is likely to use the access. At the end of the construction period if the access is to be redundant then it will need to reinstated to a suitable standard to be agreed with the Highway Authority. If the access is to be retained than the security provision would need to be repositioned to discourage fly tipping.

In paragraph 4.1.4 states that all accesses will be designed and constructed to allow for two-way vehicle movement. It needs to be clear that this relates to two way HGV movements.

In paragraph 4.1.5 states that 'reversing onto the highway will be prohibited'. The layout of the compounds should be included as part of the CTMP, for approval by the Highway Authority to ensure that this is achievable.

In paragraph 4.1.7 states that facilities for cleaning vehicles will be provided to ensure that mud and debris is not deposited onto the highway. It also states that the preventives measure could include rubble strips, automated wheel wash drive though, jet washer with operatives and surfaced sections of access roads on the approach to the highway.

All vehicle wash down should take place on hard standing with dedicated drainage within the site zone. Clean and made surface should then convey vehicles to the highway. Automated wheel wash drive through and jet washers with operatives should be used. Rubble strips are not considered to be acceptable.

Travel Plans
The Highway Authority has raised a number of comments relating to the travel plans that need to be taken into account as part of the Framework CTMP. It should be noted in the Framework CTMP that the travel plans have not been approved and will need to be submitted for agreement by the Highway Authority.

Construction Traffic Parking
Paragraph 4.3.1 states that all vehicles shall be parked within the project boundary and not on the public highway. No detail has however been provided as to how this will be monitored or managed.

This is particularly important given the potential impact on Buckinghamshire residents, as well as potential impact on HGV routing.

In paragraph 4.3.3 it's stated that all vehicles shall leave/egress site in a forward gear, the parking with the sites and compound will be reverse parking manoeuvres only. The layout of the compounds should be included as part of the CTMP including vehicle tracking, for approval by the Highway Authority.

Surveys
The Highway Authority has raised a number of comments relating to the proposed construction routes and mitigation measures that need to be taken into account as part of the Framework CTMP, in addition to the following points:

In paragraph 5.1.2 it stated that it is important that measures are implemented that will allow the existing highway users to continue to use the highway network in a safe and suitable manner. At this stage the Highway Authority is of the view that the mitigation proposals are not sufficient and further work is required.

In paragraph 5.1.3 it sets out that highway assessment surveys shall be undertaken prior to the project starting. This is to assess the life and condition of the existing carriageway which EWR will be intensifying the use of. The Highway Authority has provided comments regarding our requirements, which should be incorporated into the Framework CTMP or secured by condition.

Monitoring
This section appears to be very light touch and does not provide any assurances or detail to either the Highway Authority or local residents.

It is noted that visual monitoring will be undertaken of build-up of mud and debris on the highway. It is unclear of how often a visual inspection will be carried out, nor what mitigating action will be undertaken if a problem is identified. It should be noted that the Highway Authority needs authorisation to direct additional sweeping/road cleansing to be undertaken as appropriate, given the safety implications.

It is noted that periodic audits of HGV/LGV's will be undertaken to check the route they have used to travel to the project, as well as monitoring of prohibited routes. The methodology of the monitoring, including frequency, has been not been set out nor what mitigating action will be undertaken if a problem is identified. Given the importance of the routing, relating to the Transport Assessment, further consideration is required as part of the Framework CTMP.

Vehicle Identification
In paragraph 5.3.1 and 5.3.2 it states that all full time site vehicles shall be branded or will display EWR livery, this is found to be acceptable. It should be noted that at this stage delivery vehicles are not going to be branded or liveried, therefore the Highway Authority is concerned about the ability of EWR to monitor and manage construction route compliance.

Whist each access point will have ANPR camera recording vehicles entering and egressing the sites, this does not help identify the vehicles working on behalf of EWR on the local highway network. The Highway Authority requires the third party suppliers to be provided with magnetic signs to be displayed on both driver and passenger sides of the vehicles which reads along the lines of "Working on behalf of EWR".

It is far easier to prove that a vehicle is using an incorrect route if vehicles are branded or have livery, also members of the public will be able to identify vehicles easily and aid with compliance of the construction routing.

The Highway Authority is concerned that the Framework CTMP does not provide any mitigation to demonstrate adherence to the agreed construction routing. As such through the TWAO and CTMP the Highway Authority seeks to secure three mobile dual directional ANPR cameras. These cameras shall be linked to the Authorities system and EWR logistics management system. These cameras should be used to monitor for plate matches between HGV's at the gates and on sensitive local routes

that do not form part of the agreed routing within a fixed time period before arrival at the destination. Should EWR or the Highway Authority receive complaints of HGV's using incorrect routes the cameras are to be moved to the location of the complaint to act as route enforcement.

Community Consultation and Engagement

In paragraph 5.4.2 it states that the local community and other road users will be able to report issues, unsafe driving and incidences of non-conformance to EWR Alliance through a range of media including a 24 hour helpline. It should be noted that at this stage delivery vehicles are not going to be branded or liveried, therefore the Highway Authority is concerned about the ability of EWR to monitor and manage complaints received.

It is noted in paragraph 5.4.3 that a working group is to be set up comprising both EWR alliance and representatives of the local community to discuss issues arising from the Project traffic. The Highway Authority would want to be represented on the working group.

Incident Reporting

It is noted that the EWR Alliance will record all reported incidents of non-conformance to the CTMP. The reports should be issued for approval to the Highway Authority on a monthly basis, including a trend analysis and any mitigation requirements to overcome identified problems.

Construction Travel Plan

The primary aim of the Construction Travel Plan is to reduce and manage traffic generation by staff travelling to their workplace from their place of home during the construction period. A Construction Travel Plan Frameworks have been submitted and the Highway Authority has reviewed these plan and the comments are found in Appendix Biii and Appendix Biv of this response. The Travel Plan Frameworks should be updated accordingly, to provide a sound basis on which to develop the Travel Plans.

The Highway Authority would seek that a condition be imposed on the TWAO in relation to the submission, approval, implementation and monitoring of the Travel Plans.

Programing

The Highway Authority accepts that at this stage EWR have not produced a detailed delivery programme for the route through Buckinghamshire. The Highway Authority does however urge EWR to demonstrate through the programme and CTMP that they have considered seasonal impacts and usage of the highway by the existing users of the network. The programme should show that EWR have accounted for periods where the network may be subject to different pressures that would affect the flow of vehicles over the normal conditions.

Highway Mitigation Measures

The Transport Assessment states that it is *'imperative that measures are implemented which will:*

- *Enable the HGV's associated with the construction of the Project to travel along the rural roads in a safe and suitable manner*
- *Enable existing users of the roads to continue using them in a safe and suitable manner'*

Temporary works have been identified including a series of passing places and widening, however as set out above the Highway Authority has a number of concerns. The Highway Authority is of the view that measures proposed and as outlined in Appendix H do not go far enough to meet the above imperative. Whilst a number of these can be secured as part of the TWAO and detailed design process there are some substantive issues, which need to be addressed prior to the TWAO being made.

The Transport Assessment has identified the following junctions where there are capacity issues, where EWR would have a significant impact in Buckinghamshire:

- Junction J021 – A421/Gawcott Road/Embleton Way
- Junction J022 - A421/ Embleton Way/Osier Way
- Junction J023 –A421/London Road/ A413
- A41/Aylesbury Vale Parkway (and associated corridor in to Aylesbury)

- Station Road/Friarage Road (and associated neighbouring junctions)

The Transport Assessment does not provide for any physical junction improvements during the construction phase, on the basis that construction activity is temporary nature. However the impacts are still considered to be significant enough to warrant mitigation.

The Transport Assessment proposes to install a series of monitoring surveys at key locations, which could experience delay so that the local highway authority and community are kept informed. The Highway Authority does not consider that EWR proposals are sufficient and should be amended as per the requirements set out below:

- Journey time data – available from mobile phone and Bluetooth collected in real time. Journey time changes will be reported to the local highway authorities and community and any issues identified could be explored.
- Automatic Traffic counts – to monitor increases in traffic on the main construction access routes. This data would allow EWR to monitor HGV activity and report findings to local highway authorities and communities.
- CCTV at critical junctions – to allow real time monitoring of the performance of junctions particularly through peak periods.
- VMS signage connected to the Highway Authorities UTMC system – for the informing of the travelling public of network pressures and delays. These systems allow for active management of the network.
- The Highway Authority expects that Intelligent Transport Systems and monitoring mitigation be installed three months prior to routes becoming active to provide sufficient baseline data.

If locations are identified where temporary impacts are occurring then it may be necessary to implement temporary measures which could include:

- Warning Signage – informing road users of temporary delays or construction works being undertaken.
- Temporary Traffic Signal Control – this could be used to manage increase in traffic flows caused by the introduction of the Project
- Provision of temporary/mobile CCTV cameras
- Temporary speed restrictions
- Engagement with the Highway Authorities UTMC team for potential to apply temporary changes to existing traffic management plans.

The Highway Authority has raised a number of concerns with the junction capacity assessments undertaken, which need to be addressed prior to grant of the TWAO. As such, further mitigation may need to be identified once the Highway Authority's comments have been adequately addressed.

Furthermore no mitigation is proposed to overcome the highway safety concerns, raised by the Highway Authority. The Highway Authority has raised a number of concerns with the safety assessment undertaken and would seek to see the following mitigation:

- **A41 Corridor** - Junctions along the A41 that are to be used for construction traffic should have red surfacing applied to hatching areas to highlight the increased risks associated with these junctions. A right turn lane should be provided for junctions along the A41 to allow safe refuge for vehicles turning. Radius of junctions should be modified in such a way as to remove the need for vehicles joining A roads to over shoot the centre line. Where accesses are temporary they are to be planed out and removed following completion of the works.

- **A413 Corridor** – Junctions along the A413 that are to be used for construction traffic should have red surfacing applied to hatching areas to highlight the increased risks associated with these junctions. A right turn lane should be provided for junctions along the A413 to allow safe refuge for vehicles turning. Radius of junctions should be modified in such a way as to remove the need for vehicles joining A roads to over shoot the centre line. Where accesses are temporary they are to be planed out and removed following completion of the works.

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- **A413/Vicarage Road/Sheep Street** - This junction requires mitigation to highlight the running lanes in each direction to maintain lane discipline around the bend. Additional protection is required on the inside of the bend to protect the pedestrian footway from overrunning of vehicles.

- **Padbury Road/A421/Lower End staggered junction –** This junction requires mitigation to highlight the hazards around turning movements. This could be in the form of coloured surfacing, vehicle activated signing, high friction surfacing, relining and/or refreshing lining.

- **Blackgrove Road/Waddesdon Hill/A41** – it is noted that this junction is to be upgraded as part of HS2 and for the purpose of this assessment it is considered committed. This route cannot be used by EWR construction traffic until the works to this junction have been carried out or alternatively a temporary scheme provided.

- **A421 Corridor between Tingewick Bypass and Bourton** – In particular the junction at Tingewick Road, the roundabouts at Gawcott Road, Osier Way and junction of A421, with the A413 east of Buckingham town. Safety mitigation on the approaches to these junctions should be considered particularly mitigation against the risk of collisions within queuing traffic. This could take the form of coloured surfacing, vehicle activated signing, high friction surfacing, relining and/or refreshing lining.

- **A413 between A421 and Lace Hill -** The A413 leaving Buckingham has a number of sensitive locations along it, including a supermarket, long distance bus stops and a well-used pedestrian route to local schools. A safety scheme is required to ensure safety all of road users during construction.

- **A421 and A413 roundabout and approaches** – The junction operates at or above capacity for much of the time, and is heavily used by HGV's. Safety mitigation on the approaches should be considered particularly mitigation against the risk of collisions within queuing traffic. This could take the form of coloured surfacing, vehicle activated signing, high friction surfacing, relining and/or refreshing lining.

- **A413/Lenborough road junction** – the heat maps indicate a number of collisions have occurred in the vicinity of the junction. The proposed construction routing would considerably increase the number of right hand slow turning movements and therefore this needs further consideration.

- **A413 Padbury** –The A413 through Padbury passes close to the local primary school and has significant numbers of children walking to the school. A safety scheme is required to ensure safety all of road users during construction.

- **Whaddon Road** – the heat maps indicate a number of collisions at the point in the network where the Haul Route for B5 compound is to be accessed and therefore this needs further consideration.

- **Fleet Marston** – the heat maps indicate a number of collisions at the point in the network where E5 compound is to be accessed and therefore this needs further consideration.

- **Blackgrove Road** – the heat maps indicate a number of collisions at the point in the network where E4 compound is to be accessed and therefore this needs further consideration.

- **Main Street Mursley** – The Highway Authority is of the view that mitigation should be provided to ensure that safe access is maintained through the village centre for all road users during construction. This should include a review of parking restrictions.

- **Drayton Road, Mursley Road/Bletchely Road Jucntion** – This junction requires mitigation to highlight the hazards around turning movements. This could be in the form of coloured surfacing, vehicle activated signing, high friction surfacing, relining and/or refreshing lining.

- **A421 corridor between Little Horwood Road, Shucklow (junction 27) and A421, Winslow Road (Junction 26)** – Junctions along the A421 that are to be used for construction traffic should have red surfacing applied to hatching areas to highlight the increased risks associated with

these junctions. A right turn lane should be provided for junctions along the A421 to allow safe refuge for vehicles turning. Radius of junctions should be modified in such a way as to remove the need for vehicles joining A roads to over shoot the centre line. Where accesses are temporary they are to be planed out and removed following completion of the works.

