

Llywodraeth Cymru  
Parc Cathays  
Caerdydd  
CF10 3NQ

10/05/2021

Annwyl / Dear G N Jones,

**The Chester to Bangor Trunk Road (A55) (Junctions 16 and 16a Improvement, Realignment and Slip Roads) Order 202**

Thank you for referring the above proposal which we received on 23/03/2021. NRW has reviewed the information provided in the 'A55 Junctions 16 and 16a Improvements Environmental Statement March 2021.

NRW have concerns with regards to the conclusions of the Environmental Statement (ES) document and advise that the document is updated to take into account the comments below:

**Description of the Scheme**

Chapter 2 – Description of the Scheme

1. It is stated in section 2.9.3 that the compound will be “located on the south side of the A55 and to the west of the existing Junction 16A, would be taken form the duration of construction and fully restored on completion to the original greenfield condition for agricultural use.”
2. We also note section 2.9 and further details are required with regards to the compound as follows:
  - What are the intentions for foul waste during the construction phase?
  - Access and egress plans for the compound(s)?
  - Will the compound be constructed on hard standing/stone to prevent run off?
  - How will the site draw water for utilities? Bore hole, standpipe mains etc.
  - Will the compound be connected to mains electricity or generator?
3. A site-specific drainage plan will be required for the compound area to detail the above and to ensure no runoff from the compound.

4. We note that there is reference to the Construction Environmental Management Plan (CEMP) in section 2.10.5 – 2.10.6. We welcome works being completed under a CEMP and note Chapter 20 and appendix 2.2 Pre-CEMP.

## Geology and Soils

### Chapter 6 – Geology and Soils Appendices 6.1 – 6.3

5. We are broadly satisfied with the conclusions and recommendations within the chapter; however, we have the following comments.
6. Section 6.2.8 refers to The Contaminated Land (England) Regulations 2006, and the DEFRA Contaminated Land Statutory Guidance, these should be The Contaminated Land (Wales) Regulations 2006 and Welsh Government Contaminated Land Statutory Guidance 2021.
7. Section 6.3.1-6.3.2 refers to CLR11 this has now been replaced by Land Contamination: Risk Management'
8. A number of minor EQS exceedances for leachate and groundwater samples were identified in section 6.8.65 to 6.8.77. Whilst the potential construction and operational effects have been considered, these exceedances have not been assessed further in terms of potential risks to controlled waters (i.e. as the site currently sits). Generally, we would expect that where exceedances have been identified there should be progression to the next tier of assessment within the Remedial Targets Methodology ('Remedial Targets Methodology: Hydrogeological Risk Assessment for Land Contamination' Environment Agency, 2006  
<https://www.gov.uk/government/publications/remedial-targets-worksheet-v22a-user-manual>
9. Furthermore, there is no qualitative assessment/statement as to whether these exceedances are posing a risk to controlled waters.
10. The contaminated land risk assessment for the Scheme has been provided in Technical Appendix 6.3. this only considered the risk in the construction and operational phase and does not assess the historical contamination.
11. A refuse tip, gasworks and tar storage were previously present on site and whilst some remediation may have occurred there is insufficient information to demonstrate that residual contamination is not present, if present residual contamination could be impacting controlled waters. In accordance with Planning Policy Wales V11 6.9.17 *"the onus will remain with the developer to ensure that the development of the site will remove any unacceptable risks and the planning authority in making development management decisions will need to ensure that the land is suitable for its proposed use and would not meet the legal definition of contaminated land under Part IIA."*

