

Adran yr Economi a'r Seilwaith
Department for Economy and Infrastructure



Llywodraeth Cymru
Welsh Government

This document is an update to the ‘Proof of Evidence – Chief Witness’ document WG 1.1.1. It contains an update following the addition of the bridge protection measures in the DRAFT AMENDMENT (NO.2) SCHEME ORDER and a general update on the works to address the allegation of serious detriment upon Newport Docks by Associated British Ports (ABP).

Scheme Evidence Update

Peter Ireland MA (Oxon), D. Phil

Welsh Government, Environment - General

Document Reference: WG 1.7.5

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1. AUTHOR

- 1.1 I am Peter Ireland. I am a Senior Director of RPS in the Planning and Development Division of RPS Group plc. My professional qualifications are set out in my main Proof of Evidence (WG 1.7.1) and are not repeated here.
- 1.2 I confirm that the opinions expressed are my true and professional opinions.

2. SCOPE AND PURPOSE OF THIS SCHEME EVIDENCE UPDATE

- 2.1 This Scheme Evidence Update provides evidence on environmental matters, other than contamination, for the Welsh Government's Scheme as modified by the April, May and August 2017 draft Orders Supplement to include proposals for bridge protection measures at the Junction Cut and the accommodation works to address the impact on Newport Docks.
- 2.2 This Scheme Evidence Update summarises the information set out in the April 2017 Environmental Statement Supplement (ESS) together with further evidence in respect of the Newport Docks included in the August 2017 ESS and the October 2017 ESS. It does not supersede my previous Proof of Evidence (WG 1.7.1).
- 2.3 Aspects of my evidence update interface with or refer to the evidence of other witnesses including:
- a) Mr Matthew Jones (Chief Witness)
 - b) Mr Ben Sibert (Engineering)
 - c) Mr Barry Woodman (Construction)
 - d) Mr Jonathan Vine (Shipping)
 - e) Mr John Davies (Sustainable Development)
 - f) Bryan Whittaker (Traffic)
- 2.4 My updated evidence is presented in the following structure, with a detailed contents provided at the start of the document.
- 1. Author
 - 2. Scope and Purpose of this Scheme Evidence Update
 - 3. Scheme Evidence Update

3. SCHEME EVIDENCE UPDATE

3.1. Works within Newport Docks

- 3.1.1. The Welsh Government published a supplement to the draft Orders in April 2017 to include bridge protection measures as part of the proposed Scheme. The supplement to the draft Orders was accompanied by a supplement to the Environmental Statement, the April 2017 ESS.
- 3.1.2. Further works are now proposed to address the impact on Newport Docks. These include additional quayside works within South Dock and the relocation of ABP's assets and those tenants within Newport Docks that would be directly affected by the published scheme. Those further works are set out in the evidence update of Mr Matthew Jones (WG 1.1.7) and described and assessed in the August 2017 ESS.
- 3.1.3. The key elements of the works covered by the August 2017 ESS that are required to make up the impact of the proposed Scheme to Newport Docks are as follows:
- a) The phased creation of approximately 303m of new quay on the north side of South Dock;
 - b) Refurbishment of 250m of quay on the south side of South Dock (at the eastern end of the Coal Terminal);
 - c) Provision of a moveable bridge to facilitate mobile harbour cranes, other port equipment and HGV's to cross the extended junction cut from west to east (and vice versa) of South Dock; and
 - d) Preparation of 3 parcels of land to facilitate the relocation of ABP, tenants and occupiers of the port that are affected temporarily and permanently by the scheme, including site preparation, new buildings, hardstandings and infrastructure.

- 3.1.4. The Welsh Government has also continued to work with ABP to develop a solution which reduces the level of residual risk of a ship impact to the River Usk Crossing, where it passes over the Junction Cut, to a level deemed acceptable by both parties. That updated design is described and assessed in the August 2017 ESS.
- 3.1.5. Further details of the proposals are provided in the Scheme Evidence Update of Mr Matthew Jones (WG 1.1.7).