- **A41 – Jackson Road to Rabans Lane** - Parking restrictions should be sought on the A41 between Jackson Road and Rabans Lane in Aylesbury.

Operational Phase:
The Transport Assessment has not identified any junctions within Buckinghamshire that would operate over capacity. The Highway Authority has however raised concerns with the scope and assessment undertaken, which needs to be addressed prior to grant of the TWAO. As such the Highway Authority reserves its position with regards to mitigation that may be considered necessary in accordance with the National Planning Policy Framework.

It should however be noted that based on the cumulative assessment of the A41/Station Way (Aylesbury Railway Station) junction, the Highway Authority are of the view that mitigation will be required at this location.

Car Parking
The Multi-Modal surveys show that Aylesbury Train Station has a much higher percentage of passengers accessing the station by car when compared to the national average mode share from the National Passenger Survey (22% vs 11% NPS). The majority of passengers arriving by car in the am peak park off site (19%), indicating that people are either using the local highway network or alternative car parks. The Highway Authority is of the view that the Transport Assessment has failed to consider the impact of car parking on the local highway network and within existing car parks in the town centre, all of which are within walking distance of the station. Transport for Buckinghamshire's Parking Team has identified an existing pressure to the south west of the station, which would be exacerbated by the EWR proposal. As a result, the Highway Authority would expect EWR to fund a review of parking in this area and implementation of any necessary mitigation, such as a residents parking scheme.

Sustainable Travel
In addition walking (42% vs 56% NPS) and cycling (2% vs 4% NPS) is significantly lower than the national average mode share from the National Passenger Survey, indicating that whilst a number of homes are accessible within 20m walk or cycle of the station this is not an attractive option. If more passengers are to be encouraged to use sustainable transport it is considered necessary to improve the quality of the links to and from the station. Aylesbury has an existing cycle network which has a number of areas that could be improved to provide links to all areas of the town which fall within a suitable distance for cycling to the station.

It is also noted that the existing cycle route on 'Jet Way' will be severed by the closure of a level crossing.

The Highway Authority considers that improvements to the cycle and pedestrian signage over the town to the station would be required, along with the redirection of the existing Jet Way and contributions to cycle promotion across the town. In addition the Highway Authority also considers that improvements to the pedestrian routes into the town centre between Aylesbury Station and Aylesbury Market Square should be secured as part of the TWAO.

Overall the Highway Authority is of the view that the mitigation proposals put forward by EWR do not go far enough in order to satisfy the Highway Authority that safe and suitable access can be achieved and that the proposals during construction and operation would not have a severe impact on the local highway network.

Conclusion
At this stage the Highway Authority reserves its position until the issues outlined above are adequately addressed and necessary mitigation secured. Where possible, it is recommended that EWR and Buckinghamshire County Council work together to resolve the outstanding matters ahead of any examination given the overall transport benefits of the scheme. The

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Highway Authority would welcome a Statement of Common ground be developed between the two parties on areas of agreement, including mitigation requirements.

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EWR Mitigation Summary

Page no	Action	To be completed by	Completed
4/56	Road safety mitigation		
10	Temporary mitigation required should proposed works for HS2 fail to be completed		
11	EWR commitment to work with HS2 on temporary routing and mitigation measures		
11	EWR commitment to engage with HS2 regarding the possibility of sharing haul routes		
17	Aylesbury Parking Mitigation		
18	Aylesbury Improvement to quality of walking and cycling links		
24-25/43/55	Mitigation to off-site junctions		
30- 37	Construction route mitigation		
38-39	Highway Structures mitigation		
39-41	Highway Asset maintenance		
41-42	Detailed design of access points		
45-46	Detailed design of permanent highway works		
46	Funding of additional surveillance cameras		
47 -48	Code of Construction Practice		
48-54	Construction Traffic Management Plan		
53-54	Mobile ANPR cameras to enforce construction route adherence		
54	Travel Plan		
55	Traffic Monitoring and temporary mitigation		
58	Parking mitigation south west of Aylesbury Station		
59	Aylesbury cycle route and walking mitigation		

EWR Action Summary

Page no	Action	To be completed by	Completed
1	Revised car parking and cycle parking utilisation surveys	EWR	
2	Cross reference flows from Manual Classified Counts with Automatic Traffic Count data	EWR	
3	Review secondary traffic survey locations and where necessary collect further data	EWR	
4	Justify and explain how the Road Safety Assessment methodology has been derived and applied	EWR	
4	Assess links and junctions in rural locations for accident patterns to understand if they will be exacerbated by construction traffic	EWR	
7	Reconsider access to Verney Compound (B2)	EWR	

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7/35	Reconsider access to Furze Lane Compound (B3)	EWR	
8/13	Reassessment of Bletchely Compound (B6) and impact on Newton Longville	EWR	
8/22/23/31	Update Framework CTMP – temporary signals	EWR	
8	Reconsider the location of the Bletchley Compound (B6) access in relation to the haul route	EWR	
9	Update Framework CTMP – Freight Logistics and daily profile of staff	EWR	
9	Update Framework CTMP – road closures and highway diversions	EWR	
10	Update Framework CTMP – HS2	EWR	
11-12	Explain methodology for Cumulative Impact Approach and provide points of clarification	EWR	
13	Provide HGV calculations	EWR	
13	Provide clarification on staff, operative and LGV trip calculations	EWR	
13	Consideration to the local highway impact during construction peak hours	EWR	
14	Clarification of labelling of spreadsheets in Appendix I	EWR	
14	Confirmation as to why trips are shown to structures	EWR	
15	Review of LGV routing	EWR	
16	Full Multimodal assessment of passenger demand increases to be provided	EWR	
18	Sensitivity test for the construction assessment year to be undertaken using strategic model data for Aylesbury	EWR	
18	Clarification on the refinement of staff and operative trips	EWR	
19-21	Undertake additional junction assessments	EWR	
22	Junction layout drawings used for peak hour assessments to be provided	EWR	
22	Queue length survey data and raw survey datasets for peak hour assessments to be provided	EWR	
23	Amending and updating the junction model for Compound B5	EWR	
24/25	Amend junction models and provide new assessments and where appropriate mitigation	EWR	
27	J108 A41, Blackgrove Road - Provide the Highway Authority with details of highway improvements to be provided by HS2 and demonstrate that the mitigation is sufficient for construction traffic.	EWR	

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27/28	J108 A41, Blackgrove Road -Provide information to show that the HS2 improvements will be completed in adequate time for use by EWR.	EWR	
30	Amend construction route drawings to include additional mitigation sites	EWR	
31	Update Framework CTMP to detail new assets to be constructed to full specifications.	EWR	
31	Provide expanded tracking sections	EWR	
32	Provide confirmation of size of vehicles to be used	EWR	
31/35	Provide new tracking drawings	EWR	
38	Update Framework CTMP to reflect Highway Structures comments	EWR	
39/40	Update Framework CTMP to reflect Highway Asset management comments	EWR	
41	Reassess access points to achieve correct visibility levels	EWR	
42	Undertake additional design and works on the access points	EWR	
43	Provide junction layout plans as requested	EWR	
43	Increase scope of the Operational Assessment	EWR	
43	Amend junction model and provide new assessments and where appropriate mitigation	EWR	
45	Revise Cumulative assessment using validated model	EWR	
47	Revise Code of Construction Practice	EWR	
48	Revise Framework Construction Traffic Management Plan	EWR	
55	Amend proposals for monitoring surveys as required by the Highway Authority.	EWR	
56	Update mitigation requirements	EWR	

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Sub-appendices for Traffic and Transport comments

Appendix Bi – Access Tracking
Appendix Bii – Tracking Routes
Appendix Biii – Travel plan review satellite compounds
Appendix Biv – Travel plan review strategic compounds
Appendix Bv – Cycling comments

Appendix Bi – Access Tracking

Location	Reference access drawings	Reference highway improvement	Mitigation Proposed	Acceptable	Additional Mitigation Needed	General Comments
Station Road, Launton	107.6	Route Section 2A sheet 3	none	no	Tracking is tight to opposite edge of carriageway on exit from compound. Vehicles have been shown to overhang the edge of the access bellmouth, realignment is required	Edge haunching required if not existing to protect the carriageway edge.
Bicester Road, (towards Marsh Gibbon)	106.2	Route Section 2A sheet 6	none	no	Access should be widened and signals provided through the bridge.	Tracking shows that entry and exit from compound can be achieved.
Main Street/Green Lane, Padbury	102.6	Route Section 2A sheet 11	proposed temporary kerb re-alignment	yes		Left turn to Main Street has not been shown, this is shown on route tracking, and has been requested to be shown in detail.
Sandhill Road, Near Verney Junction	95.5	Route Section 2B sheet 2 of 3 (OXD/25) and Temporary Highway Works Drawings Sheet 121	none	no	Tracking is tight to carriageway edge, haunching is required if not existing. Northern most access needs widening to allow two vehicles to pass within the compound access point.	The accesses are not shown on either set of drawings referenced in column C Drawings require updating.
Verney Road, Verney Junction	93.7	Route Section 2B Sheet 1 of 1 (OXD/24)	none	no	Access should be moved to gain maximum visibility. Tracking is tight to carriageway edge, haunching is required	Tracked HGV takes full carriageway width and other mitigation

					if not existing.	measures close to the access will be required.
Verney Road, Winslow	92.9	Route Section 2B Sheet 1 of 4 (OXD/23)	yes on 92.9 drawing there is a red box but not on any other plan (shown on tracking drawing s Furze Lane B3 1 of 2)	no	What is the access serving? The Highway Authority seeks clarification as this access is outside of the red edge boundary.	Tracking shows left turns only. Full tracking is required.
Winslow Train Station	91.7	Route Section 2B Sheet 1 of 4 (OXD/20)	yes red box on all plans	no	Tracking needs to show right movements. Tracking is also needed against the existing road markings to ensure that the right turn lane is not impeded.	This access point is currently in use and serves the Sir Thomas Freemantle School.
Horwood Road, Winslow	90.3, 90.0 and 89.9	Route Section 2B Sheet 1 of 3 (OXD/17)	none	no	Inset B - widening is needed as tracking number 88 shows over running of bell mouth of opposite access. The drawings do not show any mitigation for this. Inset C modify access to prevent right turn out of the access also signage needed here to prevent right turn out. Horwood Road past touch point 90.0 is not an HGV route.	Tracking does not show that HGV's can complete movements passing any stop lines for temporary traffic management.

Moco Farm Entrance	89.1	Route Section 2B Sheet 1 of 3 (OXD/14A)	none	no	Tracking shows right turn out of Moco Farm entrance this is required to be removed this is not an HGV route. Signs also to be erected to deter any HGV from using this road	Forward visibility at track access to Moco Farm needs to be improved. The sharp left turn bend is sharp and making the right turn movement into the track to be considered a safety concern that needs to be addressed due to the intensification of the use. (also referenced on tracking sheet)
Swanbourne Station	87.8	Route Section 2B Sheet 1 of 4 (OXD/13)	Yes (retained stated on tracking drawings)	no	The Highway Authority has concerns as to how two way flow be controlled as site and access is narrow. If the site will be gated where are the gates in relation to the vehicles? Tracking appears to show vehicles in conflict with a structure within the site and immediately behind the access point.	
Whaddon Road, between Mursley and Whaddon	86.0.	Route Section 2B Sheet 1 of 4 (OXD/11)	no	no	Full tracking needed from Mursley to A421 Waddon Roundabout (also detailed on tracking sheet) Bell mouth requires enlarging to ensure smooth access to highway.	Visibility needs to be improved. Widening mitigation needs to be provided on existing carriageway.
Whaddon Road, near Saldern Wood	85.1	Route Section 2B Sheet 1 of 3 (OXD/10AA)	no	no	Tracking shows overrunning on left out. Edge haunching needs providing and local widening opposite access point.	

Newton Longville compound and haul road	82.8	Route Section 2B Sheet 1 of 4 (OXD/7)		No	Tracking shows full width of road to be used to access haul road, access needs widening to allow turning within haul road and keep public highway clear. Compound access and haul road need to be aligned to minimise delay from any temporary signals	Where are wheel washers going to be put, what are haul roads going to be constructed of. CTMP update required
A41 Fleet Marston layby	32.1	Route Section 2E Sheet 91 of 134	None	No	Tracking shows HGV's starting entrance move from the wrong side of the road. Needs to be tracked showing centre line on the drawings access should be widened if needed to allow the movement to be completed. All movements need to be tracked.	Visibility shown is at a maximum of 20m, mitigation for this is required from EWR.
A41 Fleet Marston nr rail overbridge	34.8	Route Section 2E Sheet 94 of 134	None	No	Tracking shows HGV Westbound exit overrunning the centre line of the road. Layby suspension and realignment of road centre line should be considered. Tracking for right turn in and out is required. Left in requires very slow moving vehicles, run in layby is required	
AV Parkway station	35.2	Route Section 2E Sheet 95 of 134	None	Yes with mitigation	Separation of works traffic from public is required through the existing car park.	
Low loader Tracking.						

