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National Infrastructure
Planning
Temple Quay House
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Our ref: WX/2019/133441/01-L07
Your ref: TRO40011
Date: 01 December 2020

Dear Sir/Madam

**METROWEST PHASE 1 DEVELOPMENT CONSENT ORDER (DCO) APPLICATION
SUMMARY OF WRITTEN REPRESENTATIONS
ENVIRONMENT AGENCY REFERENCE 20025331**

Please find hereunder a summary of the issues detailed in the Agency's formal Written Representations. Unfortunately, it is not possible to summarise some elements of the Agency's Representations, without compromising the essential meaning or context. Obviously, it is important to read the comments hereunder in conjunction with the original Representations:

1. Flood Risk

The Environment Agency's flood risk maps show the DCO application area to be within tidal Flood Zone 3 and Flood Zones 3b, 3a, 2 and 1 (fluvial and tidal). Accordingly, the application area has a high probability of flooding.

The Flood Risk Assessment (FRA) submitted in support of the proposal, has demonstrated that part of the site is in functional floodplain (Flood Zone 3b) and will, as a consequence, flood at a return period as low as 1 in 5 years at present.

The FRA has, in addition, demonstrated it is not possible to mitigate the flood risk on the line without increasing flood risk to third parties. Therefore, the proposed development would remain in flood zone 3b and, as a consequence, will not be operational during a flood event. Accordingly, an appropriately detailed Emergency and Evacuation Plan will be essential to ensure the safety of the line and its users.

The proposed development has been classified by the applicant as 'Essential Infrastructure' development.

1.1 Sequential Test and Essential Infrastructure in Flood Zone 3b

The Agency acknowledges that the fundamental nature and objectives of the proposal, effectively precludes the use of other sites at a lower risk of flooding.

The NPPF further advises that if it is not possible for development to be located in zones with a lower risk of flooding (taking into account wider sustainable development objectives), the Exception Test may have to be applied. The PPG (Flood Risk and Coastal Change) identifies that Essential Infrastructure development is permissible in Flood Zone 3b, subject to the application of the Exception Test.

1.2 Exception test

The NPPF states the application of the Exception Test should be informed by a site-specific flood risk assessment.

The Agency has reviewed the submitted FRA and is of the view it does not currently comply with the requirements set out in the PPG (Flood Risk and Coastal Change). The Agency requires the submission of additional information for review and an update of the FRA, to ensure an appropriate assessment of the flood risks arising from the proposed development.

1.3 Modelling

The Agency has reviewed the latest modelling submission for the proposal (March 2020 model) and have concluded the model, as submitted, is insufficient. Accordingly, the Agency has requested additional information for review. The applicant is currently in the process of submitting the requested details.

1.3.1 Coastal Flooding (Portishead to Pill)

The proposed development area is currently protected from coastal flooding by flood defences, up to the present day 0.1% (1 in 1000yr) annual probability flood event. The defences will continue to offer protection over the 60 year lifetime of the development for the 0.5% (1 in 200) annual probability flood event, but not the 0.1% (1 in 1000). The defences will not protect the site for a 100 year lifetime.

1.3.2 Easton in Gordano Fluvial Flooding

The FRA concludes the Portishead to Pill section of the scheme is above the fluvial and tidal 1 in 1000 year flood level, for present and future scenarios (2075 and 2115). However, this relies on a flood relief channel in the form of a farm access track running under the railway line. As a result, appropriate provisions are required within the DCO, to ensure the farm access track will be maintained for the lifetime of the development.

At that location, the railway needs to be realigned, which will result in a loss of floodplain storage. The model has identified a loss of floodplain storage of 75.5 m³ as a result of realigning the railway. The Agency has advised that, on the basis of the storage volume stated, it would not require the provision of floodplain compensation.

1.3.3 Drove Rhyne Model

The FRA concludes the proposal is above the modelled 1000 year return period Drove Rhyne flood level for the present day (2015) and future (2115) scenarios, and is not considered to be at risk of flooding from Drove Rhyne.

The FRA states the railway will be raised by 200mm (paragraph 4.2.34 p4.13), with no change to the culvert size. The FRA concludes the flood risk impact of the scheme is negligible and there is no need for a post development model. Unfortunately, the FRA does not detail how the railway line will be raised and whether there will be a need to widen the embankment as a result. If this is the case, would there be any loss of floodplain as a result of a wider footprint and a consequential need for appropriate floodplain storage compensation?