3.2. April 2017 Environmental Statement Supplement

- 3.2.1. The April 2017 ESS (Document 2.6.1) was concerned solely with the bridge protection measures that were the subject of the April 2017 draft Compulsory Purchase Order Supplement (No. 3).
- 3.2.2. Sheets 5, 6 and 16 of Figure 2.4 of the March 2016 ES are the General Arrangement drawings that show the proposed scheme across Newport Docks. Those sheets were updated to include:
- a) 150m of new quay at the western end of the north side of South Dock (Sheet 5)
 - b) Build outs either end of the Junction Cut in the North Dock and South Dock to provide bridge protection measures for the Usk Crossing. The width of the Junction Cut was unchanged (Sheet 6 and 16)
 - c) A new retaining wall on the east side of the Docks Way Link Road to protect the building operated by LDH Plant (Sheet 16).
- 3.2.3. A more detailed general arrangement drawing of the proposed bridge protection measures together with four cross sections were provided as Appendix FS3.1. The Environmental Masterplans (EMPs) (Figure 2.6, March 2016 ES; Document 2.3.2) were also updated accordingly.

3.2.4. The environmental assessment topics that were scoped in for the assessment of the bridge protection measures were:

- a) Marine Ecology of Newport Docks
- b) Geology and Soils
- c) Materials

3.2.5. The following environmental assessment topics were scoped out:

- a) Cultural Heritage
- b) Landscape and Visual
- c) Air Quality
- d) All Travellers
- e) Community and Private Assets
- f) Road Drainage and the Water Environment

Marine Ecology

3.2.6. The conclusion of the assessment of effects on marine ecology was that no ecologically sensitive sites would be affected by the works and that the conclusions of the ecological assessments of the March 2016 ES and its three previous supplements (September 2016, December 2016 and March 2017) would not change significantly.

3.2.7. The main impact associated with the proposed River Usk Crossing bridge protection works would be the loss of approximately 1.16 hectares of subtidal benthic habitat within Alexandra Docks. Those habitats are not listed under any nature conservation legislation and the species likely to be associated with those habitats are common and widespread both locally and nationally. Due to the relatively small area of habitat affected and the local (negligible) value of this valued ecological receptor the impact was predicted to be of negligible magnitude and of neutral significance.

- 3.2.8. The potential impact of underwater noise on fish populations within the docks due to piling during construction was assessed. The ESS stated at paragraph 2.2.15 that *“the risk to all fish species (including migratory fish in the unlikely event that they occur in Alexandra Dock) from mortality and potential mortal injury as a result of underwater noise, even in close proximity to the source (i.e., tens of metres) is considered to be low. The most likely scenario is that during construction operations, fish present within Alexandra Dock will redistribute to other parts of the dock during periods of elevated noise levels. Following cessation of noise generating construction activities, fish behaviour will quickly return to baseline levels”*. Consequently, the assessment concluded that *“due to the short term, intermittent nature of construction related underwater noise, and the local (negligible) value of the fish VERs occurring within Newport Docks, the impact is predicted to be of minor magnitude and neutral to slight significance”* (paragraph 2.2.16).

Geology and Soils

- 3.2.9. The assessment of the effects on geology and soils assumed that no dredging or the associated disposal of potentially contaminated sediments would be required. As such *“the construction and operation of the proposed bridge protection measures would not significantly change the conclusions of the March 2016 ES and ES Supplements with respect to soils, geology and land contamination”* (paragraph 2.2.18).

Materials

- 3.2.10. The assessment of the effect of the use of materials concluded the same as for geology and soils for the same reasons.

Buildability

- 3.2.11. The Buildability Report (March 2016 ES Appendix 3.1) which was expanded upon in the December 2016 ESS (Appendix SR3.1) was supplemented (ESS5 paragraphs 2.2.22 to 2.2.34) to take account of the construction details shown in the cross sections referred to in paragraph 3.2.3 to this Scheme Evidence Update above.