## Road Drainage and Water Environment

### Chapter 7 – Road Drainage and Water Environment

Figures 7.1 – 7.7

Appendices 7.1 – 7.5

- *Flood Risk*

12. We note the chapter considers the potential impacts of the scheme for both the construction and operational phases.
13. The removal of the existing Junction 16 roundabout and construction of a replacement junction with westbound on and off slip roads only. A new link road would be constructed running roughly parallel with the A55 to the south. A new junction would be constructed further east at Junction 16A Dwygyfylchi with a new overbridge and graded separated junction with slip roads in both directions. The site boundary lies partially within Zone C2, according to the Development Advice Map (DAM) referred to under Technical Advice Note (TAN) 15 Development and Flood Risk (July 2004).
14. We have reviewed the content of the FCA (Appendix 7.2) and supporting Afon Gyrach We have reviewed the submitted Flood Consequence Assessment in Appendix 7.2 of the ES (Vol. 3C App Chapters 7-18) dated March 2021. The FCA is dated 09/06/2020 (fourth issue) and we would advise that reference to flood zones 3, 2 and 1 in our mapping system has changed since this time. We published updated flood risk maps showing current day flood risks last October with the Flood Risk Assessment Wales maps. As such Section 3 may need to be updated although the modelling work would seem acceptable to show that the flood risk associated with the new crossing of the Afon Gyrach (designated as a main river) is manageable.
15. The watercourse has been hydraulically modelled (Appendix 7.5 – Afon Gyrach Flood Modelling Report) and it is noted that the proposed structure to cross the river Gyrach does increase water level upstream by 0.13m on the extreme or 0.1% event. This increase (afflux) in levels extend a maximum of 28m upstream of the crossing and would usually result in concerns being raised by NRW. However, it is noted and understood that the current use of this land is pasture and would become land purchased and retained by Welsh Government. Should this be the case then this increase would be acceptable.
16. However, the modelling has been based on an assumption that the new structure should have an opening size (shape, width and height) as the existing A55 arch structure. This would be acceptable although the modelling report does advise (para. 7.3.4) “... *The impact of the structure on flow velocities and scour should be examined in greater detail at the detailed design stage and can be based on the results of the HEC-RAS model as part of a robust approach...*”. Therefore, the dimensions used in the model may need to be increased. We are aware, from historic discussions and remedial works that the downstream railway crossing is liable to scouring of the bed.

The increase shown in the hydraulic modelling on velocities therefore needs to be addressed so that the scheme will not accelerate erosion downstream.

17. The sizing, design (particularly retaining the natural bed, and not using a culvert) and placement of the new bridge structure will be key to ensuring a continued and stable sediment regime through the reach. Incorrect sizing, design, location and installation could result in excessive scour, deposition (and therefore increased maintenance) within the new and existing A55 structures, increased flood risk and a deterioration of habitats for species present. Please note that any structure that is modelled to show a afflux upstream during high flow events (such as this) is likely to increase velocities and scour within the structure itself. As such we would recommend that a Geomorphologist is employed in the design of the final scheme to ensure these factors are duly considered and addressed.
18. We appreciate that the existing A55 crossing has a natural bed and would request that this should also be the proposal for the new crossing (rather than a culvert). If it can be agreed that a clear span bridge is the preferred method of crossing, then the proposal may not require a separate Flood Risk Activity Permit (FRAP) from NRW under Environmental Permitting Regulations 2016.
19. Access to allow for future maintenance with heavy plant is to be provided (para 3.1.7) between the existing A55 crossing and the proposed crossing.
20. As such we are generally satisfied with the proposal but would suggest that the actual crossing design is fully understood at the Order stage to determine the need for a possible FRAP application.
21. The flood modelling is heavily influenced by the initial flood estimates used in any hydraulic modelling. If the hydrology used to obtain the flood estimates are incorrect then the model results will also be incorrect and may not give an accurate reflection of the flood risk associated with the proposal. We therefore offer the following comments which need to be addressed as part of an updated FCA (and agreed with NRW) prior to the Order being made.
22. With regards to Appendix 7.4 (Hydrological Calculations Record). The peak flow for the 1% Annual exceedance probability event appears reasonable, however, there are some points that need clarifying in the report for future reference and the response to them may change the final estimates slightly. The points which need addressing are as follows:
  - Software used. The latest version has not been used. We would expect the record to be updated to use the version released September 2020. We are unable to find in the report which version of ReFH2 has been used for this work. The report needs to confirm which version was used. ReFH 2.2 or 2.3 should be used with the FEH2013 rainfall model. The NRW guidance note GN008 (2017) states that we may not accept ReFH1 or ReFH2.1 estimates that use the FEH1999 model.
  - Statistical. Urbanisation - the Environment Agency Flood Estimation Guidelines (June 2020) recommend that urbanisation adjustment of QMED is applied in all

cases for consistency in WINFAP4. Section 4 should demonstrate that urban adjustment has been addressed adequately. It is accepted that this will only have limited changes in values.