1.3.4 Bower Ashton / Ashton Gate Area

The proposed development is at risk from both fluvial flooding from the Colliters Brook and Longmoor/Ashton Brook and tidal flooding from the river Avon. The FRA has used the existing Bristol City Council's Central Area Flood Risk Assessment (CAFRA) model, which has been developed further for the proposal. The Agency is currently awaiting additional information to complete the review.

Proposals to increase in the height of the railway by 150 to 200 mm at this location, to alleviate flood risk, have proved impracticable without increasing flood risk to third parties. As a result, the railway line will remain at its current height and will therefore, be subject to increased depth and frequency of flooding during its lifetime. The only part of the proposed development that will be raised, with mitigation provided, is Clanage Road compound and ramp (see hereunder).

Network Rail has advised that the depth of flooding on the line is not an issue for them, on the grounds they are unable to operate the line when it is flooded. However, the frequency of flooding is an issue. With climate change, the model demonstrates both the frequency and depth of flooding increases, which will lead to more frequent and longer disruptions on the line and therefore passenger services.

The FRA compares the flooding at this location to the 2013/2014 floods on the Somerset Level and Moors (SLM) and is expecting the recovery of the line to be relatively rapid. However, the nature of flooding at Bower Ashton will be different from the SLM, in terms of duration, wave impact, water velocity and silt deposition/removal. It is not clear in the FRA if the above issues have been taken into consideration when assessing the actual impact of flooding and the consequential closure of the line.

Accordingly, the frequency and depth of flooding remains a concern.

1.3.5 Clanage Road

The proposal provides for the construction of a permanent maintenance compound at Clanage Road, together with a ramp to access the railway. The site is currently located within functional floodplain (flood zone 3b), the highest risk flood zone. The proposed works at Clanage road would increase flood risk to third parties however, the FRA has assessed potential mitigation options. The options include the lowering of land within the compound area to 7.5, 7.4 or 7.3m AOD to compensate for the loss of floodplain due to the proposed ramp.

It is not possible to provide level for level floodplain compensation at the site however, the model shows that volume for volume compensation can be provided by lowering ground levels. The FRA states the preferred mitigation option is to lower the ground level to 7.4m AOD, which would result in an increased flood risk to some properties of

1mm, which the FRA contends is negligible and within model tolerance. It is acknowledged the indicated increase in flood risk is low however, the Agency would prefer the lowering of ground levels to 7.3m AOD, which would have no impact on third parties.

The FRA fails to demonstrate the compound area will be safe. Accordingly, full details must be submitted in respect of a safe (dry) access/egress route.

Additionally, further details are required in respect of how the compound area will be used, including any welfare unit/porta cabin on site, which will necessitate appropriate compensation. The Agency must, in addition, request the provision of additional information regarding:

- the finished floor level of any proposed building(s) on site,
- provision of a safe refuge on upper floor (where applicable).

The Agency remains concerned regarding the location of the proposed storage compound, on the grounds no materials, permanent or temporary, should be stored with Flood Zone 3b, unless the materials can be moved outside the flood zone at short notice, or additional flood storage compensation provided. Additionally, any materials stored must not present a pollution risk.

The FRA does not make any provision for floodplain compensation for temporary works. The submitted assessment reports a low risk of flooding due to the temporary storage of plant and material on the floodplain. Floodplain compensation needs to be provided for any temporary buildings and/or storage facilities within flood zone 3. As advised, land within Flood Zone 3b should not be used for storage purposes, unless the materials can be moved outside the flood zone at short notice, or additional flood storage compensation provided. Again, any materials stored must not present a pollution risk.

1.4 Breach Analysis

Breach analysis has been undertaken for coastal defences. The technical notes, (Appendix M), concludes that a breach of the Sea Commissioner's Bank would not affect the proposed development, now or in the future.

However, there is the potential for the Longmoor tunnel and the Colliters Brook system to fail. It is important to note that a valve on the outlet of the Longmoor tunnel, could fail either open or closed. Both scenarios would have consequences in terms of flooding the railway, which must be assessed, together with the potential impact on the railway, in the event of the Longmoor tunnel collapsing.

1.5 Flood Risk Activity Permits and Maintenance

Any works within 8m of a non-tidal main river and 16m of a tidal river (and potentially any works within the floodplain) are likely to require a prior Flood Risk Activity Permit (FRAP) from the Agency. For information, it can take up to 60 days to determine a permit.

The Agency must strongly advise the applicant to apply for any requisite permits at the earliest opportunity, due to the complex nature of the proposals, which would necessitate the coordination of numerous functions within the Agency.

Culverts will need to be surveyed to ensure they are structurally sound and sufficient in respect of any proposed works. Any deficient culverts will need to be repaired or replaced on a like for like basis, which will require a FRAP from the Agency, prior to works commencing.