Navigation Risk Assessment

- 3.2.12. The original Navigation Risk Assessment (December 2016 ESS, Appendix SR2.1) prepared by Global Maritime Consultancy (GMC) on behalf of Welsh Government was updated as a result of the additional bridge protection measures and reported as Appendix FSR2.1 in the April 2017 ESS. The main difference between the two documents was that GMC included the results of a geometric assessment which consisted of the modelling of potential ship impact scenarios with the proposed bridge over the Junction Cut within Newport Docks.
- 3.2.13. The geometric assessment concluded that there was potential for errant vessels to contact the bridge structure and support piers with either the vessels' superstructure or bow.

3.3. August 2017 Environmental Statement Supplement

Introduction

- 3.3.1. As outlined in Matt Jones' updated Scheme Evidence Update (WG 1.1.7) the Welsh Government has continued to work with ABP since the publication of the April 2017 ESS. Discussions have focused on two primary aspects. First, to develop a solution that reduces the level of residual risk of a ship impact to the River Usk Crossing, where it passes over the Junction Cut. Second, to understand better the potential impact the proposed Scheme may have on the water and land based operations that ABP and its tenants carry out at Newport Docks.

- 3.3.2. The loss of various buildings and open storage space operated by ABP and some of its commercial tenants within Newport Docks is a direct effect of the proposed Scheme and was described in the March 2016 ES (Document 2.3.2).
- 3.3.3. The creation of relocation infrastructure, including service roads, replacement buildings and hardstanding for storage elsewhere within Newport Docks is an indirect consequence of the construction of the proposed new section of motorway.
- 3.3.4. As set out at paragraph 2.1.6 of the August 2017 ESS (also referred to as ESS5; Document 2.8.6), the legal basis for the M4CaN ES is the Highways Act 1980 (as amended) (see March 2016 ES paragraphs 1.5.4 and 5.2.1). However, from the evidence of John Davies MBE (WG 1.23.6), I understand that planning permission to build the relocation infrastructure will be taken forward through consents from the Secretary of State for Transport via Private Acts of Parliament that established Newport Docks, together with use of ABP's and the Welsh Government's existing Permitted Development (PD) Rights afforded by Parts 11 and 13 of the Town and Country Planning (General Permitted Development) Order 1995. Consent to interfere with navigation rights will be taken forward through the Scheme Orders and the consents from the Secretary of State via Private Acts of Parliament.
- 3.3.5. The consenting strategy includes a separate EIA under the Town and Country Planning Act (Environmental Impact Assessment) (Wales) Regulations 2017 and the Marine Works (Environmental Impact Assessment) Regulations 2007 which will be undertaken and reported in a single ES in accordance with the requirements of those regulations. (To prepare a single ES I have assumed that the exception provided by Regulation 10 (b) of the Marine Works (Environmental Impact Assessment) Regulations 2007 would be acceptable to NRW's Marine Licensing team).

- 3.3.6. In addition to the published Statement to Inform Appropriate Assessment Addendum (Document 2.8.9) a separate Habitats Regulations Assessment under the Conservation of Habitats and Species Regulations 2017 will also be prepared in parallel with the EIA and be published at the same time as the ES. Those assessments are underway.
- 3.3.7. In addition, a section 106 agreement or unilateral undertaking would be required to ensure that mitigation is delivered to avoid impact on the integrity of the nearby Severn Estuary SPA and River Usk SAC.
- 3.3.8. The purpose of the ESS5 (Document 2.8.6) is to report the direct and indirect environmental effects of the works now proposed to address the impact of the proposed Scheme on Newport Docks, viz:
- a) Preparation of areas of land to facilitate the relocation of ABP, tenants and occupiers of the port that are affected temporarily and permanently by the scheme, including site preparation, new buildings, hardstandings and infrastructure.
 - b) The phased creation of approximately 303m of new quay on the north side of South Dock which now includes dredging (unlike the April/May 2017 proposals) to provide sufficient depth of berthing.
 - c) Refurbishment of 250m of quay on the south side of South Dock (at the eastern end of the Coal Terminal).
 - d) The narrowing and extending of the Junction Cut with revised entry parameters and protocols for the North Dock.
 - e) Provision of a moveable bridge to facilitate mobile harbour cranes, other port equipment and HGV's to cross the extended junction cut from west to east (and vice versa) of South Dock.