Location	**Reference access drawings**	**Reference highway improvement**	**Mitigation Proposed**	**Acceptable**	**Additional Mitigation Needed**	**General Comments**

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Marsh Gibbon A3	A3		No	No	Compound access needs widening and bringing in line with haul road. Localised widening on west side of the road. Tracking from Haul Road is missing.	
Green Lane/Charndon depot	A4		No	No	Easing of inside edge of access point. Reinforcing of east side of road and minor local widening.	
Steeple Claydon/Queen Catherine Road	B1		yes	No	EWR should consider if the access point can be moved to allow better visibility through the level crossing? Low Loader tracking indicates that local widening will be required. Tracking into the haul route has not been provided.	
Verney Junction	B2		Yes	No	The widening proposed needs to be shown with tracking. Tracking also needs to be shown for bend adjacent to access point	
Furze Lane compound	B3		None	No	Widening into compound land needed to allow for not overrunning east side of Furze Lane. Haunching needs providing to protect the edge of carriageway	
Little Horwood/Swains Way	B4		None	No	Local widening and haunching to be provided. Position of overhead cables to be shown to demonstrate that they will not be hit.	
Whaddon Road Newton Longville Compound	B5		None	Yes	Edge protection required opposite access point.	
Newton Longville compound and haul road	B6			No	Compound access point is outside red line. This drawing needs reviewing by EWR and providing to the Highway Authority.	

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Appendix Bii – Traffic Routes

Route	Commentary	Requirements
County Boundary to Marsh Gibbon Compound A3	Road from county boundary to Poundon is shown to be a Pinch point between HGV's and HGV's and private cars. The proposed passing places have not been tracked to show that they can be accessed by HGV's Tracking shows that additional passing place is required at Poundon Main Street. Tracking shows on approach to Marsh Gibbon Compound that the route is significantly constrained and that there is insufficient space for HGV's to pass at the point of the bridge.	Detailed tracking is required at Main Street junction with Green Lane access point and on the approach to Marsh Gibbon compound area.
A41 to Charndon Compound A4	Detailed Tracking has not been provided for the junction of the A41 and road to Grendon Underwood. The tracking shows no mitigation on the route to Grendon Underwood but at the scale provided the route appears to require mitigation to pass vehicles. Through Grendon Underwood the drawings HGV/HGV pinch points with no mitigation proposed and three points of HGV/Car pinch points. Through Edgcott the tracking shows 0.8Km where HGV's cannot pass. In the centre of the village there is also a point where cars and HGV's cannot pass. Tracking shows that between Edgcott and School Hill there are lengths greater than 200m where there is an HGV/HGV pinch point. Tracking shows pinch points between HGV and car at School Hill junction and along School Hill. Main street Charndon is showing HGV /Car pinch points for a length of 300m which requires mitigation as does the main street junction with School Hill.	Detailed tracking is required for all movements at the junction of the A41 and the road to Grendon Underwood. Expansion of the tracking drawing through Grendon Underwood is required. Mitigation within Gendon Underwood is required to allow for passing points. Mitigation within Edgcott village is required to allow passing. Mitigation is required to allow passing and expanded sections of tracking drawings for either end of School Hill. Additional passing places are required on Main Street Charndon.

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A413 Lenborough Road junction to Queen Catherine Road	Tracking shows that Lenborough Road has pinch points between cars and HGV's with a bend between proposed mitigation B1-P-8 and B1-P-7 Tracking shows that Bridge at B1-P-20 and B1-P-5 allows for single movements, it is not possible to identify the movements through this area due to the scale. Junction at Main Street Padbury shows pinch point and immediately south of the junction shows extended HGV/HGV pinch points. Tracking shows that vehicles are not able to pass at White Bridge and the tracking is on a scale that cannot be clearly seen. Passing places are shown between White Bridge and Sandhills road, there is a pinch point identified between B1-P-16 and B1-P-17 with no visibility between the proposed mitigation. Along Herds Hill Road tracking shows a long section of HGV and car pinch point approaching Sandhill road, and there is an HGV/HGV pinch point all the way to Steeple Clayon. On entering Steeple Claydon tracking appears to show insufficient space to pass vehicles but it is not marked as a pinch point. Queen Catherine Road shows a number of pinch points approaching the compound and works area, additional mitigation is required	Additional mitigation is required between B1-P-8 and B1-P-7 Larger scale drawings are required through constrained bridge sections B1-P-20 to B1-P-5 Additional mitigation is required south of main street Padbury. Additional tracking drawings are required for white bridge and mitigation to be outlined with the tracking. Additional mitigation is required between B1-P16 and B1-P-17 Additional mitigation is required along Herds Hill Road due to the distances between proposed passing places. Additional assessment of tracking through Steeple Claydon is required. Additional mitigation is required between Buckingham Road and B1-P-10
Sandhill Road to Verney Junction	Tracking shows that the entire route section is an HGV/HGV pinch point with large sections as HGV/Car pinch points. Spacing between proposed mitigation exceeds 200m in multiple locations. Movement onto Verney Road is displayed to be unsuitable within the tracking while bends along Verney Road appear to not be achievable given the tracking drawings provided. Tracking is incomplete to access point 93.7	Additional mitigation is required on Sandhills Road The highway Authority does not consider Verney Road to be appropriate for use given the tracking drawings provided and an alternative should be sought. Tracking should be completed to access point 93.7
A413 Buckingham to Little Horwood Road Winslow	This route has not been tracked apart from a short section approaching Lenborough Road from the north and a short section approaching Fruze Lane from the North. The A413 is a main route, however Winslow is an historic market town with constraints on the A413. The Highway Authority is concerned to demonstrate that the route through the town is accessible to construction traffic.	Tracking should be provided through Winslow town centre.

Furze Lane and Verney Road	The entire route is an HGV/HGV pinch point and much of it is an HGV /Car pinch point. Mitigation is proposed at locations that the Highway Authority considers to be appropriate. Furze Lane bridge continues to demonstrate issues with the tracking.	Proposed mitigation will be assessed at detailed design.
Little Horwood Road	The length of Little Horwood Road forms an HGV/HGV pinch point with the first mitigation 500m from the A413, and without visibility of the junction. The tracking shows the road to be constrained along the length to access point 90.0 with mitigation at appropriate intervals. The tracking indicates that between access point 90.3 and 90.0 there is insufficient space for HGV's to pass.	Additional mitigation is required at the junction with Sheep Street. Additional mitigation is required between sheep street and B3-P-3 Mitigation is expected to be incorporated into the site access mitigation around the access points.
Whaddon Road between A421 and Mursley Village	Route tracking drawings do not show this route at all. As such there has been no review of the tracking or mitigation requirements of this route.	The Highway Authority require this route to be tracked and proposed mitigation along this route to be submitted.
Stoke Hammond Bypass to Little Horwood Compound B4	The tracking drawings show that Stoke Road has a short section where HGV's cannot pass, and two passing bays have been proposed for this section. The length of the road once it becomes Drayton Road is a HGV/HGV pinch point and only has two passing places proposed. The section in front of the dwellings is an HGV /Car pinch point. The Highway Authority does not consider this to be sufficient mitigation. The junction of Bletchley Road, Drayton Road, Newton Road, Main Road shows sufficient space for tracking but the two approaches on the construction route show HGV/HGV pinch points. Mitigation is required on these approaches in addition to safety mitigation at the junction. The entire length of Bletchley Road and Mursely Road are shown as an HGV/HGV pinch point. There are points between mitigation sites that are in excess of 700m. The highway authority considers this to be too far between mitigation sites. Approaching the junction between Bletchley Road and Mursley Road there are also pinch points between HGV's and Cars, no mitigation is proposed approaching this junction. The highway authority considers this to be required. Mursley Road is shown to be an HGV/HGV pinch point along its length, and mitigation sites B4-P-5 and B4-P-4 are approx. 1.2Km apart. The Highway Authority considers this to be too far between mitigation sites. The corner north of B4-P-4 shows that	Additional passing place mitigation is required on Drayton Road. Additional passing place mitigation is required around Newton Road, Bletchley Road, Drayton Road junction. Additional mitigation site should be provided between B4-P10 and B4-P-11 Additional mitigation is required on Bletchley Road approaching Mursley Road. Additional mitigation is required between B4-P-5 and B4-P-4 Additional mitigation is required at the corner north of B4-P-4 Mitigation is required in Mursley Village. Larger scale view port of the compound access area and Station Road junction is requested for more detailed review.

	HGV's cannot pass and therefore additional mitigation is required to allow effective travel through the bend. The tracking shows that through the village of Mursley there are a number of HGV/Car pinch points and a continuous HGV/HGV pinch point. The Highway Authority requires mitigation to ensure that HGVs can pass through the village. Between Mursley Village and the Little Horwood Compound Station Road is a pinch point between HGV's and Cars, however the highway Authority acknowledges that frequent mitigation has been proposed. This mitigation extends to Access point 89.1	
A41 to Quainton Compound E3 - Quainton Road	A41 Junction has only been tracked from Aylesbury direction, all movements should be tracked. The entire length of the Quainton Road is shown to be an HGV/HGV pinch point with a number of HGV/Car pinch points. The Highway Authority does not consider the distance between the A41 and the single mitigation site to be acceptable. The highway authority does not consider it acceptable to only have one mitigation site on this route and requires further mitigation to be provided to the north of the currently proposed location.	Mitigation is required on Quainton Road in the area of the A41 junction and before reaching location E3-P-1. Additional mitigation is required between E3-P-1 and the compound access location.
A41 to Waddesdon Compound E4 - Black Grove Road	Tracking shows that the length of Blackgrove road is an HGV/HGV pinch point and there is no mitigation proposed. The Highway Authority is aware that EWR are expecting HS2 to have completed a scheme along sections of this route, however it is required that should this not be in place mitigation will be provided.	Mitigation is required if HS2 does not provide suitable mitigation on this route.

East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council

Appendix Biii – Travel Plan Review Satellite Compounds

Planning Ref Number	
Development Name	East West Rail Bicester to Bedford Improvements
Development Type	Construction Travel Plan – Satellite Compounds
Address	
Date of Travel Plan	
Date of Review	August 2018
Assessment by / contact details	Sarah Halsey
Travel Plan Status	Not approved – see actions table below

Comments

Overview

The Construction Travel Plan (CTM) forms part of a package of management documents to assist in the control of transport movements to and from construction compounds during the Project's construction period. The CTP is concerned with the movement of personnel only and this CTP deals with the 10 satellite compounds and one Vehicle Park**,** a compound, near Junction 13 of the M1 that will be used as a location to hold HGVs while they wait to access other compounds at the right time.

Paragraph 1.61, Report Structure, mentions that Section 2 provides a short summary of national and local policies relating to CTPs. However, this is not included in the report.

The report explains that the CTP deals with the following personnel trips:

Type of Movement	Definition
Staff	Supervisors and administrative staff
Operatives	Construction staff
Subcontractors	Off-site staff providing specialist services
Workforce	All contractors working on construction compounds

The report explains that operatives will arrive in the hour prior to work starting at 07:00 and depart in the hour after work finishes at 18:00. Staff will arrive between the hours of 07:00 and 09:00 and depart between 16:00 and 19:00. Operative movements reflect shift patterns, whilst staff are expected to arrive and depart during the AM and PM peaks.

No information is provided on the duration of the construction period and operation period of each of the strategic compounds. This needs to be included in the CTP.

Paragraph 2.1.5 deals with subcontractors. We would like a firm commitment that subcontractors will sign up to the CTP and have quarterly meetings with the TPC to discuss the CTP and any parking issues.

Information on commuting patterns is provided but it is not clear where this information comes from as no source has been included.

East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council

The CTP states that car parking will be limited at the satellite compounds but enough to meet demand and no overspill parking will take place on the highway network. All parking will be on-site, a gateman will control vehicle movements to and from the compounds.

Then report explains that the majority of car parking will be provided at the strategic compounds, with workforce mini buses provided to transport the workforce from these strategic compounds to satellite compounds.

A table is included in Appendix A which provides a summary of access by all modes. It demonstrates that, apart from the Bletchley compound, none of the satellite compounds have good accessibility by sustainable transport modes. The CTP states that a proposed mini bus service will ferry operatives to and from the strategic compounds where they will park.

It is considered that in order to provide sustainable access to the compounds, the minibus service should connect to local PT hubs in addition to, or even instead of, the strategic compounds. Links to Aylesbury Vale Parkway, Kempston Hardwick, Bicester and Bletchley are suitable locations.

The objectives of the CTP are considered acceptable.

There are no numerical targets in the CTP apart from the average car occupancy rate of at least 1.5 for operative trips. Numerical targets for staff and contractor employees are required and will need to be agreed with BCC following the baseline surveys.

With regards to the Travel Plan Coordinator (TPC), the report states that" the *Travel Plan Coordinator will be a single point of contact for the workforce for enquiries relating to the CTP, he / she will liaise with stakeholders and with contractor companies and ensure these companies communicate the CTP to their employees. It is likely that this responsibility will be taken by the site manager or logistics manager. This will be confirmed in due course and updated accordingly."*

The report states that initial workforce travel surveys will be conducted within one month of the construction sites commencing operation. This is considered satisfactory as is the information that will be obtained with the surveys.

