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Sender's ref: SSI-10055

Mr Lloyd Eley-Smith
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Department of Planning and Environment
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Via Major Projects Portal: PAE-47210957

Dear Lloyd

Subject: Review of exhibited Environmental Impact Statement – Inland Rail (Albury to Illabo) (SSI-10055) - Flooding

Thank you for your email dated 11 August 2022 seeking comments from the Biodiversity and Conservation Division (BCD) of the Department of Planning and Environment (the department) about the Environmental Impact Statement (EIS) exhibited on 17 August 2022 for the Inland Rail Albury to Illabo project.

We have reviewed the exhibited EIS against the Secretary's Environmental Assessment Requirements (SEARs) provided by the department to the proponent on 14 October 2020. BCD considers that the EIS meets the Secretary's requirements for flooding, contingent on the applicant addressing issues 1-5 identified in **Attachment A**.

BCD is concerned that there has been a lack of effective community and stakeholder engagement throughout the development of the EIS regarding flooding issues. Collaboration during the detailed design phase, particularly with Wagga Wagga City Council, is important for key sites like Uranquinty and Pearson Street where council has proposed flood mitigation options as priorities in the respective floodplain risk management studies and plans. BCD expects ARTC to work collaboratively with councils, the NSW State Emergency Service and local communities along the alignment during the detailed design process to ensure flood impacts and risks are minimised at key enhancement sites.

A summary of our assessment and advice is provided in **Attachment A**. Detailed comments are provided in **Attachment B**. All plans required as a Condition of Approval that relate to flooding should be developed in consultation and to the satisfaction of BCD, to ensure that issues identified in this submission are adequately addressed.

If you have any questions about this advice, please contact Renee Shepherd, Principal Project Manager, via renee.shepherd@environment.nsw.gov.au or 02 6883 5355.

Yours sincerely



Adam Vey
Director South West
Biodiversity and Conservation Division

13 September 2022

ATTACHMENT A – BCD Assessment Summary for Biodiversity - Environmental Impact Statement (SSI-10055)
ATTACHMENT B – Detailed Comments for Flooding – Environmental Impact Statement (SSI-10055)

ATTACHMENT A BCD Assessment Summary for Flooding - Environmental Impact Statement (SSI-10055)

1.	The detailed design of the Albury Riverina Highway enhancement site must include a detailed flood assessment of the operation of the stormwater storage and pump system to ensure the minimisation of downstream flood impacts to the satisfaction of Albury City Council. Recommended action: 1.1 A thorough assessment of the flood impacts during operation of the Riverina Highway enhancement site must be completed in the detailed design stage to ensure the downstream impacts do not exacerbate the existing flood risks through the Albury CBD. Albury City Council must be extensively consulted throughout this process.
2.	Additional information is required on the proposed works and flood impacts at the Uranquinty Yard site. Close liaison with Wagga Wagga City Council is required to ensure complimentary flooding outcomes are achieved. Recommended actions: 2.1 Response to Submissions report to clarify the proposed modifications to the Sandy Creek rail bridge and embankment, including confirmation of flood impacts resulting from any changes to the existing structures. This must include details on the hydraulic modelling methodology used to ensure that a consistent approach has been used when assessing the impact of any changes to the rail line. 2.2 A cumulative impact scenario for the 1% Annual Exceedance Probability (AEP) must be undertaken with the proposed levee in place. 2.3 ARTC to work closely with Wagga Wagga City Council in the detailed design stage to ensure consistency with the Uranquinty levee upgrade project.
3.	Close liaison is required with Wagga Wagga City Council during the detailed design of the Pearson Street rail lowering to ensure complimentary flooding outcomes are achieved. Recommended action: 3.1 ARTC to work closely with Wagga Wagga City Council in the detailed design stage to ensure the project complements the Glenfield Drain Flood Mitigation project.
4.	The flood impact assessment at the Wagga Wagga Yard site must be updated to ensure all missing drainage elements are included in the hydraulic model prior to approval. Recommended action: 4.1 The existing culvert at the Wagga Wagga Yard site must be included in the hydraulic model, and the flood impact assessment (including confirmation that the QDLs are not exceeded) must be updated for the Response to Submissions report.
5.	Additional information or assessment is required at enhancement sites which impact on drainage lines or streams. Recommended action: 5.1 Evidence is required to confirm that the qualitative assessment of the project's impact on drainage lines and streams is sufficient. Where sufficient evidence cannot be provided, a quantitative assessment must be presented in the Response to Submissions report.

