Number	Issue	RVR Comment	Action	Discussed/Agreed Action	Signpost for Resumbission
1	The departure has been incorrectly submitted against GG 101 clause 2.7, and requires resubmission as an aspect not covered by standards.	There was no function within the DAS system at the time of submission which allowed a Departure to be proposed against no specific standard, i.e. an aspect not covered by standards. The appropriate reference has now (27/05) been added by the HE DAS team.	Departure revised on DAS (27/05) as per advice from Highways England DAS Team.	Complete	DAS Departure Submission
2	No DMRB standard exists for level crossings on the all-purpose trunk road. The closest DMRB standard would be CD 123 – Geometric design of at-grade priority and signalised junctions. It is recommended that the designer adopts the design principles relating to signalised junctions provided by CD 123 as the basis for the highway elements of the design e.g. signal visibility, markings, stopping site distance (SSD) etc. and update the design to provide compliance.	The level crossing arrangement has been designed using level crossing specific design guidance from the Office of Road and Rail (ORR). This guidance outlines the layout of level crossings and provides additional information on visibility to wig-wags, traffic sign provision, traffic sign spacing and road marking arrangement. Geometric changes to the vertical alignment have been designed in accordance with CD 109. The only information pertaining to level crossing design that CD 123 provides is regarding SSD to signals (Section 7) however this does not apply directly to a level crossing application and nor does it take into account the additional signage on the approach to the level crossing which pre-warns of the upcoming signals.	Arup to provide evidence of the SSD. Highways England to confirm what form the visibility compliance evidence should take i.e. statement, drawing etc.	Drawing in PDF is the required evidence. Arup asked where is the transition for visbility requirements between CD109 and CD116 - HE and Arup to take away. HE need to discuss with the owner of CD116 and confirm.	Drawing: 239025-ARP-XX-XX-SK-CH-0001 - SSD Assessment. Sketch created and appended to DAS resubmission.
3	The submission must consider the combined impact of the proposed level crossing the A21 and the two crossings on the local road network. To consider the impact on road user safety due to traffic potentially diverting to avoid queues associated with the crossing	Traffic is unlikely to divert. Junction Road lies 3km east of A21 and a diversion to or from would be lengthy. Northbridge St runs parallel to A21. Theoretically traffic could divert but with level crossings on both routes there would be no journey time saving. Also only southbound traffic on A21 approach would have a practical ability to divert.	RVR to prepare Technical Note. HE to confirm	Technical Note to be prepared and submitted to HE - HE concerned on interaction of two crossings - if traffic sees one is closed, will they try and divert via Robertsbridge. Information / note to be supplied within the DAS resubmission	Technical Note Ref: ITL14477-023 Additional Transport Information. Appended to DAS resubmission.
4	The designer must provide evidence of the consultation and agreement from Highways England, regarding agreed changes to the A21 at the level crossing approaches.	Noted.	Correspondence to be provided of drawings submitted for consultation; responses; and meeting notes.	Evidence can be provided.	Technical Note Ref: ITL14477-023 Additional Transport Information. Appended to DAS resubmission.
5	The designer must provide evidence of consultation with Highways England regarding the relocation of the 40mph speed limit.	Noted.	Notes of meetings of meetings to be provided along with letter of support from Police.	Evidence can be provided.	Technical Note Ref: ITL14477-023 Additional Transport Information. Appended to DAS resubmission.
6	The submission must evidence that assessment of the extension of the 40mph speed limit complies with the guidance provided in DfT Circular 01/2013 Setting Local Speed Limits.	The scheme proposeds that the 40mph gateway is moved 60m south.	Highways England to confirm whether assessment is required using Speed Limit Appraisal Tool for extension.	SLAT is required and evidence to be provided.	DAS submission text amended and highlighted in yellow. Technical Note Ref: ITL14477-023 Additional Transport Information includes the response from Sussex Police regarding compliance with DfT guidelines. Appended to DAS resubmission. SLAT not accessible through the DfT website.
7	The designer must confirm that the visibility of the proposed ADS and any existing roadside assets are not affected by the design, and that any new sign(s) can safely be accommodated within the available verge. Also, the increased surface area of the proposed sign face requires that the sign posts and foundations be assessed to ascertain their suitability for the replacement sign face.	Noted.	Arup to check and confirm that existing signs are not affected by the new level crossing infrastructure. Highways England to confirm what form the visibility compliance evidence should take i.e. statement, drawing etc. Post and foundation design are not part of this Departure and are an item which will be addressed during detailed design.	PDF drawing required as evidence. Sign face is a larger square meterage - note on the same drawing that wind loading, etc will be considered at detailed design.	Drawings: 239025-ARP-XX-XX-SK-CH-0002, 239025-ARP-XX-XX-SK-CH-0003 and 239025-ARP-XX-XX-SK-CH-0004. Sketches created and appended to DAS resubmission.
8	The designer must undertake an overtaking assessment to ascertain the overtaking value of the route, in accordance Section 9 of CD 109 Highway link design. Following this, the designer must consult with the appropriate HE operations teams and gain approval to reduce the overtaking capacity of this section and submit a departure if the overtaking capacity is reduced to less than 30% as a result of the design proposal.	The short section to the north of the proposed crossing location is to be revised to show solid line to the roundabout.	Arup to revise road marking layout. Assessment of remaining length between roundabout and Redlands Lane to be assessed to ensure FOSD achievable.	Arup requested clarification on what consisted the route with regards to the assessment. How far do we need to assess as part of the works? HE stated 2km minimum back from the roundabout as roundabout is a major feature. Revised drawing to be provided and assessment completed. If overtaking capacity reduced to less than 30% then an additional Departure would be required	Technical Note Ref: 239025-ARP-XX-XX-TN-CH-0001 - CD109 Overtaking Assessment. Appended to DAS resubmission.
9	The designer must provide further comment regarding anti-trespass panels. Is there an aspiration that they will they also prevent unauthorised vehicle access onto the railway lines, or will a more substantial system be required?	The anti-trespass arrangement is in accordance with ORR guidance. There is no aspiration that they will specifically prevent unauthorised vehicle ingress but they will act as a deterrent. Only the inclusion of a physical barrier across the rail corridor when the conventional level crossing barriers are up would prevent unauthorised access.	Proposed arrangement in accordance with ORR guidance. No further comment required.	HE looking for clarification Concern about vehicles striking anti-trespass panels. RVR noted ORR guidance requires triangular feature to deter peds/vehicles from entering rail corridor.	SRA updated and appended to DAS resubmission