As start and finish times of operatives are fixed, and sustainable access is minimal in some of the compounds, it is considered that informal car sharing is the most important trip reduction measure. The report states that "*Notices in communal areas will promote car sharing and it will be published during the staff induction process*."

It is considered that informal car sharing needs to be organised and encouraged more via the Travel Plan Coordinator. All operatives interested in car sharing should be able to register interest with the Travel Plan Coordinator and contact details should be exchanged if there are operatives with similar destinations. This informal car share scheme should also be promoted via the travel information pack.

The policy of local recruitment and lodging nearby the sites is welcomed.

The report recognised that specifying car trips along designated routes is not practical and cannot be enforced. However, the report states that "*staff and operatives will be encouraged to use the Construction Access Routes identified where possible with leaflets, maps and infographics on site and with information in welcome packs and starter inductions.*" This is considered very useful.

On parking the report states *"The parking of construction related vehicles will be managed by the contractors to reduce the overall environmental impact. Parking initiatives will include providing parking spaces which are closer to the site compound turnstile exit / entrance for those who car share or van pool. It is proposed that the site manager or logistics manager will keep surveillance on parking to ensure no inappropriate overspill onto the public highway*."

The report should be clearer on the fact that all subcontractors will have to agree their parking strategy with the Travel Plan Coordinator and that the Travel Plan Coordinator is ultimately responsible that no overspill parking on the public highway takes place.

East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council

The report states "*Where bus or rail travel does not offer a reasonable alternative to private car journeys for staff and operatives, alternative measures should be promoted and encouraged such as minibus and car sharing schemes".*

Provision of such a service will be investigated and any updates will be included in any revisions of the CTP. Opportunities to run minibuses to collect staff from nearby bus stops could also be considered."

The CTP therefore includes no firm commitment to a minibus service to nearby PT hubs or bus stops. Such a commitment is required.

It is not clear in the CTP what facilities and information will be provided for walking and cycling at the satellite compounds. More information is required.

There is no commitment in the initiatives section of the report for an Employee Travel Information Pack. This should be included in the CTP.

The report states "It is critical that management support is obtained from the contractors to ensure that the implementation of the CTP is effective. The tender requirements will stipulate that contractors take responsibility for taking forward and implementing the CTP." This is welcomed but we would like to see a commitment to quarterly meetings between the CTP and contractors to discuss the CTP.

Within the monitoring section, a commitment to conduct initial workforce travel surveys within one month of the construction sites commencing operation is required.

The report states that "*the Travel Plan Co-ordinator will undertake a regular review of the CTP; this will involve a review of the targets which will be determined following the completion of the baseline travel surveys*." Annual reviews, including annual travel surveys, during the operation of the sites are required.

Actions	**Completed**
Please provide information on the operation period of each of the strategic compounds.	
Please amend the report to include plans for each compound showing the site location, the nearest bus stops, 2km and 5km isochrones and pedestrian and cycle routes in the vicinity of the site.	
Please include a firm commitment that subcontractors will sign up to the CTP and have quarterly meetings with the TPC to discuss the CTP and any parking issues.	
Numerical targets for staff and contractor employees are required and will need to be agreed with BCC following the baseline surveys.	
Please include a commitment that informal car sharing will be organised and encouraged via the TPC and promoted in the Travel Information Pack.	
Please include a statement that all subcontractors will have to agree their parking strategy with the TPC and that the TPC is ultimately responsible that no overspill parking on the public highway takes place.	
A minibus service from a nearby PT hub to each compound is required.	
The initiatives section of the CTM should include information on the Employee Travel Information Pack.	
The CTP needs to include a commitment to quarterly meetings between the CTP and contractors to discuss the CTP and parking issues.	
Within the monitoring section, a commitment to conduct an initial workforce travel survey within one month of the construction sites commencing operation is required.	

Annual reviews, including annual travel surveys, during the operation of the sites are required.	

Conclusion

Although the CTM includes a number of potentially effective measures to reduce single occupancy car use, there is not enough commitment to effectively reduce staff and operatives travel to and from the strategic compounds and control on-site parking. A number of changes are therefore required before we are able to approve the plan

East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council

Appendix Biv – Travel Plan Review Strategic Compounds

Planning Ref Number	
Development Name	East West Rail Bicester to Bedford Improvements
Development Type	Construction Travel Plan – Strategic Compounds
Address	
Date of Travel Plan	
Date of Review	August 2018
Assessment by / contact details	Sarah Halsey
Travel Plan Status	Not approved – see actions table below

Comments

Overview

The Construction Travel Plan (CTM) forms part of a package of management documents to assist in the control of transport movements to and from construction compounds during the Project's construction period. The CTP is concerned with the movement of personnel only and this CTP deals with the strategic compounds only, a separate CTP is provided for the satellite compounds. The strategic compounds include the following sites:

- A1 Bicester
- A4 Green Lane
- B4 Little Horwood
- B6 Bletchley
- E5 Fleet Marston.

Paragraph 1.61, Report Structure, mentions that Section 2 provides a short summary of national and local policies relating to CTPs. However, this is not included in the report.

The report explains that the CTP deals with the following personnel trips:

Type of Movement	Definition
Staff	Supervisors and administrative staff
Operatives	Construction staff
Subcontractors	Off-site staff providing specialist services
Workforce	All contractors working on construction compounds

The report explains that operatives will arrive in the hour prior to work starting at 07:00 and depart in the hour after work finishes at 18:00. Staff will arrive between the hours of 07:00 and 09:00 and depart between 16:00 and 19:00. Operative movements reflect shift patterns, whilst staff are expected to arrive and depart during the AM and PM peaks.

No information is provided on the duration of the construction period and operation period of each of the strategic compounds. This needs to be included in the CTP.

East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council

Paragraph 2.1.5 deals with subcontractors. We would like a firm commitment that subcontractors will sign up to the CTP and have quarterly meetings with the TPC to discuss the CTP and any parking issues.

Information on commuting patterns is provided but it is not clear where this information comes from as no source has been included.

All parking will be on-site, a gateman will control vehicle movements to and from the compounds.

Section 2.3 provides information on accessibility by all modes of transport to the compounds. However, without a plan showing the site location, bus stops, walking and cycling routes and catchment areas, this is extremely difficult to follow. These plans will need to be included in the CTP.

Paragraph 2.3.3 states that "*Appendix A provides a summary of site access by various transport modes. The walking, cycling and public transport options have been provided ".* However, only bus timetables have been included in Appendix A.

The site access descriptions of A4, Poundon, and B4, Little Horwood, suggest these sites are completely inaccessible by all modes apart from private vehicle. No solutions have been provided.

The objectives of the CTP are considered acceptable.

There are no numerical targets in the CTP apart from the average car occupancy rate of at least 1.5 for operative trips. Numerical targets for staff and contractor employees are required and will need to be agreed with BCC following the baseline surveys.

With regards to the Travel Plan Coordinator (TPC), the report states that" the *Travel Plan Coordinator will be a single point of contact for the workforce for enquiries relating to the CTP, he / she will liaise with stakeholders and with contractor companies and ensure these companies communicate the CTP to their employees. It is likely that this responsibility will be taken by the site manager or logistics manager. This will be confirmed in due course and updated accordingly."*

The report states that initial workforce travel surveys will be conducted within one month of the construction sites commencing operation. This is considered satisfactory as is the information that will be obtained with the surveys.

As start and finish times of operatives are fixed, and sustainable access is minimal in some of the compounds, it is considered that informal car sharing is the most important trip reduction measure. The report states that "*Notices in communal areas will promote car sharing and it will be published during the staff induction process*."

It is considered that informal car sharing needs to be organised and encouraged more via the Travel Plan Coordinator. All operatives interested in car sharing should be able to register interest with the Travel Plan Coordinator and contact details should be exchanged if there are operatives with similar destinations. This informal car share scheme should also be promoted via the travel information pack.

The policy of local recruitment and lodging nearby the sites is welcomed.

The report recognised that specifying car trips along designated routes is not practical and cannot be enforced. However, the report states that "*staff and operatives will be encouraged to use the Construction Access Routes identified where possible with leaflets, maps and infographics on site and with information in welcome packs and starter inductions.*" This is considered very useful.

On parking the report states *"The parking of construction related vehicles will be managed by the contractors to reduce the overall environmental impact. Parking initiatives will include providing parking spaces which are closer to the site compound turnstile exit / entrance for those who car share or van pool. It is proposed that the site manager or logistics manager will keep surveillance on parking to ensure no inappropriate overspill onto the public highway*."

East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council

The report should be clearer on the fact that all subcontractors will have to agree their parking strategy with the Travel Plan Coordinator and that the Travel Plan Coordinator is ultimately responsible that no overspill parking on the public highway takes place.

The report states "*Where bus or rail travel does not offer a reasonable alternative to private car journeys for staff and operatives, alternative measures should be promoted and encouraged such as minibus and car sharing schemes".*

However, under the minibus section it states "*a minibus service can be investigated to ferry workforce to and from nearby transport hubs, such as the following:*

- *Compound A1: Bicester Village rail station; Bicester North rail station; Bicester park and ride*
- *Compound B6: Bletchley rail station; Bletchley bus station.*
- *Compound E5: Aylesbury bus station; Aylesbury rail station, Aylesbury Vale Parkway station*

Provision of such a service will be investigated and any updates will be included in any revisions of the CTP."

The CTP therefore provides no firm commitment to a minibus service to these three sites from the nearby PT hubs. An assurance is required.

In addition, no minibus service is proposed for the two strategic compounds that are not accessible by sustainable transport, A4 Green Lane and B4, Little Horwood. These sites appear to be 5 to 6 miles from a railway station. A firm commitment is required for a minibus service from a nearby PT hub to these sites.

A minibus service between the Bicester Park & Ride Site and Strategic Compound A1 will be discussed with Oxfordshire County Council. This would allow staff and operatives to use the S5 bus service from Oxford or travel by private vehicle to the P & R.

More commitment is required in the CTP with regards to the walking and cycling promotion. We need to be confident that the information will be available at the strategic compounds, therefore an assurance that cycle storage facilities, changing rooms, showers, lockers, maps and leaflets will be made available on-site is required in the CTP.

There is no commitment in the initiatives section of the report for an Employee Travel Information Pack. This should be included in the CTP.

The report states "It is critical that management support is obtained from the contractors to ensure that the implementation of the CTP is effective. The tender requirements will stipulate that contractors take responsibility for taking forward and implementing the CTP." This is welcomed but we would like to see a commitment to quarterly meetings between the CTP and contractors to discuss the CTP.

Within the monitoring section, a commitment to conduct initial workforce travel surveys within one month of the construction sites commencing operation is required.

The report states that "*the Travel Plan Co-ordinator will undertake a regular review of the CTP; this will involve a review of the targets which will be determined following the completion of the baseline travel surveys*." Annual reviews, including annual travel surveys, during the operation of the sites are required.

Actions	Completed
Please provide information on the operation period of each of the strategic compounds.	
Please amend the report to include plans for each compound showing the site location, the nearest bus stops, 2km and 5km isochrones and pedestrian and cycle routes in the vicinity of the site.	
Please include a firm commitment that subcontractors will sign up to the CTP and have quarterly meetings with the TPC to discuss the CTP and any parking issues.	

Numerical targets for staff and contractor employees are required and will need to be agreed with BCC following the baseline surveys.	
Please include a commitment that informal car sharing will be organised and encouraged via the TPC and promoted in the Travel Information Pack.	
Please include a statement that all subcontractors will have to agree their parking strategy with the TPC and that the TPC is ultimately responsible that no overspill parking on the public highway takes place.	
A minibus service from a nearby PT hub to each compound is required.	
The initiatives section of the CTM should include information on the Employee Travel Information Pack.	
The CTP needs to include a commitment to quarterly meetings between the CTP and contractors to discuss the CTP and parking issues.	
Within the monitoring section, a commitment to conduct an initial workforce travel survey within one month of the construction sites commencing operation is required.	
Annual reviews, including annual travel surveys, during the operation of the sites are required.	

Conclusion

Although the CTM includes a number of potentially effective measures to reduce single occupancy car use, there is not enough commitment to effectively reduce staff and operatives travel to and from the strategic compounds and control on-site parking. A number of changes are therefore required before we are able to approve the plan.

East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council

Appendix Bv – Cycling comments

- As a general point, it was deeply disappointing to see little mention of walking and cycling measures within the consultation documents. EWR should seriously investigate measures to optimise sustainable access to stations. Sustainable travel options for operatives accessing site compounds should also be a key element of the scheme, as is being discussed with High Speed 2 Ltd and their contractors. For the Aylesbury arm, much of this is very achievable using Aylesbury Vale Parkway as a railhead.

- EWR will interface with the newly completed Waddesdon Greenway cycleway at Aylesbury Vale Parkway, which runs alongside the far side embankment as shown on sheet 95. The Greenway scheme has been designed to minimise disruption once East West Rail works happen, but the redline boundary needs to be amended. The current proposals would cut across the cycleway, which is anticipated to be a heavily used route for access to Waddesdon Manor and the only sustainable travel link between Waddesdon and Aylesbury. I would encourage the EWR team to liaise with us about best arrangements in this area.

- There are a number of interfaces between EWR and the aspirational Buckinghamshire cycling network within the HS2 Interface Area. We have previously been directed that all works within the interface area are being led by HS2, but the EWR team should be mindful of the proposals either way. These are subject to ongoing discussion and development with HS2 Ltd and their contractors. Particular areas of concern are Quainton/ Doddershall and Calvert/ Steeple Claydon.