1.6 Emergency and Evacuation Plan

It is important to note that it is considered unsafe for people to walk through flood water greater than 300mm in depth. The FRA shows a depth of flooding greater than 300mm on the line for very low return period events, both in present and future scenarios. Appendix T provides details of a proposed emergency response in the event of flooding, however, it appears to only detail how Network Rail staff will be organised to monitor and survey structures along the railway line and risks during the construction phase at Clanage Road. Although such provisions are required, the plan, in its current state, is incomplete. The plan is required to make appropriate provisions to ensure the safety of passengers, including those potentially stranded on the line and at stations, members of staff and any other party that could potentially be adversely affected. Additionally, the Agency must advise that the plan provides for flood risk due to climate change and the potential breach of defences.

It is important to note the assumption detailed in Section 8.6.4 p 8.9 is not correct. Rainfall and storms could potentially influence sea level differently along the coast and therefore flooding could potentially occur at any time along the line.

Accordingly, the Agency must request confirmation of the applicant's intention to extend the provisions of the proposed Emergency Response Plan outlined in Appendix T and as detailed under Requirement 5 (CEMP). All emergency and evacuation procedures detailed within the requisite plan, must be to the satisfaction of the local authority's Emergency Planning Officer.

1.7 Climate Change

A Climate change factor of 25% was originally applied to the Colliters Brook. The Agency has reviewed the models and can confirm that the model was run using 40% and 70% uplift for climate change.

Notwithstanding the above and as previously advised, the climate change information in the supporting FRA is confusing. Accordingly, section 5 of the FRA must be reviewed and updated in line with the climate change factor actually used in the model.

1.8 Surface water

The Agency will not accept any additional surface water discharges, upstream of the pumping station.

If a surface water discharge is required through an Agency defence, an appropriate assessment of the work will need to be undertaken, to the satisfaction of the Agency. Any subsequent liability and maintenance requirements, will be the responsibility of Network Rail.

1.9 Associated development

The FRA (Section 7) refers to associated developments however, these have not been fully assessed for flood risk. Accordingly, details are required in respect of the developments and any potential flood risk impact.

1.10 Flood Risk Assessment (FRA)

Paragraph 2.2.29 states there are 7 areas or works lying within undefended flood zone 3a and 3b. It then refers to table 4.6 of the FRA. Table 4.6 of the current FRA is not pertinent to the above issue. Accordingly, the Agency will require clarification regarding the following points:

- Which table is correct?
- The current FRA only discusses coastal flooding, Easton in Gordano the Drove Rhyne and Ashton Vale area.
- What are the 7 areas? The FRA should present all 7 areas and explain how they will be safe for the lifetime of the development.

Section 7.4.4 page 7-2 states the proposed development “*Has been designed and will be constructed to remain operational during normal conditions and in times of flood, provided it is safe for users.*” However, the current design proposal for Ashton Vale maintains the line at its current elevation, which, as detailed above, will result in an increased depth and frequency of flooding during its lifetime. This arrangement is therefore at variance with the above statement. Clarification is therefore required regarding this issue.

With regard to Section 7.4.4 page 7-2, the Agency must advise that floodplain compensation should be provided for all loss of floodplain within Flood Zone 3, not just the loss floodplain within Flood Zone 3b (functional floodplain).

Section 10 (Mitigation) Table 10.1 page 10.3, states the residual risk is likely to be mitigated by future strategic tidal flood defences in Bristol. The Agency has previously advised the applicant that it is not acceptable to rely on the proposed strategic defences to mitigate residual risk. For information, the Agency is working with Bristol City Council in respect of future strategic flood defences in Bristol however, proposals are at an early stage and there remains a degree of uncertainty regarding actual delivery.

2 Contaminated Land and the Water Environment

The Agency, as a regulator with responsibilities to protect the water environment, has, on numerous occasions, advised the applicant the submitted documents do not, in its opinion, provide a sufficient understanding of the potential for contamination within the application site, either in terms of the entirety of the application area, or any particular location therein. Additionally, the subsequent assessment undertaken, asserts that the risks are not significant. However, that assessment, is based on insufficient information.

In view of the Agency’s continued concerns regarding this issue, it is considered essential that the perceived gaps in the land contamination work undertaken thus far, are addressed through appropriately worded Requirement(s) attached to any approved DCO. It is noted the draft Requirement 17 (Contaminated land and groundwater) does not provide for the submission of a verification plan, which is a standard Agency

requirement. Accordingly, the Agency must request an amendment of the draft Requirement to include the following provision:

'A verification plan must be submitted providing details of the data that will be collected in order to demonstrate that the works set out in the remediation strategy are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.'