Number	Issue	RVR Comment	Action	Discussed/Agreed Action	Signpost for Resumbission
10	The TAME counter figures from Webtris show an increase in the summer months and it is probable that there would also be an increase in cyclists, particularly due to the rural nature of the area, which may have a significant bearing on the submitted queue lengths and cyclist numbers quoted in the submission. Additional traffic surveys, particularly within the warmer months, are required to gain a more accurate analysis of traffic figures, walkers, cyclists, horse riders and an accurate assessment of peak periods.	Tech Note accepted by HE shows that daily traffic flows may increase in summer months but highest hourly flows on May Day Bank Holiday used for assessment. No evidence of walkers (no footway) or equestrians. Cyclists may be present but numbers very low. HE accepted use of data already collected.	Append further background Tech Notes to submission.	Previous technical notes to be provided including traffic assessment note, NMU data note and WCHAR	Technical Note Ref: ITL14477-023 Additional Transport Information. Appended to DAS resubmission.
11	The Traffic Assessment Note, and the SRA must consider the impact of journey times on the SRN as a result of trains running during peak periods, and the possibility of the disruption during the end of the school day.	The operation of the railway will be prohibited 07.00-09.00 and 17.00-19.00 weekdays. End of school day traffic flows lower than peaks assessed.	As above plus append planning decision notice	Planning permission to be provided to confirm railway cannot operate in peak hours without breach of planning conditions. Traffic note to be provided - some data provided showed peak hours between 16.00-17.00. Direction notice from HA to also be provided. i-Transport/RVR to check situation on peak hours.	Planning permission appended to DAS resubmission. Technical Note Ref: ITL14477-023 Additional Transport Information covers peak period. Appended to DAS resubmission
12	The Traffic Assessment must be reviewed to take into consideration the increase in tourist numbers. The RVR Economic Impacts Report, Table 1-2, indicates that RVR is expected to attract an additional 22,000 visitor trips, rising to 94,000 in 2030, the impact of which has must be considered and the possible impacts recorded for the SRN and local road network.	Trips would not all be by road. Trips would not all be to Robertsbridge. Trips to Robertsbridge would not affect A21	As Item 3	Pick up in same note as to be provided for Point 3 - HE concern is what impact will these additional trips have on the SRN	Technical Note Ref: ITL14477-023 Additional Transport Information. Appended to DAS resubmission.
13	Survey figures indicate that the operation of Robertsbridge roundabout will be compromised, disrupting traffic from Robertsbridge and Salehurst wishing to access the northbound A21 from both Northbridge Street and Church Lane. During the 'best case' days the southbound queues would end approximately 25m south of the roundabout, which could result in rear end shunts due to vehicles leaving the roundabout to head south. Worst case northbound queues could potentially have an adverse impact on the operation of the A21/Redlands Lane junction. The submission must provide details of suitable mitigations and the proposed network signing strategy.	Drawings submitted with departure show 'Keep Clear' road markings on roundabout to maintain flow from Church Street.	HE to confirm requirements of Network Signage Strategy.	Statement notes roundabout will have queuing frequently - i-Transport / RVR to confirm. HE commented that any inconsistencies need to be removed. We were proposing an amendment to the signage rather than a new strategy. HE not asking for whole network signage strategy - they just want to understand what signs are going up where - are any signs proposed to try and prevent vehicles diverting from or using the A21. Arup to provide a drawing with appropriate notes to confirm any changes to signage/signing strategy	Drawing: 239025-ARP-XX-XX-DR-CH-0003. Drawing showing proposed traffic signage within the extents of the scheme amended to P2 and appended to DAS resubmission.
14	The submission uses the ORR Level Crossings Guidance document as a basis for the design, however, this is a 10-year-old document which also refers to TSRGD 2002 and has not been updated to reflect changes to requirements. The designer must review all signing and road markings and confirm that they are as prescribed in TSRGD 2016 and also ensure that there is compliant visibility to each sign. The designer must provide evidence that they have considered the need for secondary signing to inform of the presence of the crossing.	Noted.	Highways England to confirm what form the visibility compliance evidence should take i.e. statement, drawing etc.	Arup to complete review of signs/lines and compliance with TSRGD and then confirm or revise accordingly in a drawing with appropriate notes	Drawings: 239025-ARP-XX-XX-SK-CH-0002, 239025-ARP-XX-XX-SK-CH-0003 and 239025-ARP-XX-XX-SK-CH-0004. Sketches showing signage visibility splays created and appended to DAS resubmission. Drawing: 239025-ARP-XX-XX-DR-CH-0002. Drawing showing proposed road marking provision amended to P2 and appended to DAS resubmission.
15	The submission must provide consistency between the economic benefit figures provided within the RVR Economic Impacts Report and the Cost Benefit Analysis Technical Note.	The operational stage benefits to the local economy are summarised in Table 4-12 (and Table 4-17) of the RVR Economics Impact Report as £1.08m per annum. The same figure is used in Cost Benefit Analysis Technical Note	No further action	Short comment to be provided as to reason of using this £1.08m to be provided by i-Transport / RVR	DAS submission text amended and highlighted in yellow.
16	The Environmental Review shows that the vast majority of environmental issues occur at the construction phase. The negative impacts during the operational phase include noise, which the assessment states 'could' propagate further, and visual due to the overhead structure, which, the report concludes, would not be congruous with a rural setting. The overhead option could be seen to be advantageous over the level crossing due to the improved ecological, water and land use outcomes when compared to noise and the entirely subjective visual impact. The designer must provide documented evidence of consultation with relevant environmental bodies on their preferred option of crossing type.	The Departure includes a link to the ES for the proposed level crossing which is the preferred option. An update was published in March 2021.	HE to confirm consultation correspondence from RDC and EA is appropriate.	Positive statement to provided in Departure submisssion and key consultation correspondance to be appended.	DAS submission text amended and highlighted in yellow. Key correspondence appended to DAS resubmission. Reference: Environment Agency Consultation Response (Dec 2016)
17	The SRA states that full SSD is provided throughout the area of the proposed crossing and is referenced as A21(T) Alignment Review (Doc Ref REP-239025-R001). This document has not been included with the submission. The submission does not demonstrate that the desirable minimum SSD (120m) for the existing 40mph speed limit can be achieved from the roundabout to the crossing, in accordance with CD 109 Highway Link Design. The submission also does not demonstrate that the desirable minimum SSD to the back of the southbound best-case queueing traffic scenario can be achieved from the local roads or the exit from the roundabout. The design must provide details of suitable mitigation for these safety issues to reduce the residual risk.	Asessment undertaken and plan attached to Technical Note previously issued to HE	Technical Note & Drawing to be appended to the Departure.	Note and drawing to be appended	Drawing: 239025-ARP-XX-XX-SK-CH-0001 - SSD Assessment. Sketch created and appended to DAS resubmission.

Number	Issue	RVR Comment	Action	Discussed/Agreed Action	Signpost for Resumbission
18	The proposed road markings on the A21, immediately to the south of the roundabout, allow a short overtaking section. The SRA should be updated to include an assessment of any potential hazards associated with the road marking layout at this location together with appropriate specific mitigation measures to reduce the residual risk.	Comment as per Item 8	As per Item 8	As per output at Item 8. No edit to SRA required.	Drawing: 239025-ARP-XX-XX-DR-CH-0002. Drawing showing proposed road marking provision amended to P2 and appended to DAS resubmission.
19	A GG104 Walking, cycling and horse-riding assessment and review (WCHAR) must be appended to the departures submission and the contents used to update the SRA.	A WCHAR has been undertaken in accordance with GG 142. There were no specific opportunities identified on the A21 as there are currently no walking/cycling/horse-riding specific facilities within the A21 corridor in the vicinity of the crossing location. An opportunity was identified to upgrade a pedestrian crossing facility at Robertsbridge Roundabout on Church Road arm.	WCHAR to be appended to the Departure and signposted within the SRA.	WCHAR to be appended and signposted in SRA	DAS submission text amended and highlighted in yellow. Technical Note Ref: ITL14477-023 Additional Transport Information. WCHAR included as attachment within note and appended to DAS resubmission.
20	The SRA must be revised to include an assessment of specific hazards affecting cyclists and walkers which will result from the implementation of the level crossing. The revised risk assessment should also include details of appropriate mitigation measures to reduce the residual risks associated with these hazards.	Comment as per Item 19	WCHAR to be appended to the Departure and signposted within the SRA.	as above - confirm risks are not assessed in SRA as WCHAR highlights very limited if any expected NMU visitors	SRA updated and appended to DAS resubmission. Technical Note Ref: ITL14477-023 Additional Transport Information. WCHAR included as attachment within note and appended to DAS resubmission.
21	The designer must revisit the SRA and assess the risks and mitigation measures involved with altering the vertical alignment of the A21 to that of a higher design speed.	The existing vertical alignment of the A21 seems to adopt a 100A design speed in the vicinity of the proposed level crossing with an existing sag curve with a K value of 26 located within the posted 40mph zone. The proposed vertical realignment of the A21 adopts values associated with an 85A design speed as this would maintain the vertical profile as close to the existing 100A design speed profile as reasonably practicable. It would also provide an improved transition onto, through and off the level crossing with associated comfort and visibility benefits. The key difference in vertical design parameters between an 85A and a 70A design speed is the crest K value and the proposed alignment uses a K value of 55 (equating to a vertical crest curve radius of 5500m). Amending this to a crest curve with a K of 30 would make minimal real-term difference to the profile. The values given within the Table 2.10 of CD 109 are also defined as minimum values.	No assessment required as design speed is reduced from existing profile. No additional risks identified.	Additional comment to be provided in the DAS submission.	DAS submission text amended and highlighted in yellow.
22	The SRA must identify risks and provide mitigation regarding the risks to rail passengers as part of the 'other party' group, as a result of the provision of a level crossing.	These risks were included within a risk assessment on railway related risks which was submitted to the Office of Road and Rail (ORR). These risks were not originally included within the HE SRA as the thought was that they should not be assessed twice by two separate documents.	Arup to include latest rail passenger risks from the risk assessment submited to ORR within HE SRA.		SRA updated and appended to DAS resubmission
23	The SRA must include a comparison of risk between the existing situation, and the risks to users of the SRN following the provision of a level crossing.	A risk assessment of the existing situation is not a direct requirement of GG104 and, as such, the existing situation (do nothing) has not been assessed as part of the SRA - only the hazards associated with the option being proposed (the level crossing) have been considered. The existing situation is discussed within Step 5 of the SRA and is used to define the Safety Baseline and identify the Affected Populations.	The existing situation is not an activity that is being assessed as part of the SRA. The assessment is on the risks presented by the inclusion of the level crossing as a feature within the highway corridor. No assessment of existing situation required.	HE to review this item and advise further - RVR position is the SRA is a summary of the additional risks from the introduction of the baseline	HE/SES confirmed this is not required. SES Email from Terry Carling [Dated: 9 June 2021]. Appended to DAS resubmission.
24	The SRA must include a comparison of risk between a level crossing and the other grade separated options.	The SRA was not undertaken with a view to informoing the option selection process as it had already been decided that, following consultation with ORR, the cost of grade-separated options were grossly disproportionate. The SRA looks to ensure that the risks associated with the level crossing are assessed and mitigated against so that the crossing option is ALARP. It also allows any residual risks from the proposed scheme can be identified and managed	No option assessment or comparison to be provided.	HE to review this item and advise further - RVR position is the SRA is a summary of the additional risks from the introduction of the baseline. HE indicating they want a comparison with a 'compliant' layout such as a grade operated junction but how do we do that - via an SRA or demonstrated some other way in the departure? ORR SoC?	SRA updated and appended to DAS resubmission. A risk assessment of the alternative options has been undertaken for operation and future maintenance, and is included within the SRA for context as the designs associated with the alternatives have not been developed such that a detailed appraisal can be undertaken.
25	Regarding SRA item H12, the designer must provide further details on the appropriate visibility to the crossing and its associated operational signs, and if this visibility cannot be achieved, must provide suitable details of suitable mitigations to reduce the residual risk.	Noted.	Arup to provide further detail and clarify any necessary mitigaiton measures as part of SRA item H12.	As per signage/visibility drawings and covered as per Point 2	Drawing: 239025-ARP-XX-XX-SK-CH-0001 - SSD Assessment. Sketch created and appended to DAS resubmission.