- Sheet 20. This area forms a key part of a future cycling link from Claydon House to Steeple Claydon, and onwards north to Buckingham, Brackley and Bicester. Provision for safe and attractive cycling should be incorporated along this section. This provision should consist of a shared cycleway of minimum of 3m width, with 1m separation from the carriageway (although pinch points can be considered if required) and a maximum gradient of 1:20.

- Sheet 22. Footbridge should incorporate wheeling ramps to future proof ability to provide future off-road cycling link between Claydon House and Steeple Claydon. Installation of wheeling ramps (or 1:20 accessible ramps) would be best practice on all similar footbridges installed.

- Sheet 29. Footbridge should incorporate wheeling ramps (or ramps) and a link should be provided to enable access to the new station from the new development. This would significantly improve accessible access to the station from the west of Winslow.

- Finally, greater consideration should be given to the impacts of HGV traffic on the safety and attractiveness of sustainable travel. Key zones of concern and in need of detailed assessment include any interface with National Cycle route 51, which is well used, and key routes within residential areas (e.g. Verney Road and Furze Lane, Winslow; Queen Catherine Road, Steeple Claydon; Verney Junction etc.)

East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council

Appendix C: Comprehensive review of the TWAO Deposited Plans and Sections and Rights of Way Plans (Document NR14 and NR15)

Section Reviewed	**Traffic and Transport**	
Document Reviewed	*Environmental Statement Volume 2i - Chapter 14*	
14.5.40 Temporary Changes to PROW network. 14.6.25 PROW Temporary Closures.	The County Council welcomes Network Rail's commitment (as previously agreed) to provide and maintain public information notices giving advance warning of the PROW temporary closure at the points of path closure and at relevant junctions with other PROW or at a PROW junction with other public highways. Further clarification is required over whether the powers conferred in the TWAO will allow NR to temporarily close PROW within the application boundary without the need to apply to the County Council for a PROW Temporary Traffic Regulation Order.	No objection - clarification

Document Reviewed	**NR14: TWAO Deposited Plans and Sections and Rights of Way Plans**	
Sections Reviewed	**All**	
Sheet No. 9 Charndon No. 3 Level Crossing.	New Highway to be provided – Delete references to **existing** PROW from description.	No objection – amendment required
	Highways to be stopped up temporarily – Clarify the need for the temporary stopping up of footpath POD/3/1 between points T3 and T4.	No objection - clarification
Sheet No. 12 Twyford No.2 Level Crossing.	New Highway to be Provided – Footpath TWY/3/1. Point of connection to footpath YWY/2/3 is between points P1 and P2, it is not at P2. Amend drawing, point reference and description accordingly. TWY/3/1 - Delete reference to Work No. 17, point P3 and P4 from description, this forms part of the new highway for footpath TWY/2/3.	No objection – amendment required
Sheet No. 10 Charndon No. 3 Level Crossing.	Clarify need to temporarily stop up footpath POD/4/1 between points T6 and T7.	No objection - clarification
Sheet No. 9 Charndon No.3 Level Crossing.	New Highway to be Provided – Footpath CHA/3/1 - Delete references to **existing** PROW from description.	No objection – amendment required
Sheet No. 13 Bridleway CHA/1/6 and CHA/1/5	Bridleway CHA/1/5 AND CHA/1/6 to remain open between points T9 and T3 as accepted by NR. Amend drawing and description of Highways to be stopped up temporarily accordingly.	No objection – amendment requirement
Sheet No. 20 Verney Junction Level Crossing.	New Highway to be provided – Footpath MCL/2/1 and Footpath MCL/3/1 - Delete reference to **existing** PROW from the description. Highways to be stopped up temporarily - Add details of PROW that are to be temporarily stopped up in the description.	No objection – amendment required
Sheet No. 23 Winslow FP No. 5 Level Crossing.	Amend drawing and the descriptions of Highway to be stopped up and Provided to show the extension of the permanent diversion to point T1 of Footpaths ADD/11/1 and WIS/5/1/ as agreed with BCC.	No objection – amendment required
Sheet No. 24 OXD/19 Winslow No. 6	Highway to be stopped up – Footpath WIS/6/9 – Delete point P5 and insert point P7 in description.	No objection - clarification

Footbridge.	Please confirm whether the new public right of way will occupy the same path width as the existing Footpath WIS/6/9, which is to be upgraded to Cycle Track as part of the adjacent residential development. If so, why is there a need to seek the stopping up of Footpath WIS/6/9?	
Sheet No. 27 Moco Farm Overbridge.	The alignment of the new public right of way will be provided on a segregated (by way of an approved barrier or fence) footpath abutting the western and northern edges of the proposed vehicle access on the over bridge and embanked overbridge approaches. Amend drawing to show this alignment of the new public right of way and relocate point P3. See also comments for Scheme Drawing Sheet 32 Re. FP SWA/17/1 permanent diversion width.	No objection – amendment required
Sheet No. 28 Moco Farm No.2 Footbridge.	NR to confirm the correct alignment of footpath SWA/17/1 as shown on the eastern end of the over bridge. Relocate point P2 as required. New Highway to be Provided – Footpath LHO/27/1 – Delete reference to **existing** PROW from description.	No objection – amendment required
Sheet No. 29 Swanbourne Old Station Level Crossing.	New Highway to be Provided – Delete reference to **existing** PROW in description. Highways to be stopped up Temporarily – Add Footpaths MUR/19/1 and SWA/20/1 to the description.	No objection – amendment required
Sheet No. 70 Griffin Lane crossing.	New Highway To Be Provided – Delete description. The New highway describes **existing** public PROW and Public Highway throughout.	No objection – amendment required
Document Reviewed	**Volume 4 – Scheme Drawing**	
Sections Reviewed	**Track Sections 2A, 2B and 2E**	
Comments Section 2A		
Sheet 9 of 134 OXD/32A Poundon No.2 Footbridge.	Temporary PROW Closure – Delete reference to FP MGI/6/1. This path is not affected by temporary closure.	No objection – amendment required
Sheet 10 of 134 Charndon No.3 Level Crossing.	Temporary PROW Closure – Add FP POD/4/2 to the description. Delete the word Diversion from the description and insert the word Alternative. The diversion route of FP's CHA/3/1 and POD/4/2 is described in the New Footpath Proposed description.	No objection – amendment required
Sheet 12 of 134 OXD/31 Marsh Gibbon Poundon Occupation Overbridge.	Temporary PROW Closure – Delete BW CHA/1/5 and BW CHA 1/6 from the description. These sections of bridleway are to remain open. Create new point reference to replace point TF/2A/24 in description.	No objection – amendment required
Sheet 13 of 134 OXD/29A Twyford No. 2 Footbridge.	PROW Ref. TWY/3/1 – Delete the word Diversion from the description and insert the word Alternative. The New Footpath Proposed description for TWY/3/1 is the diversion route of FP TWY/3/1.	No objection – amendment required
Comments Section 2B		
Sheet 20 of 134 Queen Catherine Road Level Crossing.	Temporary PROW Closure and diversion - Footpath MCL/9/1 – Amend temporary closure description to read temporarily closed between TF/2B/2 and TF/2B/3 and amend diversion end point to TF/2B/4 and description accordingly.	No objection – amendment required
Sheet 25 of 134 Verney Junction.	Temporary PROW Closure and diversion – MCL/3/1 – delete the word diversion. There is no temporary diversion proposed for FP MCL/3/1.	No objection – amendment required

	Verney Junction Level Crossing PROW Ref should read MCL/2/1 and not MCL/2/2. Amend description. Delete the word Diversion from the description and insert the word Alternative. This use of existing PROW and other public highway does not form any part of the diversion route of Footpath MCL/2/1.	
Sheet 27 of 134 OXD/23 Cattle Arch Underbridge	Temporary PROW Closure and Diversion – The description states that FP ADD/3/1 and FP ADD/3/2 will be temporarily diverted between TF/2B/17 and TF/2B/17. This is the proposed footpath (permanent diversion) route which falls within the application work boundary. How will this be made available as a temporary diversion? Please clarify or delete reference to a temporary diversion in the description.	No objection - clarification
Sheet 28 of 124 Winslow FP No.5 Level crossing.	Point F/2B/23 appears in two locations. Delete F/2B/23 north of the rail line and replace with point reference F/2B/22. Amend drawing and the descriptions of Highway to be stopped up and provided to show the extension of the permanent diversion to point of Footpaths ADD/11/1 and WIS/5/1/ as agreed with BCC.	No objection – amendment required
Sheet 29 of 134 OXD/19 Winslow No 6 Footbridge.	Delete reference to point F/2B/26 in description. This point is not shown on the scheme drawing. Replace with F/2B/25. FP WIS/ 6/9 is to be upgraded to a cycle track by developers in association with nearby housing development. Please clarify the requirement to extinguish existing FP WIS/6/9 and replace it with the EWR proposed new footpath.	No objection – amendment required No objection - clarification
Sheet 32 of 134 Winslow FP No. 17 Level Crossing/OXD/14A Moco Farm Overbridge.	Temporary PROW Closure and diversion – Delete reference to diversion. No temporary diversion has been proposed. Amend description to read FP SWA/17/1 will be closed between TF/2B/23 and TF/2B/24. SWA/17/1 Extinguishment and new footpath proposed – Correct reference points to read between point F/2B/26 and F/2B/27. The alignment of the new public right of way will be provided on a segregated (by way of an approved barrier or fence) footpath abutting the western and northern edges of the proposed vehicle access on the over bridge and embanked overbridge approaches. The Scheme drawing incorrectly shows the new footpath on a central alignment. Amend drawing to show this alignment of the new public right of way and relocate point F/2B/27. The County Council has required that the segregated diversion of SWA/17/1 be provided with a minimum path width of 2.50m on the embanked approaches to the bridge structure over the rail track. The reason for requiring a minimum width of 2.50m is that as the ground falls away from the outside edge of the footpath, down a 1:2 gradient embankment it was considered that a path width of 2.5m would provide a safer and more convenient route, as walkers may be unwilling to utilise the 0.5m of path width immediately alongside the top edge of the embankment, effectively reducing the “walkable width” of a 2.0m wide path down to 1.50m on the ground.	Holding objection

	In addition, the County Council has required the segregated footpath diversion be provided as a "made" footpath to an agreed specification for constructed footpaths. We have provided our specification for the construction of a blinded compacted stone footpath over geotextile membrane, suitable for the embanked sections of footpath diversion. Please confirm that this will be provided.	
Sheet 33 of 134 Moco Farm No. 2 Footbridge.	Extend temporary closure of footpaths SWA/17/1 and SWA/1/1 to the limit of the application boundary. Amend drawing accordingly.	No objection – amendment required
Sheet 34 of 134 Swanbourne Old Station Level Crossing. Mursley Restricted Byway MUR/18/1	Correct the description of extinguished FP's LHO/27/1, MUR/19/1 and SWA/20/1 to read –" between F/2B/32 and F/2B/31" Correct the description of New Footpath Proposed to read –" between F2B/31 and F/2B/ 30" Delete the word Diversion and insert the word Alternative in the description. The description of the New Footpath Proposed is the description of the PROW diversion. Urgent clarification required over the proposed diversion of part of Restricted Byway MUR/18/1. Please clarify/correct the description of both the proposed extinguishment of Restricted Byway MUR/18/1 and the Proposed New Restricted Byway. Should it read be between F/2B/35 and F/2B/37? The alignment and extent of the Proposed Restricted Byway is not shown on the scheme drawing (as per the drawing Key) If the diversion is to be implemented please amend drawing to clearly show this. BCC have previously been informed (January 2018) by NR that the diversion will not be required and that instead it may be necessary to seek the relocation of part of the railway boundary fence, which defines the width of the Restricted Byway MUR/18/1 (along its NE boundary) thereby reducing the width of a length of Restricted Byway. We have been advised that provision for this will be included as part of the works permitted within the limit of deviation. Please confirm if this is to be done in preference to a diversion and provide details of the location and extent of the relocated railway boundary fence.	No objection – amendment required Holding objection Holding objection
Sheet 35 of 134 Restricted Byway MUR/18/1 Swans Way Level Crossing	SEE COMMENTS RE. SHEET No. 34 above**.** FP LHO/20/1 between F/2B/39 and TF/2B/30 should be shown as PROW to be extinguished permanently.	No objection – amendment required
Sheet 40 of 134	FP NLO/19/1 and NLO/19/2 Temporary PROW Closure and Diversion – Delete the word diversion from the description. No temporary diversion route is shown on the drawing.	No objection – amendment required
Comments Section 2E		
Sheet 90 of 134	BCC will require that NR manage the PROW crossing of the haul road to allow pedestrian access and to prevent the	No objection – amendment