Additionally, the Agency must request the inclusion of the following provision within an amended Requirement 17, or as a separate Requirement:

'If, during development, contamination not previously identified is found to be present at the site, no further development (unless otherwise agreed in writing with the LPA) shall be carried out, until the developer has submitted a remediation strategy to the LPA detailing how this unsuspected contamination shall be dealt with and obtained written approval from the LPA. The remediation strategy shall be implemented as approved.'

Such a provision is considered by the Agency as normal practice.

3 Waste Management

Document APP107 (Materials and Waste) 12.9.3 indicates a degree of uncertainty regarding the management of wastes produced on site, or wastes being brought onto site for construction purposes.

Additionally, APP107 (Materials and Waste) 12.6.22 indicates that the 36,000 tonnes of construction, demolition and excavation wastes expected to arise from the construction of the proposed development, are likely to be predominately reused on site or segregated and sent for off-site reuse, recycling or recovery within Network Rail's National Delivery Service and the West of England sub-region (i.e. minor magnitude of impact). Accordingly, no details are provided in respect of where these wastes are going to be managed off site, or the Environmental Permissions under which the wastes will be managed.

As indicated above, there is clearly a degree of uncertainty regarding proposed waste management arrangements. Accordingly, the Agency, as the regulatory authority, will require full details from the applicant regarding proposed wastes activities.

The Agency would welcome clarification of the applicant's intentions regarding the submission of the requisite details. Is it intended to resolve the aforementioned uncertainties during the examination process, or through any subsequent submission pursuant to the discharge of the proposed Site Waste Management Plan, submitted in accordance with proposed Requirement 5 (CEMP)?

4 Environmental Management (Pollution Prevention)

The Agency must be formally consulted in respect of any subsequent submission pursuant to the discharge of the proposed Pollution Incident Prevention and Control Plan, submitted in accordance with proposed Requirement 5 (CEMP). The plan must demonstrate a detailed understanding of the pertinent regulatory authorisations.

5 Biodiversity

The Agency has previously requested full details regarding how any loss of biodiversity, resulting from the proposed development, will be compensated through mitigation and enhancement, which must result in a net gain in biodiversity. It is noted the Examining Authority has raised this issue with the applicant in its first written questions (Ref: BIO.1.19). Accordingly, the Agency awaits further details from the applicant.

6 Environment Agency Land Interests

The Agency's Relevant Representation (RR – 013) advised in respect of the Agency's land interests in the vicinity of the proposed route.

Discussions are ongoing in respect of how each of the parcels of land, where the Agency is in occupation, or has an interest, will potentially be affected by the proposal. The Environment Agency will need to ensure suitable arrangements are in place, to enable it to continue to work operationally from the areas of land in question.

It is deemed essential to ensure that, if the proposal would affect any of the Agency's land interests, it does not put the Agency in breach of any of its obligations, under agreements associated with any land affected.

There is currently a degree of uncertainty regarding the applicant's intentions in respect of land identified by the Agency as pertinent to its interests. Therefore, until such time as the applicant's intentions and any potential operational and legal implications have been established, the Agency is unable to provide a definitive response in respect of this matter (please see Protective Provisions hereunder).

7 Protective Provisions

The Applicant does not seek to disapply any legislation which relates to the Agency's consenting regimes and therefore it is unlikely the Agency will require provisions in the form currently detailed in the draft DCO, setting out a separate consenting regime. However, as mentioned above, the proposed development potentially affects Agency land interests and therefore, it may require protective provisions in relation to those interests.

As stated above, there is currently uncertainty regarding the extent of any adverse impact on Agency land interests. For information, the Agency has not been able to fully investigate this matter, as a result of restricted access to its offices, due to the Covid situation. The Agency expects to be in a position to assess this matter shortly and therefore, discuss the issue with the applicant. Accordingly, the Agency will update the Examining Authority in respect of this issue at an appropriate point in due course.

8 Statement of Common Ground (SoCG)

The Agency must advise that it does not consider the format or content of the SoCG to be appropriate. Where possible, a SoCG should provide a concise, focused, easy reference document, clearly identifying all relevant issues, where agreement has been attained or otherwise. Unfortunately, the submitted document provides a duplication of lengthy extracts of text from previous correspondence, rather than a more conventional summary of issues. As advised, the comments detailed were sourced from various correspondence and were, to a degree, taken out of their original context.

Accordingly, the document is not considered appropriate to address the issues detailed in the Agency's Relevant Representations.

Should you wish to discuss any specific issues detailed above please contact the undersigned.

Yours faithfully

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