Number	Issue	RVR Comment	Action	Discussed/Agreed Action	Signpost for Resumbission
26	Regarding SRA item H21a and b, the designer must provide further details on the levels of impact that the barrier will be designed to withstand.	Barriers have a sacrificial mechanism that is designed to detach the barrier boom at a certain tip deflection. This is to protect the barrier mechanism from damage and allow it to be replaced/repaired swiftly should there be an impact. This minimises any disruption to service following an incident. No railway level crossing barriers on the UK railway system are designed to act as a vehicle restraint.	No further comment required.	Arup to provide minor revision to the description of this point in the SRA.	SRA updated and appended to DAS resubmission
27	To support this submission and justification, the designer must provide evidence of consultation with the LHA and agreement from them that they are content that the safe operation of their network will not be compromised by road users diverting onto their network to avoid queuing from the operation of the level crossing.	As per Item 3	As per Item 3	Refer/provide in the note being prepared to address Point 3	Technical Note Ref: ITL14477-023 Additional Transport Information. Appended to DAS resubmission.
28	The designer states 'Queuing is expected to regularly extend through the roundabout when the barrier is lowered'. The interface between the proposed crossing and the existing roundabout creates a queueing hazard and the risk of road injury accidents. The designer must provide details of proposed mitigations to manage this risk.	Noted.	Arup to provide further detail and clarify any necessary mitigaiton measures as part of SRA item H20.	Clarification to be provided by Arup.	DAS submission text amended and highlighted in yellow. SRA updated and appended to DAS resubmission
29	To substantiate the BCRs stated for the at-grade railway level crossing, the submission must provide evidence that the RVR contractors and volunteers have suitable experience and expertise, including previous experience of installing a level crossing over the SRN.	Volunteers will not be on SRN which will be constructed by approved contractors. HE approval required as per protective provisions. This was allowed for in cost estimates. RVR have already built parts of the existing route demonstrating their capability.	No further comment required.	Claification to be provided in departure. Arup to check wording around economic benefit.	DAS submission text amended and highlighted in yellow.
30	The risk assessment must provide a comparison between the chosen level crossing and control arrangement against other available types, to ensure that the chosen crossing type is the most appropriate for the location.	ORR have accepted proposed crossing type in latest Statement of Case	Append latest ORR Statement of Case	Append ORR Statement of Case	ORR Statement of Case Addendum (May 2021). Appended to DAS resubmission
31	The designer must update the Protective Provisions documents with reference to IANs which are no longer relevant.	Done	No further action	Append updated Protective Provisions	RVR HE Protective Provisions (May 2021). Appended to DAS resubmission
32	As it is stated that the works to the approaches have been completed to the preliminary design stage, a copy of the final Stage 1 Road Safety Audit must be attached to the departure submission.	The Stage 1 RSA was not undertaken following specific advice from HE. They requested that the Departure be resolved prior to the audit being progressed.	Provide correspondence	Amend the DAS comment that preliminary design is completed and clarify the RSA status.	DAS submission text amended and highlighted in yellow.
33	The designer must provide confirmation that the type of barrier and control arrangement (AFBCL) is acceptable by ORR for the situation.	See item 30	see item 30	Append ORR Statement of Case	ORR Statement of Case Addendum (May 2021). Appended to DAS resubmission
34	Footway provision at the level crossing			RVR / i-Transport to provide additional information/clarification	DAS submission text amended and highlighted in yellow.
35	Red light cameras			Provide email correspondance confirming CCTV suitable for prosecution purposes	Email to ORR [Dated 8 June 2021] Appended to DAS resubmission

This export is subject to the handling instructions at the end of this document.

Application for Departure from Standards

- **Departure ID:** 102131 **Revision:** 0
- **Road:** A21
- **Scheme:** Rother Valley Railway
- **PIN:** Third Party Works
- **Form of contract:** Section 278 Agreement
- **Departure summary:** Installation of a level crossing for the Rother Valley Railway on the A21(T) Robertsbridge Bypass
- **Title:** Rother Valley Railway A21 Level Cro ing
- **Design organisation:** Arup
- **Departure Criticality:** 5 - Departure is fundamental to viability of the scheme
- **Project safety risk category:** B
- **Departure safety risk category:** B
- **Standard:**
  - **Description:** Not covered by standards : Design, Road Geometry, Not covered by standards
  - **Subject:** Road Geometry
  - **Category:** Design
  - **Volume:** Not covered by standards
- **Year:** 2018
- **Clause:** 2.7

Benefits & Justification of Departure to Highways England

- **Innovative?** false
- **Added value:** 16830000

State: Specialist submission point

Locations

OSGB36 Grid Reference: 574116, 124113

Description: Proposed crossing location to the south of the existing junction (Robertsbridge Roundabout) between the A21, Northbridge Street and Church Lane. The location of the RVR A21 Level Crossing is approximately 120m south of the Robertsbridge Roundabout.

Attachments

File: RIG-2014-06 New Level Crossings.pdf

Description: ORR Level Crossing Policy Guidance Note

File: 239025-ARP-XX-XX-DR-CH-0004.pdf

Description: Construction Details

File: 239025-ARP-XX-XX-DR-CH-0001.pdf

Description: General Arrangement

File: ORR Level Crossings Guidance.pdf

Description: Level Crossings: A guide for managers, designers and operators

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File: Draft TWAO.pdf

Description:

File: ORR Statement of Case (SoC) 2020-01-31.pdf

Description:

File: 22707603 Steer Economic Impacts Report 2018-09.pdf

Description:

File: Temple ES Crossing Option Assessment 2021-04.pdf

Description:

File: RVR A21 Crossing Options Feasibility Report [Issue 4].pdf

Description:

File: ITL14477-019 TN Cost Benefit Analysis.pdf

Description: Cost Benefit Analysis of A21 Level Crossing

File: RVR A21 Level Crossing Maintenance 2021-02-05.pdf

Description:

File: ITL14477-015 TN - Summary of NMU Data.pdf

Description: Summary of NMU Data

File: ITL14477-008 TN - Accident Analysis Note.pdf

Description: Accident Analysis Note

File: ITL14477-016 TN - Traffic Assessment Update.pdf

Description: Traffic Assessment Update

File: ITL14477-007c TN - Traffic Assessment Note.pdf

Description: Traffic Assessment Note

File: SRD_102131_0 - SRD Departure Note.pdf

Description: SRD recommendation

File: ITL14477-023 TN Additional Transport Information..pdf

Description: Additional Tran port Information

File: ORR Statement of Case (SoC) Addendum 2021-05-21.pdf

Description:

File: RVR HE Protective Provisions 2021-05-14.pdf

Description:

File: 239025-ARP-XX-XX-SK-CH-0003.pdf

Description: Traffic Signs Northbound Visibility Splays - Sheet 2 of 2

File: 239025-ARP-XX-XX-SK-CH-0002.pdf

Description: Traffic Signs Northbound Visibility Splays - Sheet 1 of 2

File: 239025-ARP-XX-XX-SK-CH-0004.pdf

Description: Traffic Signs Southbound Visibility Splays - Sheet 1 of 1

File: EA Consultation Response 2016-12-19.pdf

Description:

File: SES Email from Terry Carling 2021-06-09.pdf

Description:

File: RVR Email to ORR regarding CCTV Provision 2021-06-08.pdf

Description:

File: 239025-ARP-XX-XX-DR-CH-0002 (1).pdf

Description: Road Markings P2

File: 239025-ARP-XX-XX-DR-CH-0003 (1).pdf

Description: Traffic Signs P2

File: 239025-ARP-XX-XX-SK-CH-0001.pdf

Description: SSD Assessment

File: 239025-ARP-XX-XX-DR-CH-0020 (1).pdf

Description: Preliminary Cross Sections - Sheet 1 of 7

File: 239025-ARP-XX-XX-DR-CH-0023 (1).pdf

Description: Preliminary Cro Section Sheet 4 of 7

File: 239025-ARP-XX-XX-DR-CH-0021 (1).pdf

Description: Preliminary Cross Sections - Sheet 2 of 7

File: 239025-ARP-XX-XX-DR-CH-0022 (1).pdf

Description: Preliminary Cross Sections - Sheet 3 of 7

File: 239025-ARP-XX-XX-DR-CH-0024 (1).pdf

Description: Preliminary Cross Sections - Sheet 5 of 7

File: 239025-ARP-XX-XX-DR-CH-0010 (1).pdf

Description: Preliminary Longitudinal Section

File: 239025-ARP-XX-XX-DR-CH-0026 (1).pdf

Description: Preliminary Cross Sections - Sheet 7 of 7

File: 239025-ARP-XX-XX-DR-CH-0025 (1).pdf

Description: Preliminary Cross Sections - Sheet 6 of 7

File: REP_239025_R002 GG104 Risk Assessment Rev G.pdf

Description: A21(T) GG104 Safety Risk Assessment

File: RVR - Departure DAS Comments - Responses Rev 3.pdf

Description: RVR - Departure DAS Comments - Responses

File: 239025-ARP-XX-XX-TN-CH-0001 - CD109 Overtaking Assessment Rev A.pdf

Description: CD109 A21 Overtaking Assessment

Submission

This Departure from Standard is for an “aspect not covered by requirements” and concerns the application of design guidance contained within “Level Crossings: A guide for managers, designers and operators (Railway Safety Publication 7, December 2011)” published by the Office of Rail & Road (ORR) to undertake the design of the RVR A21 Level Crossing.

The RVR A21 Level Crossing is the proposed installation and operation of a new level crossing on the A21 to the east of Robertsbridge. The use of the ORR guidance for design of RVR A21 Level Crossing is in the absence of specific design guidance and requirements within DMRB relating to level crossings.

There are no other departures from DMRB associated with the RVR A21 Level Crossing proposal.

Technical Justification

Overview

Rother Valley Railway Limited (RVR) are progressing a Transport and Works Act Order (TWAO) to construct, operate and maintain a new railway between Bodiam and Robertsbridge, East Sussex. It is intended that the existing heritage railway operation between Tenterden and Bodiam, the Kent and East Sussex Railway (KESR), would operate over the extension to allow services between Robertsbridge and Tenterden.

The extension of the railway requires the introduction of three level crossings, one of which (RVR A21 Level Crossing) would be located on the A21 Trunk Road, part of the Strategic Road Network. Highways England (HE), are responsible for the Strategic Road Network.

Policy & Planning

The proposal to reintroduce the railway between Bodiam and Robertsbridge, including the RVR A21 Level Crossing, has planning consent (Planning Ref: RR/2014/1608/P).

Planning policy support for the RVR scheme can be found at the national level in NPPF (2019) which at paragraph 83 encourages a prosperous rural economy particularly "sustainable rural tourism and leisure developments" such as the RVR scheme.

At a local level the 2014 Adopted Rother Local Plan Core Strategy supports rural employment and tourism facilities in Policy RA2: General Strategy for the Countryside with more general support for tourism activities in Policy EC6. Further, it should be noted that the former Rother District Local Plan (2006) included a dedicated policy (EM8) in support of the RVR scheme.

The Salehurst & Robertsbridge Neighbourhood Plan (2018) similarly includes economic policies in support of the RVR scheme, with tourism specifically covered by Policy EC5.

Overall, at both a national and local level there is planning policy support for the RVR scheme which is recognised through the planning consent granted by Rother District Council.

Transport & Works Act Order

The Transport and Works Act (TWA) process is separate to the planning permission and an Order (TWAO) must be made to allow the operational use of the railway line.

In progressing the assessments necessary to support the TWAO, the RVR project team have consulted with stakeholders, most notably the ORR. Following a period of discussion and provision of information on the benefits and impacts of level crossings (summarised later in this Departure) the ORR set out their position of the RVR scheme in their letter dated 31 January 2020 which includes their Statement of Case and provided an addendum to Statement of Case in May 2021 (documents attached). In summary, in respect of the consented A21 Level Crossing, the ORR are satisfied that their te t of e ceptional circum tance ha been met and that a tolerably afe level crossing could be created. In reaching this conclusion the ORR has considered the practicable alternatives to a level crossing. The ORR's opinion is that there is a degree of gross disproportion between the costs of a level crossing and the cheapest form of grade separation.

The draft TWAO has been submitted and has been the subject of considerable discussion between RVR and Highways England. A copy of the draft TWAO is appended. Following discussion, a set of protective provisions have been drafted and agreed between Highways England and RVR and will be incorporated within the final TWAO should it be made. A copy of the draft protective provisions is appended. The protective provisions require RVR to seek Highways England approval for the detailed design and to not implement the works until details of the construction and

maintenance of the level crossing works have been agreed. Furthermore, RVR has agreed to indemnify Highways England for the construction, maintenance and use of the level crossing works to the A21.

Departure from Standards

Circular 02/2013, The Strategic Road Network and the Delivery of Sustainable Development, explains how Highways England will engage with the planning system. It also gives details on how Highways England will fulfil its remit to be a delivery partner for sustainable economic growth whilst maintaining, managing and operating a safe and efficient strategic road network. At paragraph 11 it notes:

“Local authorities and developers will be required to ensure that their proposals comply in all respects with design standards. Where there would be physical changes to the network, schemes must be submitted to road safety, environmental, and non-motorised user audit procedures, as well as any other assessment appropriate to the proposed development. The Design Manual for Roads and Bridges sets out details of the Secretary of State’s requirements for access, design, and audit, with which proposals must conform.”

Accordingly, works proposed on the A21 must be in accordance with the Design Manual for Roads and Bridges (DMRB). GG 101 (Introduction to the Design Manual for Roads and Bridges) notes:

“DMRB documents are not statutory or regulatory documents or training manuals; neither do they cover every point in exhaustive detail.”

Notably, in respect of the proposed level crossing of the A21 at Robertsbridge, DMRB does not provide advice or guidance with respect to the introduction or design of level crossings on the SRN. Document GG 101 (Introduction to the Design Manual for Roads and Bridges) provides the following guidance at paragraph 2.7;

“Where an aspect of the works is not covered by existing requirements, a departure application for an aspect not covered by requirements shall be submitted."

Accordingly, the RVR scheme requires the submission of a departure from standards application to cover its provision and design requirements. GG 101 (Introduction to the Design Manual for Roads and Bridges) goes on to state at paragraph 2.7.1:

"Where an aspect of the works is not covered by existing requirements, the principles of current and relevant guidance should be followed.”

In other words, where DMRB does not cover the design requirements, the departure from standards application should identify appropriate other ‘current and relevant’ guidance to which the design should conform.

Accordingly, this document sets out a Departure application for the proposed level crossing design and its provision on the A21, which is not covered by DMRB. The relevant design guidance has been determined to be the ‘Level Crossings: A guide for managers, designers and operators (Railway Safety Publication 7, December 2011) published by the ORR. This document is referred to within the Traffic Signs Manual as providing detailed information for the signage of level crossings (Chapter 4, Section 20, Level Crossings).

The provision of a level crossing will deliver substantial wider economic benefits which have been assessed in the Steer Economics Impact Report (2018) which is appended. The Steer report states that the delivery of the Rother Valley Railway is forecast to generate local economic benefits of £17.29 million over the two-year construction period and the first ten years of operation, and £1.08 million of local economic benefits (visitor spend, volunteer spend and direct employment; Table 4-12 of Steer report) per year subsequently.

Design

It is noted that the design of the level crossing and associated changes to the A21 have not been completed to the detailed design stage. Although, associated changes to the A21 approaches have been largely completed to preliminary design stage (including the vertical alignment) and accepted by HE (although there remains an outstanding approval in principle for a culvert design, which the HE Project Sponsor has advised cannot be accepted until this departure has been approved). Further the Stage 1 Road

Safety Audit is required before the preliminary design stage is complete. The HE Project Sponsor as advised this cannot be completed until the Departure has been approved.

Subject to confirmation of the TWAO, it will be necessary to progress the design to a detailed stage insofar as it affects the A21. This would require the approval of HE (the proposed Protective Provisions for the benefit of HE in the draft TWAO safeguard such approval). As noted in GG 101 (Introduction to the Design Manual for Roads and Bridges) (paragraph 2.4) a full Departure application shall be submitted and approved before the design is finalised.