- 3.3.9. With regard to the port relocation plan (Figure ESS5 2.2b) the objective of ESS5 is to assess whether, should the port relocation plan proposals proceed, and should reasonable and non-controversial mitigation measures during construction, together with best construction practice, be implemented, the relocation works would have any significant adverse effect on the local environment, or the adjacent internationally and nationally designated sites (the River Usk SAC, the Severn Estuary SAC, SPA and Ramsar, and the River Usk (Lower Usk) SSSI).

Proposed Relocation Works

- 3.3.10. Section 2.2 of the August 2017 ES identifies and describes those premises within Newport Docks that are proposed to be relocated to one of three Land Parcel Areas, referred to as:
- a) Land Parcel A, located to the south of South Dock;
 - b) Land Parcel B, located between the Southern Distributor Road and the north quay of South Dock; and
 - c) Land Parcel C, located to the south east of South Dock.
- 3.3.11. In total, some twenty-eight buildings, structures and/or premises are proposed to be relocated, the majority to Land Parcel A, adjacent to the River Usk (Lower Usk) Site of Special Scientific Interest (SSSI).
- 3.3.12. The Port Relocation Plan (Figure ESS5 2.2) shows the proposed location of those buildings, structures and/or premises to be relocated.

- 3.3.13. Half of the buildings, structures and/or premises requiring relocation would be relocated to Land Parcel A to the south of South Dock in the vicinity of the existing Atlantic Shed and two wind turbines. Replacements would generally be on a like for like basis with the larger warehouses and hardstanding being located to the west of Atlantic Shed and the much smaller, single storey, porta cabin type buildings being located on smaller plots to the south of Atlantic Shed.
- 3.3.14. Within Land Parcel B, buildings in plots B3 to B6 would either be relocated within the same plot, or would be protected from the works to construct the proposed Docks Way Link Road by a new retaining wall(s).
- 3.3.15. The three buildings to be relocated to Land Parcel C are ABP's Central Workshops, Stores and Medical Centre. All would be replaced on a like for like basis.
- 3.3.16. The relocations of the remaining buildings, structures and/or premises are shown on the Port Relocation Plan (ESS Figure 2.2b).
- 3.3.17. Land Parcel A is also adjacent to the River Usk Special Area of Conservation (SAC) and is in close proximity to the Severn Estuary SAC and Special Protection Area (SPA). For those reasons, an Addendum to the M4CaN Statement to Inform an Appropriate Assessment has been prepared and was published at the same time as ESS5. I summarise that document later in this updated Scheme Evidence Update at section 3.4.
- 3.3.18. The phased construction of approximately 303m of new quay and the refurbishment of approximately 250m of existing quay would be funded or undertaken as accommodation works and are, therefore, not included in the draft Supplementary Orders.

3.3.19. ESS5 reports the environmental assessments undertaken by my colleagues as follows:

- a) Landscape and Visual Effects – Mr Nicholas Rowson
- b) Cultural Heritage – Mr Mick Rawlings
- c) Ecology and Nature Conservation – Ms Joanne Wilson
- d) Geology and Soils – Mr Andy Clifton
- e) Drainage and the Water Environment – Mr Richard Graham
- f) Air Quality – Dr Michael Bull
- g) Noise and Vibration – Mr Phil Evans
- h) Commercial Property – Mrs Julia Tindale

Landscape and Visual

3.3.20. The Landscape and Visual Effects assessment is reported in Section 2.5 of ESS5.

3.3.21. The proposed relocation works lie within Local Landscape Character Area (LCA) 3: Newport Docks and Uskmouth. The assessment concluded that during construction and operation of the relocation measures there would be no change to the essential characteristics of the Newport Docks and LCA, and that overall the LCA would experience a neutral significance of effect.