ATTACHMENT B Detailed Comments for Flooding - Environmental Impact Statement (SSI-10055)

1. The Albury Riverina Highway enhancement site requires a detailed flood assessment

Section 5.1.2.1 of Technical Paper 11 states that the Riverina Highway track lowering section at Albury includes a stormwater storage and pump solution due to a lack of sufficient grade for gravity drainage. The proposed design and operation of this infrastructure is not clearly described, and flood impacts during its operation have not been quantified. The Albury CBD areas downstream from where the flows are to be discharged (Wilson Street) are a known flood hotspot that contain high density development that are particularly sensitive to increased flows.

Recommended action:

- 1.1 A thorough assessment of the flood impacts during operation of the Riverina Highway enhancement site must be completed in the detailed design stage to ensure the downstream impacts do not exacerbate the existing flood risks through the Albury CBD. Albury City Council must be extensively consulted throughout this process.

2. Additional information is required on the proposed works and flood impacts at the Uranquinty Yard site

The Uranquinty Yard enhancement site includes the raising of a section of the rail that is already overtopped in major flood events, and modifications to the Sandy Creek rail bridge (Section 5.1.2.3 of Technical Paper 11). Although the impact assessment states that the flood model results show impacts are negligible and are compliant with the Quantitative Design Limits (QDLs), details of the extent of the proposed modifications to the rail bridge/embankment and the impacts on flood flows are unclear and the modelling methodology is ambiguous. ARTC must also demonstrate that the modelling methodology that compares the existing scenario with the proposed enhancement works is consistent in its approach. In addition, given that Wagga Wagga City Council is currently designing an upgrade for the levee system that protects the town, it is important that these design projects are completed in collaboration to ensure they are complementary. In this way the resultant flood impacts and risks can be minimised once they are both constructed, and where possible flooding outcomes can be optimised.

Recommended actions:

- 2.1 Response to Submissions report to clarify the proposed modifications to the Sandy Creek rail bridge and embankment, including confirmation of flood impacts resulting from any changes to the existing structures. This must include details on the hydraulic modelling methodology used to ensure that a consistent approach has been used when assessing the impact of any changes to the rail line.
- 2.2 A cumulative impact scenario for the 1% Annual Exceedance Probability (AEP) must be undertaken with the proposed levee in place.
- 2.3 ARTC to work closely with Wagga Wagga City Council in the detailed design stage to ensure consistency with the Uranquinty levee upgrade project.

3. Close liaison is required with Wagga Wagga City Council during the detailed design of the Pearson Street rail lowering

The Pearson Street rail lowering site works described in section 5.1.2.3 of Technical Paper 11 involve several major drainage changes that have the potential to exacerbate flooding conditions, particularly when the Glenfield Drain is at or near capacity. Wagga Wagga City Council are in the process of investigating options for mitigating floods in the Glenfield Drain catchment which include possible modifications to the drainage lines through the rail corridor to alleviate local flooding risks.

These design projects should progress collaboratively to ensure the resultant flood impacts and risks are minimised once they are both constructed.

Recommended action:

- 3.1 ARTC to work closely with Wagga Wagga City Council in the detailed design stage to ensure the project complements the Glenfield Drain Flood Mitigation project.

4. The flood impact assessment at the Wagga Wagga Yard site requires updating

The flood impact assessment of the Wagga Wagga Yard site in section 5.1.2.3 of Technical Paper 11 shows a flood afflux that exceeds the QDLs in the industrial area to the east of the site. However, it has been correctly identified that a major culvert is missing from the original hydraulic model sourced from Wagga Wagga City Council for use in the impact assessment. It is proposed that the flood model will be updated at the detailed design stage to include the drainage and culvert in the model to confirm the true afflux result. Further, the assessment states that the model update will likely result in only a minor afflux compared to that currently described. The update to the model and resulting impact must be included in the Response to Submissions report rather than postponed to detailed design, so that the actual flood impacts are understood prior to approval.

Recommended action:

- 4.1 The existing culvert at the Wagga Wagga Yard site must be included in the hydraulic model, and the flood impact assessment (including confirmation that the QDLs are not exceeded) must be updated for the Response to Submissions report.

5. Additional information or assessment is required at enhancement sites which impact on drainage lines or streams

There appears to be numerous sites along the alignment where streams or drainage lines may be impacted by enhancement works. Harefield is one such example. The qualitative assessment lacks detail, and it is not clear that the assessment appropriately details how the enhancement works will impact on flows or drainage.

Recommended action:

- 5.1 Evidence is required to confirm that the qualitative assessment of the project's impact on drainage lines and streams is sufficient. Where sufficient evidence cannot be provided, a quantitative assessment must be presented in the Response to Submissions report.