Supporting documents including the GG 104 Safety Risk Assessment and the General Arrangement drawings of the proposed works are provided for information. A WCHAR has been completed and is attached to the Additional Transport Information note appended.

Technical Information

The following technical justification data and information required for geometric departures and outlined in Appendix C of the Departures Manual has been requested by Highways England.

Design Speed

Existing: The posted speed limit of the A21(T) is 40mph (assumed 70A design speed) from the roundabout with Northbridge Street and Church Lane south to Ch4.596 (refer to drawing 239025-ARP-XX-XX-DR-CH-0010 for relevant chainages). South from Ch4.596, the posted speed is national speed limit, 60mph (assumed single carriageway 100A design speed) and the existing vertical alignment of the A21 seems to adopt a 100A design speed in the vicinity of the proposed level crossing with an existing sag curve with a K value of 26 located within the posted 40mph zone.

Proposed: The proposed level crossing location requires that the speed gateway be moved approximately 60m south to Ch0-55.404m. The entirety of the amendments to the carriageway occur within the posted 40mph zone and therefore have been designed to a 70A design speed.

The proposed vertical realignment of the A21 adopts values associated with an 85A design speed as this would maintain the vertical profile as close to the existing 100A design speed profile as reasonably practicable. It would also provide an improved transition onto, through and off the level crossing with associated comfort and visibility benefits. The key difference in vertical design parameters between an 85A and a 70A design speed is the crest K value and the proposed alignment uses a K value of 55 (equating to a vertical crest curve radius of 5500m). Amending this to a crest curve with a K of 30 would make minimal real-term difference to the profile. It should be noted that the values given within the Table 2.10 of CD 109 are also defined as minimum values.

Measured Speed

Automated Traffic Counts (ATCs) were undertaken in March and April 2019 and the data from these counts is presented in "Traffic Assessment Note" (Document Ref: ITL14477-007c). A summary of the speed data recorded during these counts is summarised by month (count) in the tables below.

Speed Summary Data - March 2019

Parameter	A21 Northbound	A21 Southbound
Mean Speed (mph)	38.91	37.68
85%ile Speed (mph)	44.13	42.09

Speed Summary Data - April 2019

Parameter	A21 Northbound	A21 Southbound
Mean Speed (mph)	38.67	39.75
85%ile Speed (mph)	44.04	44.31

The data above demonstrates that users frequently travel above the posted speed limit in the vicinity of the proposed level crossing location. This is likely to be due to the relatively straight and flat existing geometry of the road and the fact that the step is from 60mph down to a posted 40mph speed limit on the approach to the roundabout. The works associated with the proposed level crossing (extension of the 40mph zone, pre-warning signage, road markings etc.) are likely to contribute to an environment whereby users are more likely to adjust their speed to better adhere to the posted speed limit of the road due to their perception of possible hazards within the highway corridor ahead.

There are no additional speed data sets available through WebTris for either TAME Site 30360432 (A21 northbound) or TAME Site 30360431 (A21 southbound).

Non-Motorised User (NMU) Considerations

Existing: There is currently no out-of-carriageway NMU provision along either verge of the A21 in the vicinity of the proposed crossing location. Surveys carried out in 2012 and 2013 both showed that no pedestrians, cyclists or equestrians were recorded as passing the site. Automated Traffic Counts (ATCs) from March and April 2019 noted that there were cycle flows on the A21 on a number of days. However, as traditional ATCs are unreliable at recording cycle flows, video surveys were also reviewed and these showed that the ATCs were incorrectly identifying cycle movements. A full summary of the NMU data can be found in the technical note "Summary of NMU Data" (Document Ref: ITL14477-015)

Proposed: The proposed level crossing arrangement affords at-grade pedestrian crossing provision beside each traffic lane to prevent the need for any pedestrian user to enter live carriageway lanes in order to cross the railway. To clarify, this is provided to cover pedestrian activity in the event of vehicle breakdown or other unexpected event. The use of a fully barriered crossing with skirts attached on all barriers prevents those pedestrians from crossing the A21 on a train's approach. Anti-trespass panels in accordance with ORR guidance are to be installed across the railway corridor in both directions at the level crossing location to provide delineation and warning to any such pedestrians and discourage walking on the railway. This will be supplemented with appropriate signage.

A WCHAR has been completed and accepted by HE and is included within the "Additional Transport Information" (Document Ref: ITL14477-023) appended.

Street Lighting

Existing: Street lighting provision is currently installed on the approach to the roundabout with with Northbridge Street and Church Lane. The furthest lighting column from the roundabout is located approximately 100m from the roundabout ICD.

Proposed: The street lighting provision on both the northbound and southbound approaches to the level crossing location will be assessed and designed in accordance with DMRB and with BS:5489-1. Associated electrical design will be in accordance with BS:7671.

Accident Summary

Please refer to Collision Analysis section below and to the attached "Accident Analysis Note" (Document Ref: ITL14477-008).

Traffic Data

Automated Traffic Counts (ATCs) were undertaken in March and April 2019 and the data from these counts is presented in "Traffic Assessment Note" (Document Ref: ITL14477-007c). The data and traffic modelling of the queue scenarios associates with the level crossing operation is further discussed in the subsequent technical note "Traffic Assessment Update" (Document Ref: ITL14477-016). The note concluded that the implementation of a level crossing on the A21 and the 72 second barrier closures would result in queues of 500m for northbound traffic and 420m for southbound traffic on the busiest day of the year. At all other times, queues for northbound and southbound traffic are much less, typically between 70m and 150m in length. Southbound queues greater than 120m (21 vehicles) would extend into the Robertsbridge Roundabout. It should be noted that RVR are required to monitor queue

lengths on the A21 for 3 years from opening as a formal planning condition (Planning Condition 18) from Rother District Council.

The count data shows the %HGV to be around 8.3% - the count for April 2019 had a lower average %HGV of 7.7% however this period included the Easter Bank Holiday which is likely to account for the slight decrease in HGV movements relative to the March 2019 data.

A full summary of the NMU data can be found in the technical note "Summary of NMU Data" (Document Ref: ITL14477-015).

Collision Analysis

Personal Injury Accident (PIA) data has been obtained from 'Sussex Safer Roads Partnership' which operates on behalf of Sussex Police for the highway network in the vicinity of the site. For the most recently available five-year period (01/02/2015 – 31/01/2020), a total of four accidents were recorded on the section of the A21 in the vicinity of the proposed crossing; three resulted in slight and one resulted in serious injuries. It is noted that no PIA were recorded since 2018.

The table below details the number of collisions per year in the vicinity of the proposed crossing, along with the severity of each collision.

Number of Accidents 2015-2020 by Severity

Severity	2015	2016	2017	2018	2019	2020	Total
Slight	0	0	2	1	0	0	3
Serious	1	0	0	0	0	0	1
Fatal	0	0	0	0	0	0	0
Total	1	0	2	1	0	0	4

The serious injury accident involved a single car travelling south on the A21. It occurred when the driver crossed over into the northbound carriageway and collided with a lamppost. It was noted that the driver was under the influence of alcohol and fatigued. The road surface was dry, and the weather was recorded as fine. It happened at 19:38 during daylight on the 02 June 2015 and streetlights were present.

Two of the slight injury accidents occurred at the A21 Robertsbridge Roundabout. One was a rear end shunt as a car slowed on the approach to the roundabout whilst a 3.5t goods vehicle behind failed to stop in time. The road surface was dry, and the weather was recorded as fine. It happened at 17:45 during daylight on the 28 March 2017; street lighting was present. The second involved a single car travelling northbound on the A21 upon exiting the roundabout. It occurred when the driver lost control of their vehicle and collided with the safety barriers protecting the footpath. The road surface was wet, and the weather was recorded as raining without high winds. It happened at 05:00 during darkness on Friday 22 December 2017 with street lighting present.

The third slight injury accident occurred on the A21 south of the Robertsbridge Roundabout and involved three vehicles. It occurred when a car travelling southbound went over a bump causing the caravan that it was towing, to detach and cross over the northbound carriageway into an oncoming 7.5t goods vehicle and a 3.5t goods vehicles. The road surface was dry, and the weather was recorded as fine. It happened at 12:07 during daylight on the 06 September 2018 and street lighting was present.

The collisions can be defined as 'rare, random and multi-factorial' events, therefore, placing a definite value on the potential reduction in number or severity of collisions is impossible. It is highly likely that designing the level crossing to the most appropriate standards and applying suitable mitigation measures to any identifiable areas of risk will ansure all residual risks are as low as reasonably practicable.

The full PIA data and plan is included within "Accident Analysis Note" (Document Ref: ITL14477-008) in Appendix C. It should be noted that PIA data for entries Police Ref: 1606185 (2016) and 1700531 (2017) have not been included within the statistics reported within the table above as they did not take place on the A21. Both entries correspond to slight injury accidents.