	proposed temporary closure of Footpaths WAD/5/1, WAD/5/2, WAD/5/3 and FMA/3/1. Please confirm that this will be done.	required
Sheet 97 of 134 Griffin Lane Level Crossing PROW Ref. AYL/8/1	Delete the word Diversion from the description and insert the word Alternative. There is no New Footpath Proposed (diversion route) for AYL/8/1.	No objection – amendment required
Document Reviewed	**Volume 4 Environmental Designs**	
Sheet 9 of 98.	PROW Footpath POD/4/2 not shown through Compensatory Flood Storage Area. Amend drawing accordingly. BCC require details of mitigation measures that will be undertaken to ensure that the public footpath will not be adversely affected by the proposed Compensatory Flood Storage Area and will be protected from waterlogging or flooding.	Holding objection
Sheet 12 of 98.	The proposed permanent diversion of PROW Footpath TWY/3/1 and the existing routes of FP TWY 2/3 are not shown through the Ecological Compensation Site. Amend drawing accordingly. BCC will require mitigation details relating to the treatment and safe guarding of these PROWS, as per the County Councils requirements (previously provided) for the treatment of PROW affected by Environmental mitigation/compensation sites.	Holding objection
Sheet 24 of 98 Verney Junction New Overbridge.	PROW Footpath MCL/2/1 will be diverted onto the overbridge. The County Council has previously made NR aware that it requires the whole of the width of the access track, including the level verges/ margins alongside the surfaced width of the track to form the legal width of the PROW diversion (new route) This is required to ensure that pedestrian users have sufficient footpath width to allow them to avoid any large agricultural vehicles/machinery they may encounter on the overbridge and overbridge approaches access track. This Environmental Design drawing shows Hedgerow with Trees being proposed on the verges/margins alongside the surfaced width of the overbridge access track. The County Council will require these verges and margins to remain free of any planting and to be provided as grassland only. Please confirm that this will be done and amend the drawing accordingly.	Holding objection
Sheet 28 of 98	The permanent diversion route of PROW Footpath ADD/11/1 and WIS/5/1 is not shown. The diversion of WIS/5/1 passes through the Ecological Compensation Site B9. Please amend the drawing accordingly to show the diversion route as agreed with BCC and show this footpath as a constructed (made/surfaced) PROW on the drawing, as required by BCC. Provide mitigation details relating to the treatment and safe guarding of the diversion of WIS/5/5 affected by the Ecological Compensation Site.	No objection – amendment required No objection - clarification
Sheet 33 of 98	BCC will require mitigation details relating to the treatment and safe guarding of PROWS FP's SWA/17/1, SWA/1/2 and SWA/1/1 as per the County Councils requirements	Holding objection

	(previously provided) for the treatment of PROW affected by Environmental mitigation/compensation sites.	
Sheets 35 & 36 of 98	BCC will require mitigation details relating to the treatment and safe guarding of the proposed permanent diversion PROW Restricted Byway MUR/18/1 which will pass through Ecological Compensation Site B17, as per the County Councils requirements (previously provided) for the treatment of PROW affected by Environmental mitigation/compensation sites.	Holding objection
Document Reviewed	**EWR NR15 Planning Drawings**	
OXD/21 Cattle Arch Proposed Plan. Drawing No. - 018046	Correct the drawing to show extent of FP ADD/11/1 that is to be Stopped Up. Amend drawing to show the extended permanent diversion of FP WIS/5/1 as agreed with BCC.	No objection – amendment required
OXD/14A Moco Farm No.1 Proposed Plan. Drawing No. - 016044 Proposed Plan, Section and Elevation. Drawing No. - 016045	Proposed Public Right Of Way - The alignment of the new public right of way is to be provided on a segregated footpath (by way of an approved barrier or fence) abutting the western and northern edges of the proposed vehicle access on the over bridge and embanked overbridge approaches. Scheme drawing incorrectly shows the new footpath on a central alignment on the overbridge and embanked approaches. Amend drawing to show the correct alignment of the new public right of way Please provide details of the barrier/fence to be used to segregate the permanent diversion of Footpath SWA/17/1 and confirm that the footpath diversion will be provided with a width of 2.5m as required by BCC (except on the bridge structure over the rail track where it will have a width of 2.0m) **See also comments for Scheme Drawing Sheet No. 32.** Amend the drawing to show the correct alignment of the permanent diversion of FP SWA/17/1 adjacent to the western side of the overbridge structure across the rail track.	No objection – amendment required No objection – clarification No objection – amendment required
Document Reviewed	**Vol 2i – Project Wide Assessment. Chapter 14 – Traffic and Transport**	
Section Reviewed	**14.20 PROW Summary Table**	
Swans Way	Delete FP MUR/13/1 and insert FP LHO/20/1.	No objection – amendment required
Winslow FP No. 5	Delete FP WIS/5/7 and Insert FP WIS/5/1.	No objection – amendment required
Griffin Lane	Delete FP AYL/7/1 and insert FP/AYL/8/1.	No objection – amendment required
Section Reviewed	**Verney Junction (permanent) 14.5.62**	
	Correct the description to read: “The diversion will take MCL/2/1 via an existing track……” “For users of MCL/2/1 the resultant diversion is …….”	No objection – amendment required
	Swanbourne Old Station (permanent) 14.5.64	
	Correct the description to read: ……..”These routes are to be diverted via a new public footpath connecting LHO/27/1 with LMO/24/1, leading to	No objection – amendment required

	SWA/1/1, SWA/1/2 and the new Moco Farm No.2 footbridge……..”	
	PROW on Construction Access Routes 14.5.67	
	Add new paragraph acknowledging the requirement to agree with the Highway Authority the degree and type of retained construction/surface treatment and /or reinstatement required on any PROW that will be utilised as a construction access/haul route. This will ensure that when the haul route is decommissioned the PROW is left with a construction/surface that is commensurate with its PROW status. Reference: Bridleway TWY/1/1 and Restricted Byway MUR/18/1.	No objection – condition of TWAO
Document Reviewed	**Environmental Statement – Vol 3 Appendices**	
Section Reviewed	**Appendix 14.4 Public Rights of Way Assessment**	
Swans Way	Delete FP MUR/13/1 and insert FP LHO/20/1.	No objection – amendment required
Winslow FP No. 5	Delete FP WIS/5/7 and Insert FP WIS/5/1.	No objection – amendment required
Griffin Lane	Delete FP AYL/7/1 and insert FP/AYL/8/1.	No objection – amendment required

Comments relating to Highways rights and ownership are summarised separately below.

Document Reviewed	**EWR NR 15 Planning Drawings**	
General	In all instances, where “unrestricted powers to acquire land” have been intimated we assume that highway rights are to be extinguished. We have referenced the highway rights and the BCC Land Ownership from the corporate GIS. Please see comments below	No objection – comment
DWG 09 Line 345	Assume that a retaining wall or similar will be constructed to allow dualling of the line. Just north of the bridge there remains a small “notch” – not in the interest of the HA to keep as highway	No objection - clarification
DWG 09 Line 347	Either this parcel of 335 OR 345 need to be extended to close another small notch	No objection – clarification
DWG 09 Line 348	What does this line refer to, no pointer.	No objection – clarification
DWG 09 Line 349	Highway rights to be maintained – EWR should not purchase this land – should revert to “powers limited to temporary use of land”	No objection - amendment required
DWG 09 Line 350	PLAN needs to be shaded	No objection – amendment required
DWG 14 Line 413	Road over rail – Land can be purchased, highway rights over to be maintained.	No objection - comment
DWG 14 Line 414	Not shown as highway on TERRIER, nor as being in BCC ownership	No objection – clarification

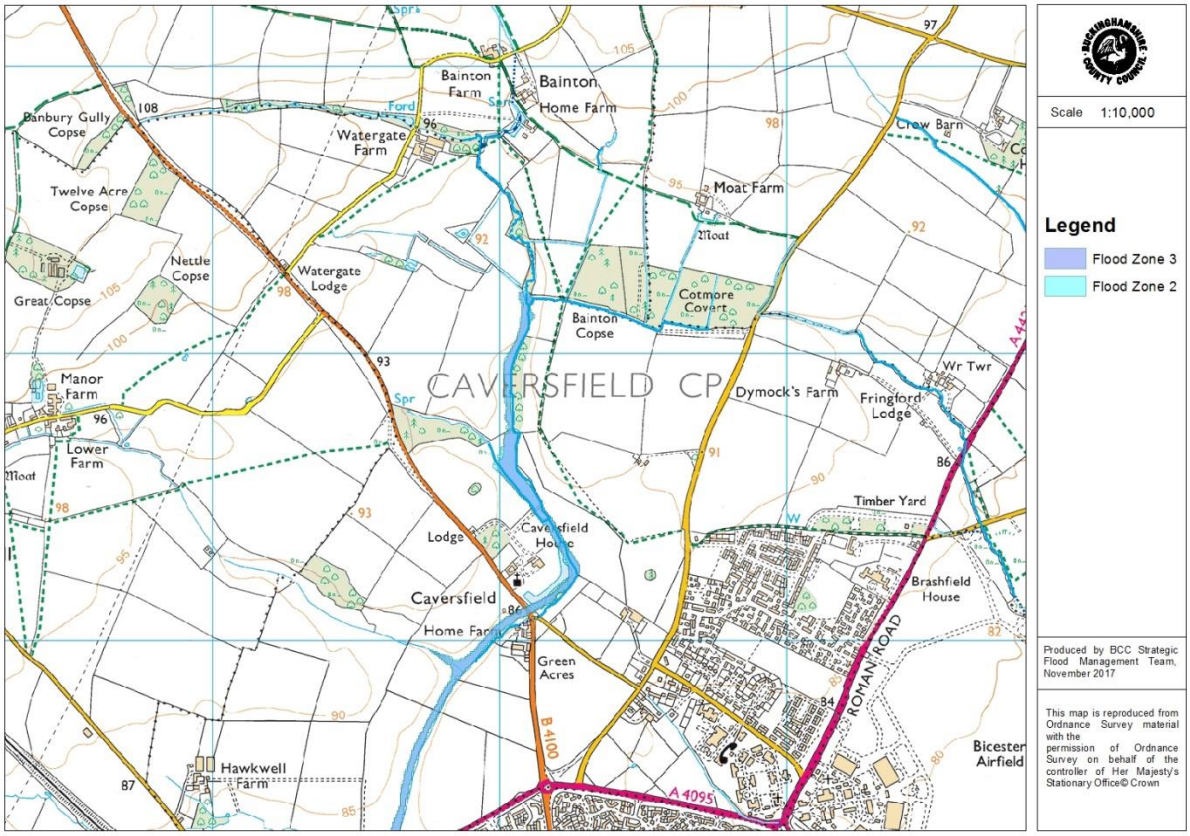
East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council

DWG 15 Line 430	Works line 18 provides "bypass". Query foot and cycle traffic, could be argued that new route is not equally commodious	No objection – clarification
DWG 16 Line 448	Were the rail rights formally removed and has this become highway by default?	No objection – clarification
DWG 21 Line 556	Line appears to clip carriageway, object unless highway alignment is maintained	No objection – amendment required
DWG 21 Line 560	Highway rights to remain – requires shading to show full extent	No objection – amendment required
DWG 21 Line 563	Highway rights to remain – requires shading to show full extent	No objection – amendment required
DWG 24 Line 657	Highway rights to remain – requires shading to show full extent	No objection – amendment required
DWG 60 Line 1381	Highway rights to remain – requires shading to show full extent	No objection – amendment required
DWG 63 Line 1424	Should be extended to encompass access to railway works area	No objection – amendment required

Appendix D: East West Rail Flood Management Opportunities

Section 2A

Back Brook (458043, 226176):



Woodland planting and other Natural Flood Management Techniques could be used in the upper reaches of the Back Brook (where it is classified as ordinary watercourse but has flood zones). There is a good opportunity to plant trees to connect woodland areas south of Bainton.