- Revitalised Flood Hydrograph (ReFH). It is unclear if rural or urban results have been used in ReFH2 methodology. Table 5.2 appears to imply that rural have been used. The rural estimate is for information only and is as though the catchment is 100% rural. The urban results should always be used as that will include any urbanisation in the catchment, the differences are likely to be minimal in this case, but the calculation record should be updated, and revised estimates used in the modelling if necessary. A storm duration of 6.15 hours has been used. Further clarification as to how this duration was derived is required. Using ReFH2.3 may give a different duration and hydrograph used in the hydraulic model.

23. We would therefore suggest that the Flood Consequence Assessment (Appendix 7.2) and the Hydrological Calculations Record (Appendix 7.4) along with the Afon Gyrach Flood Modelling Report (Appendix 7.5) be revisited and the above comments be considered for any updates to ensure that all parties fully understand the flood risk associated with the proposal.

*- Drainage*

24. With regards to section 7.4.5. we require clarification on which WFD classifications were used here. Please note this paragraph taken from 'WFD Cycle 2 Interim Classifications FAQs English' from the Water Watch Wales website when referring to the 2018 interim WFD classification:

"How robust was the quality assurance of the estuarine and coastal classification compared to previous years?"

Due to limited resources it was not possible to carry out a full quality assurance of the estuarine and coastal classification as undertaken in previous years. Where there is a change in status, the interim classification result must be used alongside the 2015 classification to provide context. Any decisions based on the interim classification will need to be carefully considered and will need to be informed by any investigations into the status change."

25. We advise that the Conwy Transitional waterbody be screened in as well. With regards to section 7.10.4. It is stated that the conclusion of the WFD Assessment is 'no deterioration' to the designated waterbodies. However, the waterbodies have not been adequately assessed. We therefore advise that this section be updated once the assessment is complete.

26. With regards to section 7.4.10 – 7.4.12 and 7.6.4 we note that it states that run-off from the Scheme would be discharged into Conwy Bay via existing outfalls to sea and via discharges to the Afon Gyrach and an unnamed watercourse which is culverted under the A55 approximately 425m west of the Penmaen-bach Tunnels and we concur with the potential for impacts.

27. We note section 7.7 and that a detailed scheme design with regards to drainage will take place, we therefore, advise that a specific drainage plan is required for the scheme. The drainage plans should detail all drainage both construction and operational. With regards to surface water the location and management of attenuation pools from road run off and detail any installation of mitigation measures such as interceptors. Any culverts installed as part of the scheme must be oversized to allow fish passage, gravel movement, and to prevent a drop in Water Framework Directive classification.
28. It should be noted that within this section there is reference to creating attenuation pools, and drainage in line with SuDS, however, there is also reference as stated above to direct discharges of surface water to the sea. We would require betterment with regards to the implementation of mitigation measures and these could be detailed within the site-specific drainage plan.
29. With regards to ES Volume 3: Appendices 7-18 – 7.1. WFD Assessment. We note that the Cycle 2 classifications have been used and advise that this should be made clear in the ES (vol. 1 Chapters), please see comments above (point 20).
30. With regards to Section 4.1.1 we agree that a WFD Compliance Assessment is required.
31. We note Table 4.1.a. We advise that the Conwy Transitional waterbody should also be screened in.
32. We note Table 4.2.b. and advise that it is unclear which waterbodies were scoped in this table. As only one waterbody was screened in, it can be assumed that this is the waterbody being scoped, but it should be stated for clarity which waterbody is being scoped. We advise that Conwy Transitional waterbody should be screened in and may also need to be scoped.
33. In addition, we advise that the Water Quality Phytoplankton status is recorded by NRW for both the Cycle 2 (2015) and Cycle 2 Interim (2018) classifications. Please see data on Water Watch Wales. In the Cycle 2 classification Conwy Coastal WFD waterbody had a phytoplankton classification of Good, whilst Menai Straight Coastal WFD waterbody was not classified. In the 2018 interim classification Conwy Bay was classified as Good for phytoplankton with a confidence of Quite Certain and Menai Straight classified as High with a confidence of Very Certain. As neither waterbodies have a phytoplankton status of moderate, poor or bad, therefore according to the directive an impact assessment is not required. We have no further comments on the water quality section of the scoping table and agree with the scoping decisions.
34. With regards to section 4.7. Mitigation Measures. We advise that the statement “the Scheme is unable to have an impact on formal mitigation measures for the Conwy Bay waterbody as there are none currently in place” is inaccurate. Under the WFD, mitigations measures for heavily modified water bodies (HMWBs) that are ‘not in place’ and have not been identified as technically feasible or disproportionately costly should be considered active, and impacts caused by the proposed project must be