Vehicle Restraint Systems (VRS)

VRS on the northbound and southbound approaches to the level crossing location will be assessed and designed in accordance with DMRB and a RRRAP will be undertaken to inform this process as part of the detailed scheme design.

Roundabout Visibility

The visibility requirements associated with the Roberstsbridge Roubavout are defined by CD116. This states that, due to the 45m ICD, exit visibility of 40m must be provided. However, as a vehicle crosses the ICD, at the exit from the roundabout, the SSD reverts to 120m as defined by the associated values for a 70A design speed in CD109. The distance between the ICD and the stop line for the level crossing is 118.5m however there is visibility whilst within the roundabout providing the requisite 120m clear line of sight to the stop line and signals. This would not need to be "through" the roundabout but would simply be an extension along the tracked path that the vehicle would be making extending 1.5m within the ICD. The visibility has been modelled and is shown on sketch 239025-ARP-XX-XX-SK-CH-0002 appended to this submission.

Speed Limit Gateway

The proposed level crossing location requires that the 40mph speed gateway be moved approximately 60m south to Ch0-55.404m. It was requested by HE that an appraisal be undertaken in order to ensure the proposed relocation was in accordance with the Department for Transport (DfT) Circular 01/2013 – Setting Local Speed Limits. DfT Circular 01/2013 states in paragraph 109:

"Roads suitable for 40mph are generally higher-quality suburban roads or those on the outskirts of urban areas where there is little development. They should have good width and layout, parking and waiting restrictions in operation, and buildings set back from the road."

The proposed level crossing does not alter the setting or context of the existing highway corridor which has a 40mph limit. The scheme requires the 60m relocation to enable an improved sequence of warning and directional signs to be situated on the approach to the proposed level crossing site. The relocation does not increase or reduce the length of existing speed limit extents beneath the minimums defined in DfT Circular 01/2013 - the next speed limit change to the south of the proposed scheme is approximately 2.75km on the approach to John's Cross Roundabout. The relocation southwards extends the existing 40mph zone.

A formal assessment using the DfT Speed Limit Appraisal Tool (SLAT) has not been possible due to the tool not currently being accessible for use through the DfT website, however, the response from Sussex Police states that they are content that the proposal meets the requirements of the DfT guidance and the guidance of the National Police Chiefs Council. This response is included as an appendix within "Additional Transport Information" (Document Ref: ITL14477-023)

Overtaking Opportunities

Road marking provision and arrangement on the approaches to and across the level crossing has been designed in accordance with ORR guidance and is shown on drawing 239025-ARP-XX-XX-DR-CH-0002. A further assessment of the A21 overtaking provision has been undertaken in accordance with CD109 and is also appended (Doc Ref: 239025-ARP-XX-XX-TN-CH-0001). The assessment demonstrates compliance in both the northbound and southbound directions following the completion of the proposed works

Supporting Documentation

Document Ref	Title	Rev/Date
REP-239025-R002	GG104 A21 Safety Risk Assessment	G
239025-ARP-XX-XX-TN-CH-0001	CD109 A21 Overtaking Assessment	A
239025-ARP-XX-XX-DR-CH-0001	General Arrangement	P1
239025-ARP-XX-XX-DR-	Road Markings	P2

CH-0002		
239025-ARP-XX-XX-DR-CH-0003	Traffic Signs	P2
239025-ARP-XX-XX-DR-CH-0004	Construction Details	P1
239025-ARP-XX-XX-DR-CH-0010	Preliminary Longitudinal Section	P3
239025-ARP-XX-XX-DR-CH-0020	Preliminary Cross Sections - Sheet 1 of 7	P2
239025-ARP-XX-XX-DR-CH-0021	Preliminary Cross Sections - Sheet 2 of 7	P2
239025-ARP-XX-XX-DR-CH-0022	Preliminary Cross Sections - Sheet 3 of 7	P2
239025-ARP-XX-XX-DR-CH-0023	Preliminary Cross Sections - Sheet 4 of 7	P2
239025-ARP-XX-XX-DR-CH-0024	Preliminary Cross Sections - Sheet 5 of 7	P2
239025-ARP-XX-XX-DR-CH-0025	Preliminary Cross Sections - Sheet 6 of 7	P2
239025-ARP-XX-XX-DR-CH-0026	Preliminary Cross Sections - Sheet 7 of 7	P2
239025-ARP-XX-XX-SK-CH-0002	SSD Assessment	P1
239025-ARP-XX-XX-SK-CH-0002	Traffic Signs Northbound Visibility Splays - Sheet 1 of 2	P1
239025-ARP-XX-XX-SK-CH-0003	Traffic Signs Northbound Visibility Splays - Sheet 2 of 2	P1
239025-ARP-XX-XX-SK-CH-0004	Traffic Signs Southbound Visibility Splays - Sheet 1 of 1	P1

Specialist Information

Publisher	Title	Rev/Date
ORR	Level Crossings: A guide for managers, designers and operators	December 2011
ORR	New Level Crossings (RIG-2014-06)	August 2018
ORR	ORR Statement of Case (SoC) RVR	January 2020
ORR	ORR Statement of Case (SoC) Addendum	May 2021
RVR	Email to ORR regarding CCTV provision [Dated: 8 June 2021]	June 2021
RVR	Draft TWAO	March 2018
RVR	Draft Protective Provisions	May 2021
RVR	A21 Level Crossing Maintenance	February 2021
Steer	Economic Impacts Report	September 2018
Arup	A21 Crossing Options Feasibility Report	July 2019
Temple	A21 Crossing Options Environmental Review	April 2021
i-Transport	Cost Benefit Analysis of A21 Level Crossing (ITL14477-019)	April 2021
i-Transport	Summary of NMU Data (ITL14477-015)	October 2020
i-Transport	Traffic Assessment Note (ITL14477-007c)	May 2020
i-Transport	Traffic Assessment Update (ITL14477-016)	September 2020

i-Transport	Accident Analysis Note (ITL14477-008)	March 2020
i-Transport	Additional Transport Information (ITL14477-023)	June 2021
EA	EA Consultation Response	December 2016
HE	Email from Terry Carling [Dated: 9 June 2021]	June 2021

Secondary Standard

Not applicable.

Associated Departures

There are no associated departures and no pre-existing departures in proximity to the proposed scheme that the project team have been made aware of.

Repeat / Similar Departures

Not applicable.

Proposer

[redacted] **- Engineer (Designer)**

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Email: [redacted]@arup.com

Benefits, Impacts & Risks

Benefits

The provision of a level crossing will deliver substantial wider economic benefits and these have been assessed in the Steer Economics Impact Report (2018) which is appended. The Steer report states that the delivery of the Rother Valley Railway is forecast to generate local economic benefits of £17.29 million over the two-year construction period and the first ten years of operation, and £1.08 million of local economic benefits per year subsequently.

The £1.08 million estimate is a combination of all the local economic benefits which would accrue including visitor spend, volunteer spend and direct employment taken from Table 4-12 of the Steer report (2018). This is an estimate of the direct economic benefits attributed to the RVR proposal.

Safety (road users)

The ORR design guidance provides guidance that is intended for use by:

1. Railway infrastructure managers
2. Highway authorities
3. Road authorities
4. Planning authorities
5. Train and station operators
6. Landowners
7. Level crossing users, including groups representing motorists, cyclists, ramblers and persons with reduced mobility.

The design guidance notes the document is for use by Highway Authorities. It provides guidance on the following:

1. Level crossing types
2. Provision for pedestrians at level crossings
3. Traffic signals
4. Traffic signs;
5. Road markings;
6. Visibility requirements
7. Railway line speed relative to vehicle flow; and
8. Legislative process and Level Crossing Orders

Use of the ORR design guidance would provide a design for the RVR A21 Level Crossing that is familiar to road users providing for safe and effective operation.

A GG104 Safety Risk Assessment for the proposed level crossing has been undertaken and is included within the attachments to this submission (Doc Ref: REP-239025-R002).

Safety (construction and maintenance)

Please refer to the GG104 Safety Risk Assessment (Doc Ref: REP-239025-R002) for maintenance specific risks. Construction risks are to be duly considered prior to construction as part of ongoing SCRG discussions and further developed by the project team once a suitable contractor has been appointed.

Technical

Use of guidance which is familiar to designers and auditors will ensure clear understanding of design requirements.

Programme

There are no benefits to the programme from progressing the Departure. The scheme will be considered at a TWA Inquiry in July 2021 and the Departure should be determined in advance of that date to inform the Inquiry.

Budget

The level crossing scheme is considerably cheaper than the alternatives as shown in the A21(T) Crossing Options Feasibility report (appended). The cheapest form of grade separation is expected to cost £11.3m (2019 prices) compared to the level crossing option which is expected to be delivered by RVR for £1.5m (2019 prices). For clarity, the estimates assume that only HE approved contractors would carry out construction of the A21 level crossing within the SRN boundary.