3.3.22. With regard to visual effects, two areas of visual receptors were identified: the first, at the eastern end of the Wentlooge Levels; the second in the area between the Ebbw River, Corporation Road and the East Usk GWR branch line.

3.3.23. The visual effect assessment concluded that, although the works would be perceptible there would be a negligible adverse impact during the construction and operation phases for the affected visual receptors.

3.3.24. The overall conclusion of the Landscape and Visual Effects assessment is that (ESS5 paragraph 2.5.57) *“the Scheme comprises elements of a scale, layout and massing that are wholly in keeping with the surrounding landscape area, both during the construction and operational phases. Although the scheme introduces new elements and removes some existing elements (such as spoil heaps and self-colonised vegetation) the essential components that define the overall character of the area would not noticeably change. It is concluded that the impacts would have a neutral significance of effect on landscape character.*

With regard to visual impacts the Scheme comprises elements of a scale, layout and massing that would be viewed in the context of numerous existing features of this type within the view available, both during the construction and operational phases. The changes to the visual amenity baseline would be barely noticeable. Visual receptors moving through the area would only have views of the Scheme for a limited part of their journey. Although receptors have a high sensitivity to change, it is concluded that the impacts would have only a slight adverse significance of effect on visual amenity due to slight or negligible magnitudes of impact. There would be a limited number of visual receptors who would experience these adverse effects” (paragraph 2.5.58).

Cultural Heritage

3.3.25. At the request of Cadw, in response to NRW's marine licence consultation undertaken in response to the publication of the April 2017 ESS (Document 2.6.1), the cultural heritage section of ESS5 considered new advice and guidance on the archaeology of the marine environment and seascape as well as the detail of Land Parcels A and C in particular.

- 3.3.26. The assessment of the proposed relocation works concluded that for construction “a *proportionate and suitable programme of archaeological investigation ahead of and/or during construction would need to be agreed and implemented within the context of preparing and consenting any application. If this happens then any effects resulting from impacts on buried archaeological remains are likely to be Slight or Neutral*” (paragraph 2.6.39).
- 3.3.27. “The construction and operation of the buildings and infrastructure required for the relocation of ABP tenants would not affect the significance of any designated historic asset. Some of the new buildings may be visible from the Grade II listed former West Usk Lighthouse which is located approximately 2 km to the south-west, but this change within the setting of the listed building would not affect its significance which is based much more on its location at the mouth of the River Usk” (paragraph 2.6.41).
- 3.3.28. “There would be no impact on the identified non-designated HLCA 111 Newport Docks, as the visual change here represents an extension into this area of structures similar to those seen elsewhere within the HLCA and the current land use does not make any real contribution to the significance of the HLCA. For the same reasons, the construction and operation of the buildings and infrastructure required for the relocation of ABP tenants would not affect the character of Marine Character Area 29: Severn Estuary”. (paragraph 2.6.42).

Ecology and Nature Conservation

- 3.3.29. ESS5 extends the ecological baseline for the proposed Scheme to include Land Parcels A and C by reference to the Thomson Ecology work undertaken on behalf of ABP for their wind turbine planning application in 2015, together with flora and fauna (species) surveys undertaken by the M4CaN project team in June and July 2017.

3.3.30. The flora and fauna surveys undertaken and completed by the end of July 2017 were:

- a) Phase 1 habitat survey
- b) National Vegetation Classification (NVC) survey
- c) Great Crested Newt survey

3.3.31. The fauna surveys started, but which were not able to be completed by the publication date for ESS5 (15th August, 2017) were in respect of:

- a) Badgers
- b) Invertebrates
- c) Reptiles
- d) Otters
- e) Breeding Birds
- f) Wintering Birds

3.3.32. The first four fauna surveys above are now complete and are reported in the October 2017 ESS. ESS5 provided a preliminary assessment (based on the information and 2017 survey data available at the time of its publication) of the likely significant effects of the proposed relocation works with respect to those protected species.