East West Rail Transport and Works Act Order (TWAO) Application
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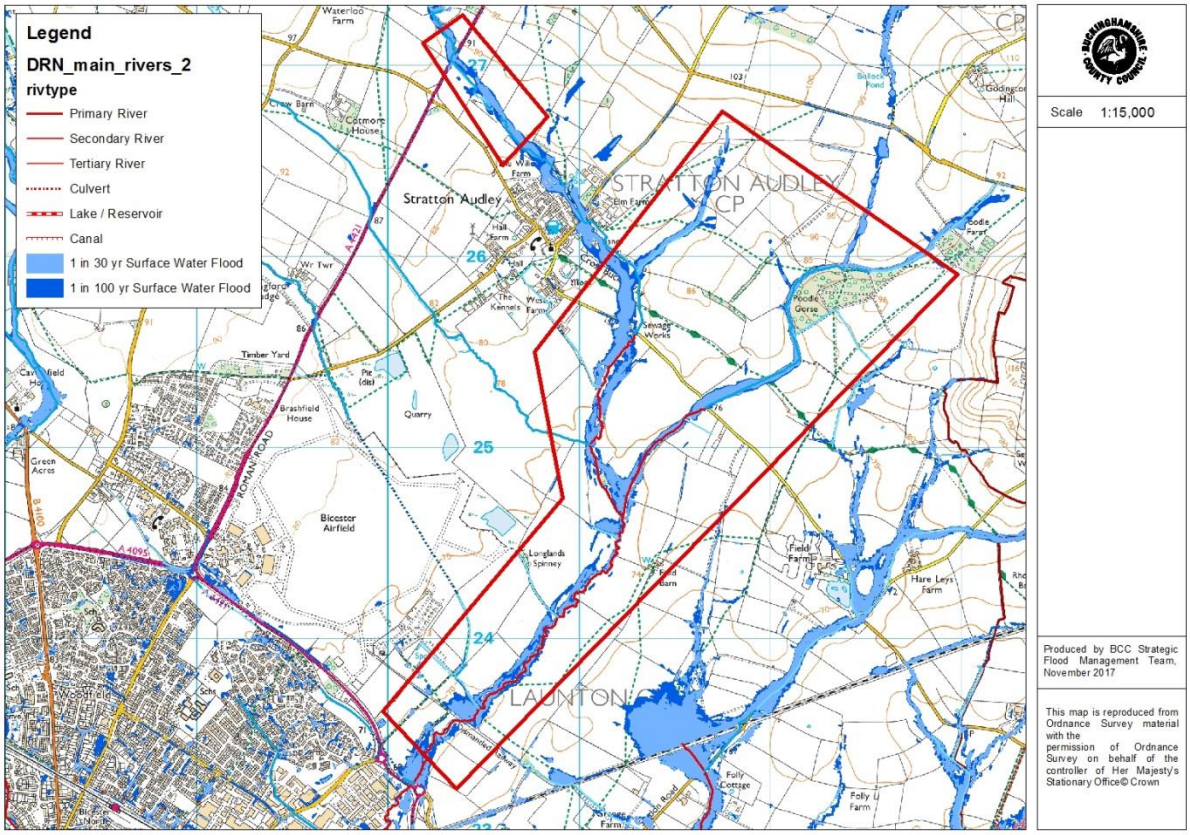
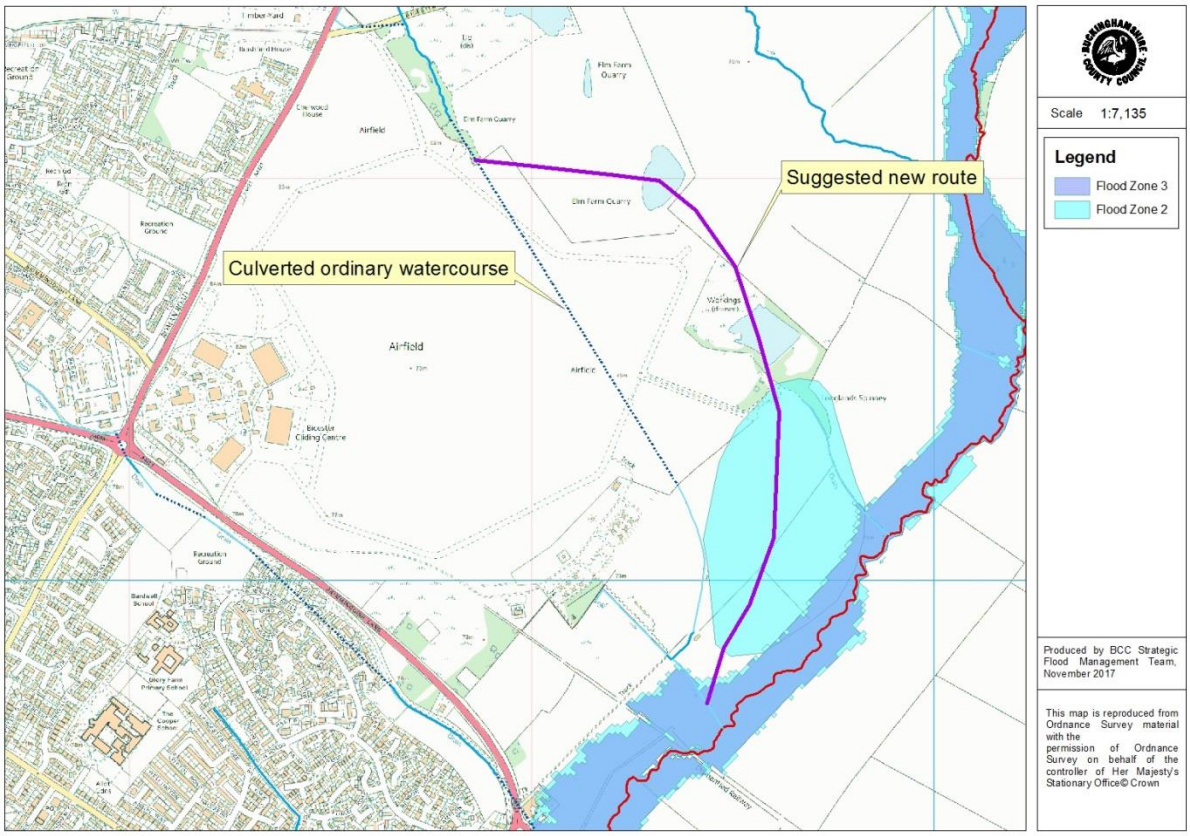
Audley Brook (461194, 224755):



There is potential for upstream storage within the Audley Brook and its tributaries. Upstream of Stratton Audley, and between Stratton Audley and Bicester (areas outlined in red), there appears to be fields and little patches of woodland. Natural Flood Management techniques could be used here to slow the flow such as; leaky dams, online and offline storage and planting of woodland.

East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council

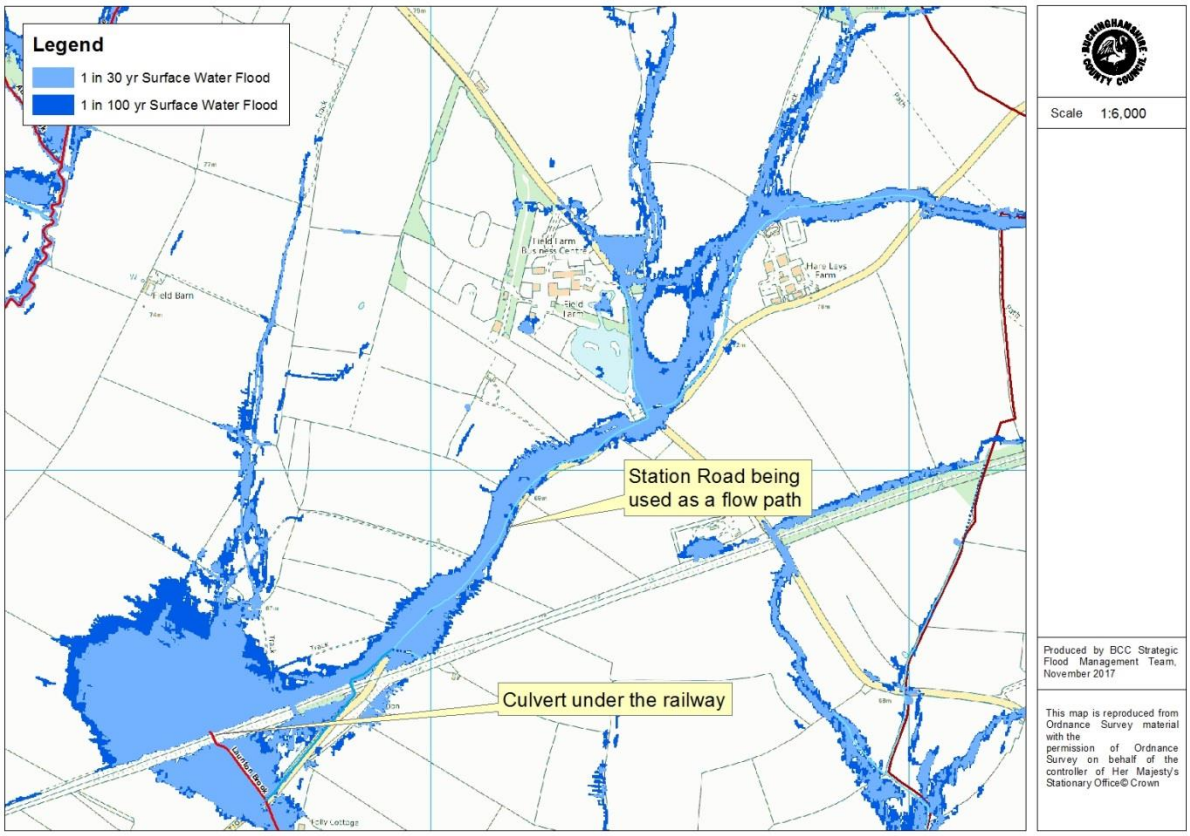
Bicester Airfield (459940, 224620):



One of the tributaries of the Audley Brook is culverted through Bicester Airfield. There is an opportunity here to de-culvert the watercourse, or leave the culvert in place and divert the watercourse round to the east of the airfield, connecting it up with the series of offline ponds and reconnecting it to the patch of Flood Zone 2.

East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council

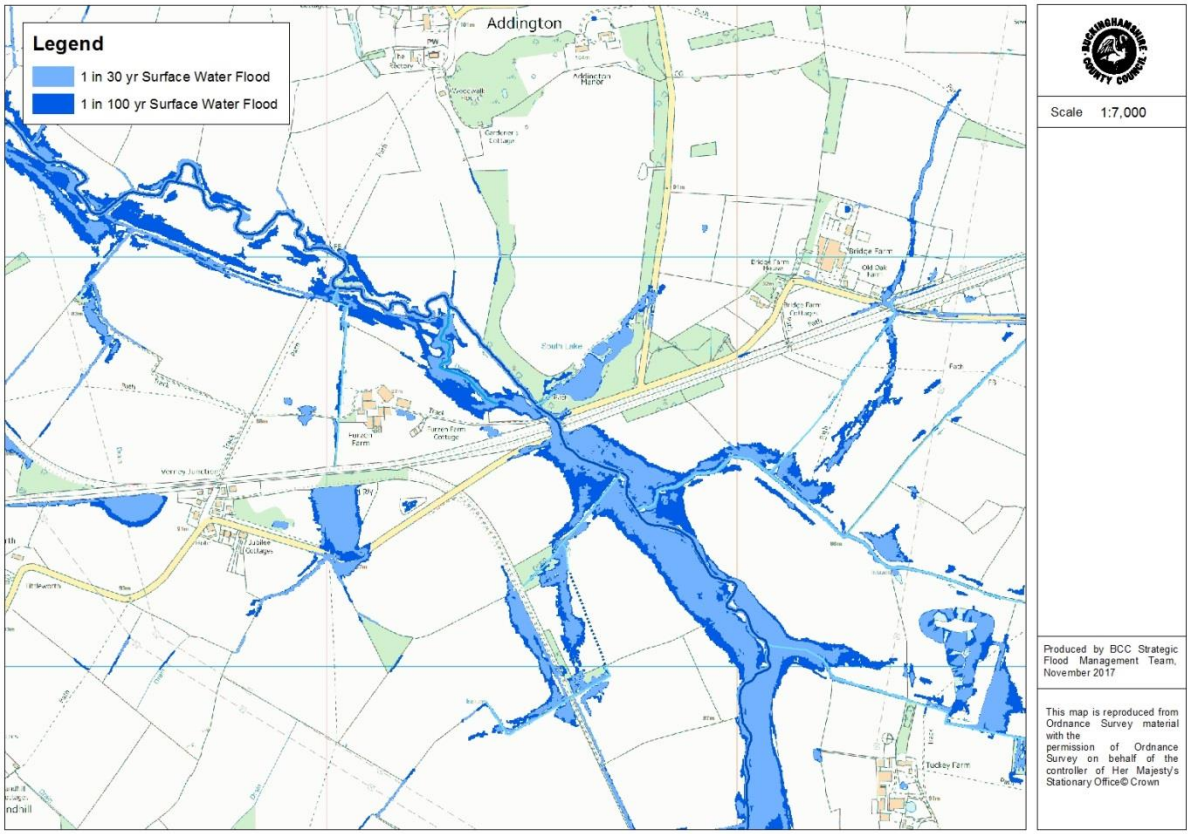
Launton Brook (461541, 223440):



Where the Launton Brook becomes main river (culvert under the current railway line), the culvert should remain the same size or be reduced in size. This culvert should not be made bigger to ensure surface water flow volumes do not increase downstream. There is a large surface water flow along Station Road, some upstream storage could be put in place to slow and reduce the volumes flowing downstream, some measures could be taken on Station Road to divert the flows off the road and onto neighbouring fields.