assessed. Please refer to section 4.4 of the OGN72, this can be made available upon request from NRW.

35. Appendix 7.6 was not present in the document 'Volume 3C Appendices Chapters 7-18'. We request to see a copy of this appendix.

## **Nature Conservation**

### Chapter 8 – Nature Conservation

Figures 8.1 – 8.14

Appendices 8.1 – 8.5

36. We are broadly satisfied with the conclusions and recommendations within the chapter; however, we have the following comments:

- *Great Crested Newts (GCN)*

37. With regards to section 8.4.8 and 8.5.39 – 8.5.41 we concur with the assessment and conclusions in respect of GCN.

- *Bats*

38. With regards to section 8.4.9 – 8.4.17 and section 8.5.42 – 8.5.62 we are generally satisfied with the assessment and conclusion in respect of bats.

39. With regards to section 8.7.55 – 8.7.62 we are generally satisfied with the assessment and conclusion in respect of bats.

40. With regards to section 8.7.123 – 8.7.131 we are generally satisfied with the assessment and conclusion in respect of bats.

41. We concur in principle with regards to what is recommended in respect of bats in section 8.8.47 – 8.8.57.

42. With regards to section 8.9.4 we are generally satisfied to the proposed bat monitoring.

- *Otter*

43. With regards to section 8.4.19 – 8.4.20, 8.4.52 and 8.5.63 – 8.5.67 we concur in general with the assessment and conclusions in respect of otters. Regarding section 8.7.64 we advise against channelisation of bankside and more natural means with regards to otter through routes should be considered.

44. With regards to section 8.7.63 – 8.7.66 we concur with the conclusions of the assessment.

45. With regards to section 8.7.132 – 8.7.144 we are broadly in agreement, however, see below points raised.

46. With regards to section 8.7.138 and, we note that the existing road scheme and proposed scheme would have light spill on the Afon Gyrach. We would advise dark zones for the Afon Gyrach and there is an opportunity for betterment in lighting at this location.

47. With regards to section 8.8.58 – 8.8.68 we are broadly in agreement.

48. With regards to section 8.9.4 we are generally satisfied to the proposed otter monitoring.

- *Water Vole*

49. With regards to section 8.4.21 – 8.4.23 and 8.5.68 – 8.5.70 we concur with the assessment and conclusions in respect of water vole.

- *Dormice*

50. With regards to section 8.4.26 and 8.5.75 – 8.5.78 we concur with the assessment and conclusions in respect of dormice.

- *Invasive Non-native Species*

51. We note and concur with section 8.5.118 – 8.5.119 in respect to Invasive non-native species.

- *Designated Sites*

52. We are in agreement that impact on Liverpool Bay SPA and Menai Strait and Conwy Bay SAC needs to be assessed taking account of the requirements and conservation objectives of the features especially the mobile species both inside and outside of the designated site boundary.

53. We are broadly in agreement with section 8.8.16 – 8.8.30.

- *Primary, Secondary and Tertiary Mitigation*

54. With regards to sections 8.8.9 and 8.8.12, we do not recognise SuDS as a recognised form of ecological mitigation/enhancement, we require that the ecological enhancement element is kept separate. We appreciate the ecological benefit, however, during a pollution incident that benefit is at risk.