There are considerable benefits to the Budget arising from the Departure

Environmental

There are no specific environmental benefits of the Departure. However, the alternatives to an at-grade level crossing solution would have substantial environmental impacts on the High Weald AONB, the setting of listed buildings in Northbridge Street and the effective operation of the River Rother flood plain. The level crossing performs better in environmental terms than all practicable alternatives. A comparative appraisal of the environmental performance of the alternatives is provided in A21 Crossing Options - Environmental Review prepared by Temple (appended).

Overall, the Departure would have a beneficial environmental effect when compared to the alternatives crossing options.

Innovation

The introduction of a new level crossing provides the opportunity for new technology to be tried and tested. The proposal incorporates an advance signalling technology and barrier equipment which has not been used on Highways England's network to-date. The technology is proven elsewhere to have safety benefits and this scheme provides the opportunity to introduce the latest update to Highways England's network and evaluate its performance. Successful introduction would enable the technology to be

proposed and implemented where appropriate elsewhere on Highways England's network to the benefit of other locations and the wider SRN.

Durability / Maintenance

None envisaged.

Network Availability

None envisaged.

Impacts

Safety (road users)

Safety impacts on road users are considered in the GG104 Safety Risk Assessment attached. In summary, all hazards are shown to have as low as reasonably practicable risk following mitigation.

Safety (construction and maintenance)

Please refer to the GG104 Safety Risk Assessment (Doc Ref: REP-239025-R002) for maintenance specific risks. Construction risks are to be duly considered prior to construction as part of ongoing SCRG discussions and further developed by the project team once a suitable contractor has been appointed.

Alternatives to a level crossing would have safety risks during construction and maintenance and would be managed to an acceptable level and in a similar manner to that envisaged under the proposed RVR level crossing scheme. As noted, the maintenance regime will also be subject to agreement with Highways England and the ORR before the crossing becomes operational.

Technical

None envisaged.

Programme

None envisaged.

Budget

None envisaged.

Environmental

The environmental impacts of the entire scheme have been considered in an EIA which can be found here (https://gateleyhamer-pi.com/en-gb/rother-valley-railway/inquiry-documents/) along with updated information which was published in March 2021. This assessed the environmental impact arising from the proposed RVR A21 Level Crossing. The residual environmental impacts were assessed to be of negligible significance. This conclusion was accepted by the Rother District Council in granting planning permission (RDC planning permission appended) and by the Environment Agency in their consultation response (EA consultation response in December 2016 (appended).

The alternatives to an at-grade level crossing solution would have substantial environmental impacts on the High Weald AONB, the setting of listed buildings in Northbridge Street and the effective operation of the River Rother flood plain. The level crossing performs better in environmental terms than all practicable alternatives. A comparative appraisal of the environmental performance of the alternatives is provided in A21 Crossing Options - Environmental Review prepared by Temple (appended).

The Departure would have a beneficial environmental effect when compared to the alternatives crossing options.

Innovation

None.

Durability / Maintenance

The maintenance liability of highway-specific level crossing signage and infrastructure would need to be determined and accepted by Highways England as part of the design

approvals process and are specifically required to be approved by Highways England as part of the protective provisions which would be included as part of the TWAO should it be made. RVR have set out their suggested approach to maintenance in their note dated 5 February 2021 (appended) .

Network Availability

The presence of the level crossing will affect both the method and nature of work that will need to be undertaken within the highway boundary at the interface with the railway (at the level crossing).

A recommendation of the GG104 Safety Risk Assessment is that, alongside ongoing review by the SCRG, a working group should be set up between relevant parties within Highways England and RVR to establish a process for railway/level crossing maintenance activities with an interface with the highway environment and vice versa.

Risks

Safety (road users)

Safety impacts on road users are considered in the GG104 Safety Risk Assessment (Document Ref: REP-239025-R002) attached. In summary, all hazards are shown to have low risk value following mitigation.

Many of the risks associated with a level crossing would not be present in the alternatives as there would be no at-grade interface between the highway and rail corridors. However, there would be other risks associated with these alternatives. On balance, it is expected the alternatives would have lower overall safety risk to road users.

An assessment of the risk of accidents comparing the existing situation is set out in the "Cost Benefit Analysis Technical Note" (Document Ref: ITL1477-019 Dated: April 2021). It is estimated that the risk of accidents in this location will increase following the introduction of a level crossing, with the annual risk of a fatality increasing from 0.041 to 0.055. This represents an increased probability of 0.014 or one fatality every 71 years.

Safety (construction and maintenance)

Please refer to the GG104 Risk Assessment (Doc Ref: REP-239025-R002) for maintenance specific risks. Construction risks are not considered as part of this departure and are to be duly considered prior to construction as part of ongoing SCRG discussions and further developed by the project team once a suitable contractor has been appointed.

Maintenance risks are considered in the GG104 Safety Risk Assessment and all hazards identified are shown to have a low risk following mitigation.

Technical

None envisaged.

Programme

None envisaged.

Budget

None envisaged.

Environmental

None envisaged.

Innovation

None envisaged.

Durability / Maintenance

None envisaged.

Network Availability

See above within Impacts section.

Mitigation

Mitigation measures to the safety relevant risks are set out in the GG104 Safety Risk Assessment (Doc Ref: REP-239025-R002) attached. Following mitigation all hazards are expected to have as low as reasonable practicable risk.

Overall Justification

Reasons why the Benefits outweigh the Impacts

The impacts of the Departure when compared against the alternatives can be summarised as follows:

1. Safety - Negative
2. Technical - Positive
3. Programme - Neutral
4. Budget - Neutral
5. Environmental - Positive
6. Innovative - Positive
7. Maintenance - Neutral
8. Network - Neutral

The only negative impact likely to result from the installation of the level crossing is in relation to safety. The GG104 Safety Risk Assessment has considered all the safety risks associated with the construction and operation of the proposed level crossing and identified that with appropriate mitigation all risks are as low as reasonably practicable.

An assessment of the valuation of accident savings, construction costs and the wider economic benefits of the level crossing compared to the least cost alternative of a road bridge is set out in the "Cost Benefit Analysis Technical Note" (Document Ref: ITL1477-019 Dated: April 2021). Comparing the wider economic Present Value Benefits (PVB) of the RVR with the Present Value Costs (PVC) of construction of the level crossing and Valuation of Accident Prevention associated with increased risk of accidents the net Cost Benefit is +£16.83m, with a Benefit to Cost Ratio (BCR) of 3.74.

The comparable figures for the least cost alternative road bridge are +£10.57m and 1.85. Thus, the scheme would deliver considerable wider economic benefits which substantially outweigh the likely increased safety risk monetised as a valuation of accident prevention.

The BCR for the level crossing demonstrates that the wider benefits substantially outweigh the costs associated with the construction and operation of the scheme. It is noted that the BCR of the level crossing is broadly double that of the lowest cost alternative arrangement. With reference to the GG104 Requirements for Safety Risk Assessment (paragraphs 3.12 to 3.13) it is noted that safety risk mitigation measures with a BCR of greater than 2 can be promoted on safety grounds.

There are considerable environmental benefits from the proposed departure which would not require unacceptable flooding and landscape impacts unlike the alternatives.

The technical impacts are expected to be overall beneficial with the use of “Level Crossings: A guide for managers, designers and operators” (ORR Railway Safety Publication 7, December 2011) is considered the appropriate design guidance in the absence of any design standards or guidance set by the DMRB.

Its application to the RVR A21 Level Crossing would offer benefits given it provides guidance on numerous key design considerations, such as:

1. Level Crossing types
2. Provision for pedestrians at level crossings
3. Traffic signals
4. Traffic signs
5. Road markings
6. Visibility requirements
7. Line speed relative to vehicle flow
8. Legislative process and Level Crossing Orders

In this circumstance, its use would ensure consistency of level crossing signage, road markings etc. with other level crossings across the wider road network. There are no adverse impacts anticipated with the use of the ORR design guidance.

The innovation has positive opportunities which the alternatives do not with the ability to use new technology which could have wider benefits through application at other existing level crossings on Highways England's network.

On balance therefore comparing the proposed departure with the alternative the environmental, technical and innovation benefits coupled with the wider economic benefits demonstrably outweigh the estimated safety disbenefits.

Reasons why the Risks after Mitigation are ALARP

As noted the GG104 Safety Risk Assessment (Doc Ref: REP-239025-R002) attached provides a comprehensive appraisal of the risks. It demonstrates that following mitigation the evaluation of the reasonably foreseeable risks has shown that the operation of an at-grade level crossing on the A21(T) would meet the objective of being "acceptable in terms of safety risk for all populations". Specifically:

1. Road Users – would not be disproportionally adversely affected in terms of safety risk and that the rate of collisions associated with the proposed level crossing should be no more than the baseline.
2. Road Workers – risk during the operational and maintenance regimes would be managed so far as is reasonably possible.
3. Other Parties – risk during the operational and maintenance regimes would be managed so far as is reasonably possible.