Section 2B

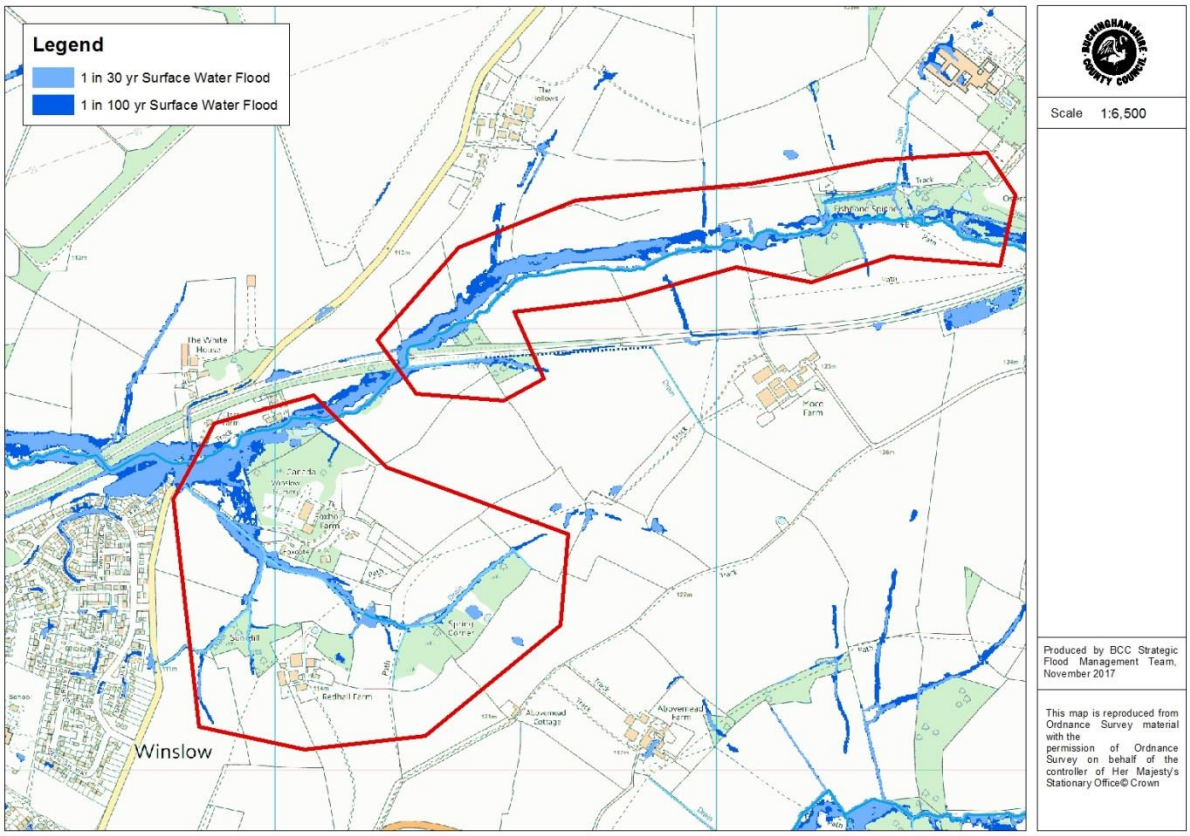
Claydon Brook (474561, 227578):



Where the Verney Road crosses the railway and the Claydon Brook, there are records of flooding on the road. Natural Flood Management techniques to store and slow flows upstream of this crossing could reduce the flood impact here.

East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council

Winslow Road (477801, 228709):



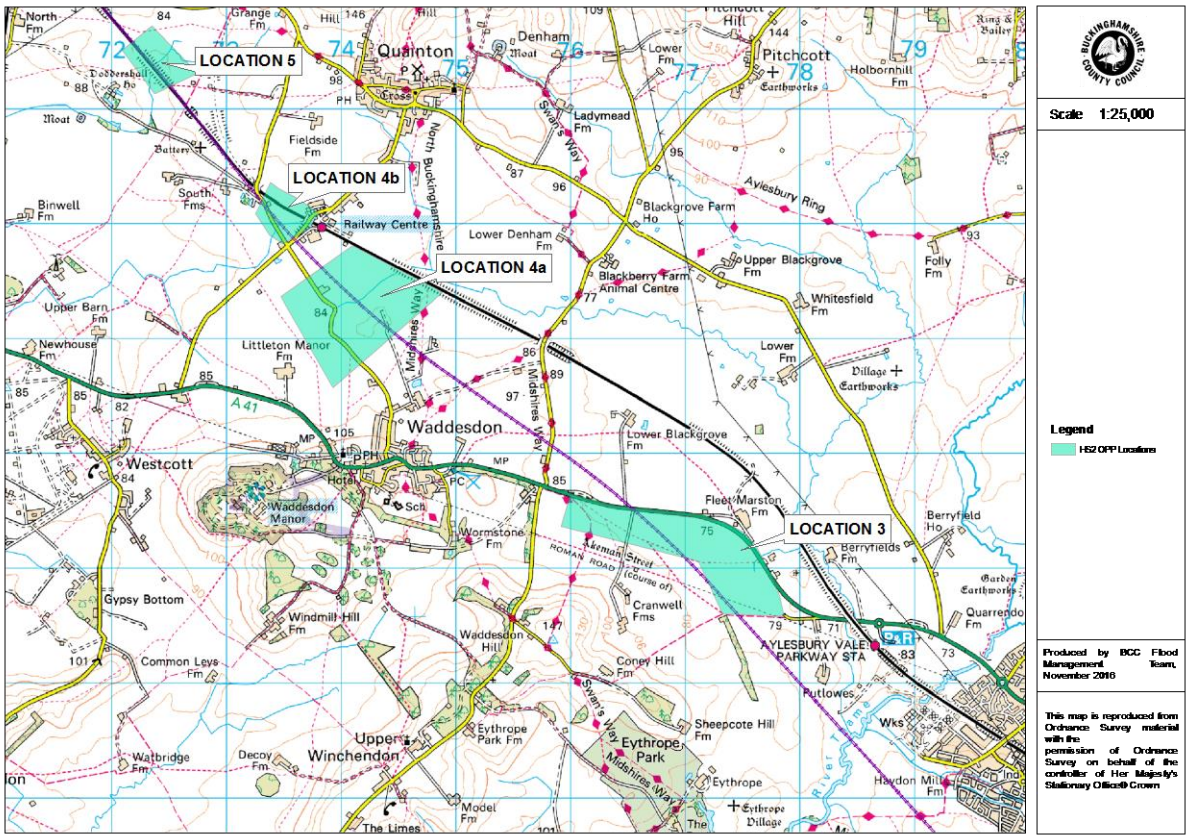
We have records of surface water flooding on Winslow Road where it goes under the railway and where the tributary of Claydon Brook flows under the road. In order to reduce the risk here there could be some upstream storage or/and woodland planting to reduce and slow the flows in this location. The areas identified for the Natural Flood Management techniques are outlines in red on the figure above.

East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council

HS2 Interface

Location 3: South of A41 Waddesdon Manor

There is a large surface water flow route here. Opportunity for some storage/wetland creation here to reduce the flows onto the A41, as this road is known to flood regularly. In the same location something could be done to improve the drainage on Waddesdon Hill, as this road is also regularly wet and there has been a recent car accident.



Location 4a and 4b: Littleton Manor Farm, Waddesdon

Surface water mapping shows flooding on two sections of highway. HS2/EA/TfB could discuss reconfiguration of the roads and opportunities to reduce flooding here.

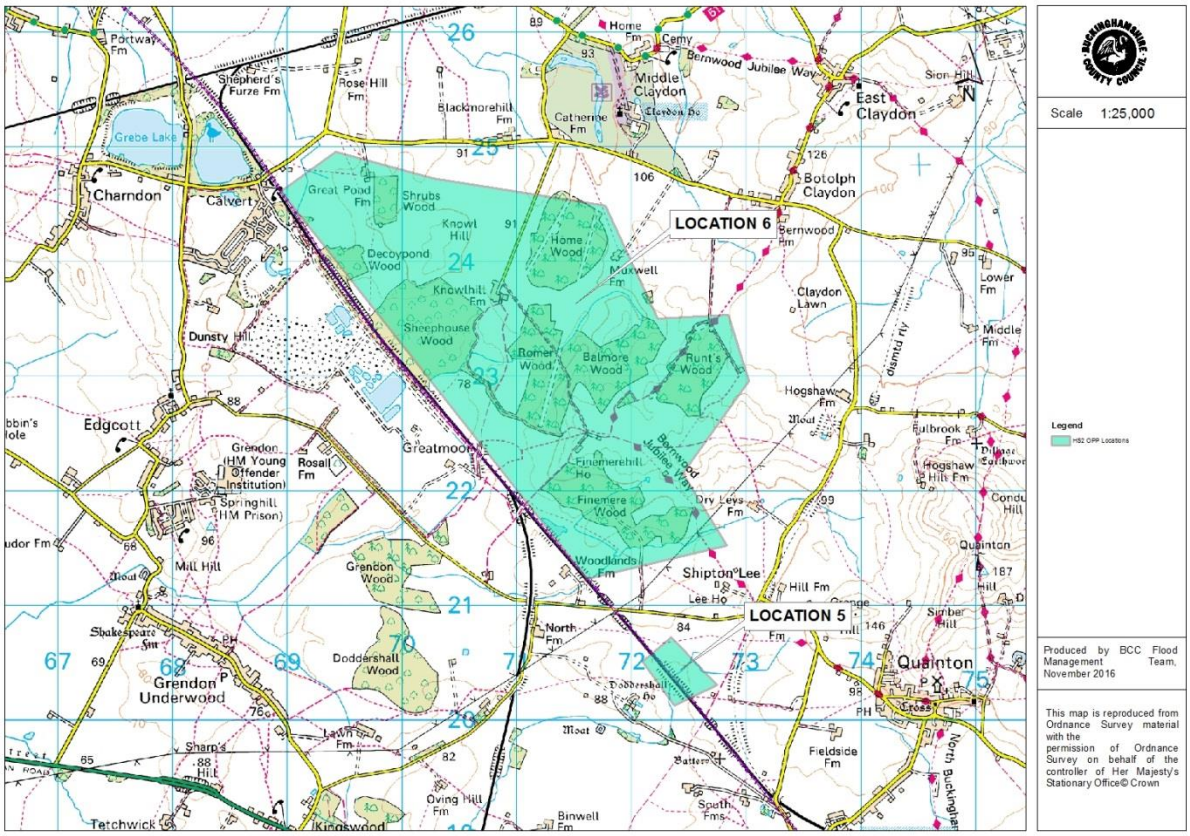
Location 5: West of Quainton

Smaller or same size culvert should be kept here to ensure that water is kept pooling behind the railway line.

East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council

Location 6: Calvert to Quainton

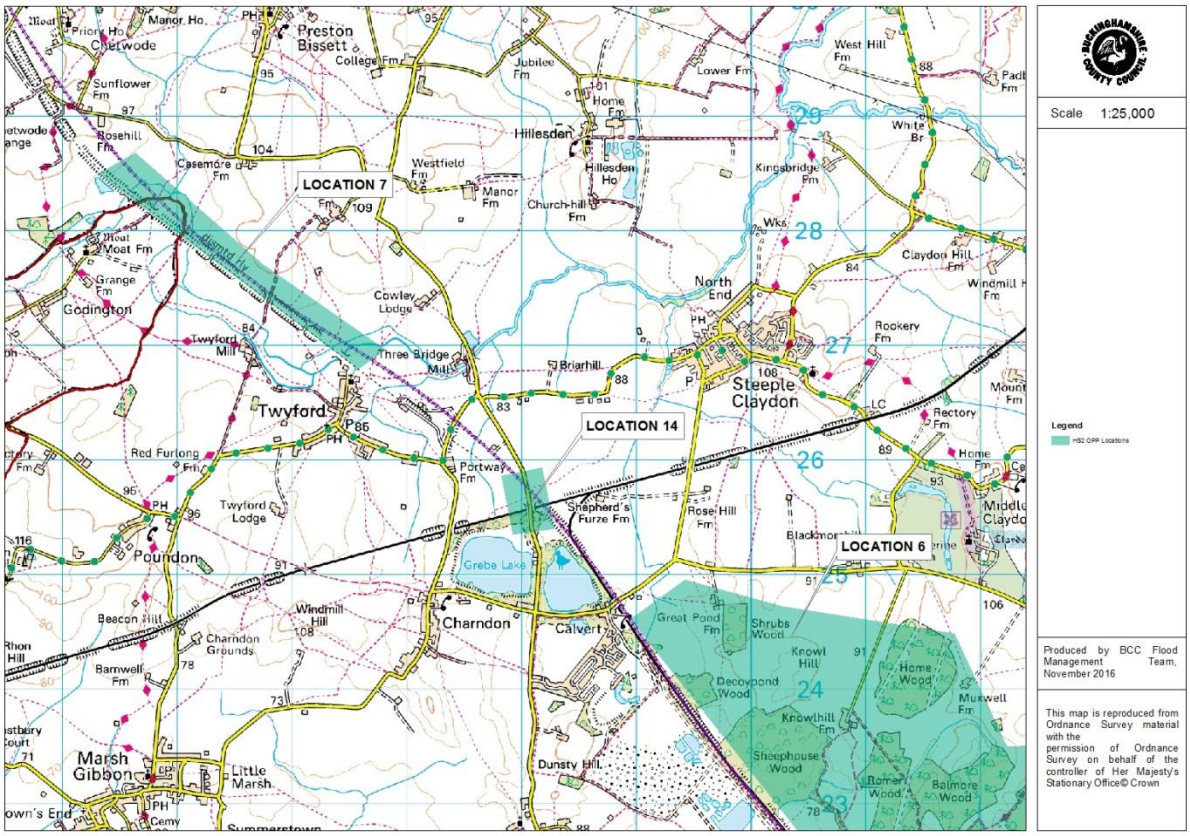
Woodland planting to create corridors and connectivity between woodland patches; Shrubs Wood, Decoypond Wood, Home Wood, Sheephouse Wood, Romer Wood, Balmore Wood, Runts Wood and Finemere Wood. The increased planting would also have a positive effect on surface water.



East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council

Location 14: Calvert Jubilee

Known flooding on Perry Hill Road north of Calvert Lakes. Sustainable drainage could be used to improve this problem.



East West Rail Transport and Works Act Order (TWAO) Application
Response from Buckinghamshire County Council