55. We note and concur with what has been outlined in section 8.8.11 – 8.8.15.

- *Monitoring and Aftercare*

56. With regards to section 8.9 we concur with what has been outlined in respect of monitoring and aftercare.

## **Landscape**

Chapter 9 – Landscape

Figures 9.1 – 9.12

Appendices 9.1 – 9.5

57. Due to the distance of the proposed A55 junction improvements from Snowdonia National Park, our planning interest relates to the development's potential visual impact upon the designated landscape's setting.

58. We welcome the Environmental Design Principles (Mitigation and Enhancement) set out in 2.6 Design strategy for the project, ES Chapter 2 The Scheme:

- Minimise light spill from highway lighting to avoid or reduce the impact on 'Dark Skies' within the Snowdonia National Park
- Protect the quality of views where this is physically achievable and minimise or mitigate any adverse impacts
- Protect landscape/scenic quality for residents and visitors to Llanfairfechan and for viewers at elevated locations within Snowdonia National Park

59. We consider the setting out of the landscape and visual context to be thorough.

60. We concur with ES Chapter 9 Landscape and visual effects, section 9.10.6 of the Summary and Conclusions: "The overall effects of the Scheme would result in the further urbanisation of the existing road corridor with additional man-made features such as the overbridge, retaining walls, lighting, gantries and signage further detracting from the existing view along the road corridor. The landscape and visual impact of the Scheme on the wider area would not be significant. The highly scenic qualities of the surrounding area and Snowdonia National Park would remain intact and there would be no significant change to the wider landscape character or perceptual qualities such as the tranquillity of the surrounding area."

61. At the local level, the ability of the scheme to achieve the best it can for townscape character and landscape integration is heavily dependent on the materials, finishes, details and colour of many of the road structures, retaining walls and the overbridge.

## **Air Quality**

Chapter 12 – Air Quality

Figures 12.1 – 12.3

Appendices 12.1 and 12.5

62. We note section 12.8.19 – 12.8.25 and concur with the assessment and note the approach taken. We note that Sychnant Pass SSSI is approx. 144m from the J16 road scheme.

63. With regards to section 12.16.1 – 12.16.9 we note that in terms of dusts, we advise that providing the dust control measures are in place that would prevent dust depositions at levels that would be considered nuisance dust deposition at residential locations (i.e. 200mg/m<sup>2</sup>/day) at the boundary of the works, then that should be sufficient to protect features of the Sychnant Pass SSSI. We do note, however, that the assessment summary Table 12.10 indicates that as the SSSI is further than 100m away the risks are considered to be low. Therefore, as indicated above any control measures would be beneficial.

64. With regards to section 12.17.6 – 12.17.7 and with regard to Tables 12-15 and 12-16, we note that it is indicated that the traffic emissions are going to be very low even with the Do Something scenario. Table 12-16 indicates that the NO<sub>x</sub> PC will be 0.6%, N-deposition will be 0.1% and acid to be 0.1%. We note that all the predicted scheme contributions appear to be not significant.

65. We note and concur with conclusions outlined in section 12.22.

## **Management of Environmental Effects**

### Chapter 20 - Management of Environmental Effects

66. We are in general agreement with what has been outlined in Chapter 20. We note appendix 2.2 and concur that the CEMP should be developed in consultation with NRW.

## **Cumulative effects and inter-relationships**

67. We do not have any comments to make with regards to cumulative effects. We consider that the local authority is best placed to advise on a list of relevant projects.

68. We welcome the inclusion of the inter-relationships between topics.

Please do not hesitate to contact us if you require further information or clarification on any of the above.

Our comments above only relate specifically to matters that are listed in our 'Consultation Topics' document (September 2018) which is published on our website:

(<https://cdn.naturalresources.wales/media/686847/dpas-consultation-topics-august-2018-eng.pdf?mode=pad&rnd=13181925684000000>). We have not considered potential effects on other matters and do not rule out the potential for the proposed development to affect other interests.

The applicant should be advised that, in addition to planning permission, it is their responsibility to ensure that they secure all other permits/consents relevant to their development.

Yn gywir / Yours sincerely,

**Siôn M. Williams**

Cynghorydd - Cynllunio Datblygu / Advisor - Development Planning

Cyfoeth Naturiol Cymru / Natural Resources Wales