Compatibility with Adjacent Roads

There would be vehicles queuing on the A21(T) on the occasions when the RVR A21 Level Crossing was in use (barriers down). Details of the expected operating patterns of the heritage railway and hence when the RVR A21 Level Crossing would be in use is set out in the note "KESR Railway Operations" (Doc Ref: ITL14477-014a), a copy of which is included within the GG104 Safety Risk Assessment.

With respect to adjacent roads to the south the closest road is Redlands Lane some 400m from the proposed RVR A21 Level Crossing location. Redlands Lane is a no through local road serving a handful of agricultural properties.

Generally, queues from the RVR A21 Level Crossing would not extend as far as Redlands Lane. Assessments demonstrate that only in one 15 minute period during the year could queues extend as far as Redlands Lane (on a May Day Bank Holiday) and then queues would only be present for between 1 and 2 minutes. Traffic volumes to/from Redlands Lane will be low day to day and generally very low on a Bank Holiday. The RVR A21 Level Crossing would not be incompatible with Redland Lane.

Approximately 120m to the north of the proposed RVR A21 Level Crossing the Robertsbridge Roundabout connects the A21 with Northbridge Street and Church Lane. Queuing is expected to occassionally extend through the roundabout when the barrier is lowered, particularly during Bank Holiday weekends. The design includes the implementation of 'Keep Clear' road markings on the circulatory carriageway to maintain movements to and from Northbridge Street and Church Lane.

Northbridge Street runs parallel to the A21. In the event the RVR A21 Level Crossing is in use it provides an alternative route. However, whilst the length of the route via Northbridge Street is broadly comparable to the A21 speeds are necessarily lower as it is a road through a village with a 30mph speed limit and on street parking along much of its length. It should also be noted that a level crossing is proposed as part of the same railway on Northbridge Street and will be in operation shortly before or after the RVR A21 Level Crossing. Further explanation is provided in Additional Transport Information note appended (Doc Ref: ITL1447-023).

The RVR A21 Level Crossing would not be incompatible with Northbridge Street or Church Lanes and would not cause vehicles to divert onto these local roads (refer to Additional Transport Information note appended, Document Ref: ITL1447-023).

Specialist comments and conditions

SSP Review

Specialist Review

26/05/2021 - Refer to attached document SRD_102131_0 - SRD Departure Note

Authorising Signatory Comments

Consultant Comments (HE Representatives)

Diary

13/11/2020 09:48

[redacted] created the departure.

[redacted] was assigned to the role of **Current assignee** by [redacted]

[redacted] was assigned to the role of **Designer** by [redacted]

13/11/2020 10:43

[redacted] transitioned the departure from **Need identified** to **Submission in preparation**

16/03/2021 22:00

[redacted] was assigned to the role of **HE project manager** by [redacted]

[redacted] was assigned to the role of **Proposer** by [redacted]

17/03/2021 11:13

[redacted] transitioned the departure from **Submission in preparation** to **PM appraisal**

[redacted] was assigned to the role of **Current assignee** by [redacted]

19/03/2021 09:22

[redacted] added a comment:

Surely the Departure is critical to the project (which is the extension of the railway not just the level crossing) If the level crossing couldn't happen could the project proceed using another option?

[redacted] transitioned the departure from **PM appraisal** to **Rework required from PM**

[redacted] was assigned to the role of **Current assignee** by [redacted]

19/03/2021 09:57

[redacted] added a comment:

Resubmitted for further comment

[redacted] transitioned the departure from **Rework required from PM** to **PM appraisal**

[redacted] was assigned to the role of **Current assignee** by [redacted]

19/03/2021 12:02

[redacted] added a comment:

Comments on Departure as Submitted Scheme Title – Rother Valley Railway Form of Contract – Transport & Works Act Order Cost Benefit – are there only non-monetary benefits, we understood that benefits to the local economy were being claimed? Departure Criticality – surely 5? Are there any other options that are affordable to RVR or could the proposed railway be built with a gap at the A21? Submission The Departure is for an "Aspect not covered by requirements". Technical Information/Justification Could include reference to the Local Plan policy supporting the project and to any other relevant national or local planning or economic policies. ORR documents to be attached or hyperlinked Correspondence with ORR on their approval of the crossing to be attached and explained in text. Supporting documentation should include drawing showing proposed A21 surface profile at the crossing with explanation in text. Preliminary design is nearly complete and subject to ongoing discussion with HE Current draft TWAO to be attached or hyperlinked Current draft protective provisions to be attached Benefits Impacts and Risks Budget Are conforming solutions affordable to RVR? Environmental Attach or provide link to latest Environmental Statement including identification of any sections relevant to the proposed Departure. Durability/Maintenance Attach RVR proposals on maintenance, gritting and snow ploughing. Comments on Conformity with Departures Manual 5.8 The current assessment does not appear to demonstrate that the benefits of the proposed departure outweigh any adverse impacts. 5.24 – 5.27 Our understanding is that departure is being put forward on the basis of the cost savings compared with a bridge, so the information required in these paragraphs should be supplied. 5.36 – 5.37 The application should not assume any knowledge of the railway proposal or of other HE/RVR discussions. Any relevant evidence that RVR has put before or proposes to be put before the Local Inquiry should be included in the application. 7.8 Particularly for third party projects, a departure can be proposed based on its benefit to other infrastructure owners or the wider economy where there is little to no impact on Highways England's delivery of the Strategic Road Network. B6 No comparison has been provided with a design fully in accordance with requirements (ie a bridge) B6.1-B6.3 No comparisons have been provided against the baseline of a fully compliant design. C1.3 – not supplied or incomplete C1.3.1 - incomplete C1.5 Supporting documentation - 1), 2)(sections), 3), 4), 11) not supplied C1.5.1 – not supplied (should cover length of A21 subject to queuing +SSD to either side

[redacted] transitioned the departure from **PM appraisal** to **Rework required from PM**

[redacted] was assigned to the role of **Current assignee** by [redacted]

20/04/2021 22:31

[redacted] added a comment:

Rework complete

[redacted] transitioned the departure from **Rework required from PM** to **PM appraisal**

[redacted] was assigned to the role of **Current assignee** by [redacted]

21/04/2021 09:19

[redacted] added a comment:

I wish to see the departure again for all possible outcomes.

[redacted] transitioned the departure from **PM appraisal** to **With DAS Admin**

[redacted] decided not to pre-determine this departure, in the case of a specialist recommendation to approve this departure.

[redacted] decided not to pre-determine this departure, in the case of a specialist recommendation to approve this departure with conditions.

[redacted] decided not to pre-determine this departure, in the case of a specialist recommendation to reject this departure.

[redacted] appraised the departure.

21/04/2021 11:59

[redacted] transitioned the departure from **With DAS Admin** to **Specialist submission point**

[redacted] was assigned to the role of **Current assignee** by [redacted]

[redacted] was assigned to the role of **Specialist submission point** by [redacted]

21/04/2021 12:45

[redacted] transitioned the departure from **Specialist submission point** to **Specialist review**

[redacted] was assigned to the role of **Authorising signatory** by [redacted]

[redacted] was assigned to the role of **Current assignee** by [redacted]

[redacted] was assigned to the role of **Technical specialist** by [redacted]

11/05/2021 18:01

[redacted] added a comment:

Just to check in on the progress of the technical review. If you have any queries on the information provided to date or require any clarifications then please let me know. If you have any initial feedback or requests for additional information regarding the Departure, which you are able to provide at this stage, then that would be greatly appreciated.

26/05/2021 16:23

[redacted] added a comment:

26/05/2021 - Refer to attached document SRD_102131_0 - SRD Departure Note

[redacted] transitioned the departure from **Specialist review** to **Rework required**

[redacted] was assigned to the role of **Current assignee** by [redacted]

25/06/2021 12:53

[redacted] added a comment:

Rework complete and specific amendments/attachments covering the previous HE comments are outlined and signposted within the RVR - Departure DAS Comments - Responses document attached to the

submission. Sections which have been amended within the main body of the Departure submission text have been highlighted in yellow.

[redacted] transitioned the departure from **Rework required** to **Specialist submission point**

[redacted] was assigned to the role of **Current assignee** by [redacted]

28/06/2021 10:18

[redacted] was assigned to the role of **Authorising signatory** by [redacted]

[redacted] was assigned to the role of **Specialist submission point** by [redacted]

28/06/2021 10:18

[redacted] was assigned to the role of **Current assignee** by [redacted]

[redacted]