

THE PORTISHEAD BRANCH LINE (METROWEST PHASE 1) ORDER 202X
NOTE REGARDING SURFACE WATER DRAINAGE AND FLOOD MODELLING

6 DECEMBER 2019

1. Introduction

1.1 This note provides clarification on two issues raised by the Planning Inspectorate regarding the application for the above Order.

1.2 On 5 December 2019 two questions were communicated to this firm. In summary these were:

a. The main body of the Environmental Statement (ES) refers to the relevant climate change allowance being a 40% uplift applied by reference to the drainage parameters. Some of the Flood Risk Assessment (FRA) appendices and some parts of the ES refer instead to a 30% uplift factor. Which is the correct figure and which has been applied?

b. What conversations have taken place with the Environment Agency (EA) and is EA content with how climate change has been allowed for by the Applicant?

1.3 The Applicant has reviewed the relevant chapters of its ES and its supporting documents and can provide the responses below.

2. The percentages applied to the modelling to allow for climate change

2.1 The Applicant has principally followed the approach described in ES Volume 4 – Appendix 17.1 – Flood Risk Assessment (Part 1 of 17) (DCO Document Reference 6.25) for Portishead and Pill stations car parks and associated new highways, haul roads and construction compounds. This states (at page 8-7):

Table 8.3: Drainage design criteria

| Design return period (years) | Exceedance flows return period (years) | Climate change allowance (uplift to rainfall) |
|-------------------------------------|---|--|
| Permanent development sites | 30 100 | 40% |
| Temporary development sites | 30 100 | 10% |

2.2 This is reflected in ES Chapter 4 – Description of the Proposed Works (DCO Document Reference 6.7). Chapter 4 states, at paragraph 4.3.16:

- In the context of permanent drainage for the Portishead and Pill stations, reference to climate change allowance of 40%. [*This bullet point however should read "In the context of permanent drainage for the Portishead and Pill station car parks and associated new highways, haul roads and construction compounds reference to climate change allowance of 40%". (See paragraph 2.8 below for an explanation)*]
- In the context of temporary drainage for the construction sites, reference to climate change allowance of 10%.

2.3 All works designed by CH2M, comprising highway works, car parks and permanent compounds have been designed to make a 40% allowance for climate change.

2.4 Portishead and Pill stations; buildings and platforms were designed - to GRIP 3 stage - by Network Rail's consultants, Arup. For GRIP 3 Arup used a 30% uplift to allow for climate change (see ES Volume 4 – Appendix 17.1 – Flood Risk Assessment (Part 1 of 17) paragraph 8.3.3 (DCO Document Reference 6.25)).

2.5 GRIP 3 is not detailed design for implementation. The detailed design will take place at Network Rail's GRIP 5 stage, which will commence in January 2021.

2.6 Detailed design of drainage for the new stations at Portishead and Pill will be resolved at GRIP 5 stage.

2.7 Requirement 11 of the draft DCO (DCO Document Reference 3.1) states:

Surface and foul water drainage

11.—(1) A stage of the authorised development must not commence until written details of the surface and (if any) foul water drainage system (including means of pollution control) have, after consultation with the lead local flood authority and the Environment Agency, been submitted to and approved by the relevant planning authority.

(2) The approved drainage systems for the relevant stage must be constructed in accordance with the approved details unless agreed otherwise in writing by the relevant planning authority.

(3) This requirement does not apply to currently operational railway land.

2.8 It is accepted that the report "The Surface Water Drainage Strategy for Portishead and Pill Stations, Haul Roads and Compounds " would be better titled: "The Surface Water Drainage Strategy for Portishead and Pill Station Car Parks, Haul Roads and Compounds" . It is clear from the report itself, in section 1.2, that the strategy deals with car parks and highways, but not the actual stations. (The report is included in the Application as DCO Document Reference 6.26 (and is also appended to the Applicant's Flood Risk Assessment)).

2.9 In summary:

(a) a 40% figure has been applied consistently by CH2M for station car parks and associated new highways, haul roads and construction compounds.;

(b) Arup's earlier GRIP 3 design uses a 30% allowance for Portishead and Pill station buildings and platforms. The Applicant is content to formally acknowledge that the engineers dealing with detailed design at GRIP 5 will need to consider a design capacity, reflecting, if appropriate, an allowance of 40% for climate change.

2.10 Requirement 11 of the draft DCO means that sufficient control over the design of new stations is imposed in relation to future approval of surface water drainage design.

2.11 The Applicant's principal consultant team have also given initial thought to whether it is likely the additional percentage specification at GRIP 5 stage might:

(a) lead to either the need for additional land outside of the existing Order land;

(b) lead to additional material works being required; and/or

(c) give rise to significant environmental effects beyond those contemplated in the Applicant's ES.

2.10 The conclusions were that no additional land or material new works are required. No additional significant environmental effects are contemplated.

3. What conversations have taken place with Environment Agency (EA) and is EA content with how the uplift for climate change has been applied by the Applicant?

3.1 The EA has seen several iterations of the emerging Flood Risk Assessment. EA has provided comments. Several meetings with EA have taken place. Arrangements are being made for a meeting in January 2020.

3.2 In a letter dated 24 April 2019, EA stated that a detailed assessment of the submitted modelling data had been undertaken and that EA was now satisfied that the models are fit for the purpose of assessing the flood risk (see Consultation Report, page 13-526, comment EA1.14P (DCO Document Reference 5.1)). The Consultation Report response confirming that the EA are satisfied with the modelling is taken from the 24 April 2019 letter referred to above.

3.3 The Applicant anticipates a Statement of Common Ground being progressed with EA prior to examination and also expects an issue specific hearing on water-related issues. The Applicant will continue to work with EA on water related issues.

3.4 For the purposes of Acceptance however, the Applicant believes it has engaged sufficiently with EA and has reacted to previous comments from EA.

4. Conclusions

The Applicant is of the view that sufficient clarification is contained in this note to assist the Planning Inspectorate with its decision on acceptance. The Applicant is content that:

(a) appropriate allowance for climate change has been made in CH2M's designs;

(b) where GRIP 3 designs are being relied on at application and in examination, GRIP 5 designs will remedy any need to adjust detailed design to allow for a greater percentage attributable to climate change. Requirement 11 provides control for this;

(c) no additional land or works will be required and no additional significant environmental effects are anticipated at GRIP5; and

(d) whilst engagement with EA continues, EA has acknowledged that modelling applied is fit for purpose in relation to flood risk.

Womble Bond Dickinson

6 December 2019