Habitats

3.3.33. Based on the port relocation plan in ESS5 (Figure ESS5 2.2b) the extent of additional habitat loss within Land Parcels A and C as a result of proposed Scheme is set out in Table 2.2 of ESS5. That table with some additional land cover data is reproduced below.

Habitat and/or Land Cover	Area of habitat within survey area (ha)	Area of habitat loss (ha)
Land Parcels A & C		
Ephemeral/short perennial vegetation	<u>16.35</u>	<u>8.00</u>
Tall ruderal	1.03	0.59
Grassland	0.78	0.74
Amenity grassland	0.73	0.09
Scrub (scattered)	<u>0.67</u>	<u>0.67</u>
Scrub (dense continuous)	<u>7.28</u>	<u>4.45</u>
Broadleaved woodland	0.33	0.23
Drainage ditch	0.13	0.05
Ephemeral pond	0.34	0.21
Reed bed	0.22	0.22
Saltmarsh	4.27	0
Intertidal mud/sand	0.67	0
Total	32.79	15.28
Bare ground	0.24	0.07
Hardstanding	7.2	2.66
Rubble mound (unvegetated)	2.52	0.96
Total	9.96	3.69

3.3.34. The greatest habitat losses would be those of ephemeral/ short perennial vegetation and scrub which together amount to some 24.3ha (74%) of the area to the south and south-east of South Dock, and some 13.1ha (86%) of the habitat lost due to the development of Land Parcels A and C. However, some 11.2ha of such vegetation will remain in the immediate vicinity of Land Parcels A and C, together with another 6.3ha of unvegetated rubble mounds, bare ground and existing hardstanding that, in time, would scrub over if left undisturbed.

3.3.35. The assessment concluded that the additional habitat loss due to land take within Newport Docks that would result from the relocation of businesses would not change the overall assessment with respect to brownfield habitats (paragraph 2.7.70), woodland (paragraph 2.7.74), waterbodies (paragraph 2.7.81), reed bed (paragraph 2.7.84), saltmarsh and intertidal mudflats (paragraph 2.7.87).

Invertebrates

- 3.3.36. The terrestrial invertebrate survey reported in the March 2016 ES, Appendix 10.31 demonstrated that Newport Docks represented a good diversity of invertebrates for such an open site and that the docks are an area of significant invertebrate conservation value. The survey showed that the saltmarsh beside the river Ebbw is of particular importance to invertebrates.
- 3.3.37. A further terrestrial invertebrate survey of Land Parcels A and C is reported in the October 2017 ESS (see Section 3.5 of this proof of evidence). The initial impact assessment in ESS5 reported as follows (paragraph 2.7.101).

“The March 2016 ES reported the magnitude of the impacts on the terrestrial invertebrate assemblage associated with brownfield land, taking into account the sympathetic restoration of the land at Great Pencarn, Newport Docks and Tata Steel, as Major Adverse and the significance of effects Moderate or Large in the medium term. In the long term as the habitats recovered the magnitude of impacts would be Moderate and the significance of effects as Moderate. These effects would be significant in EIA terms”.

Great Crested Newt

- 3.3.38. eDNA analysis of the water bodies in the vicinity of Land Parcels A and C was undertaken to determine the presence of great crested newts. No positive results for great crested newt eDNA were obtained. The report of the great crested newt survey and the eDNA analysis is included as ESS5 Appendix 2.5 (Document 2.8.6).
- 3.3.39. The March 2016 ES assessed the impacts of the M4CaN Scheme as a result of land take, construction and operation of the new section of motorway on great crested newt as not significant. The relocation of businesses to the south side of South Dock would not change that assessment.

Reptiles

- 3.3.40. The Phase 1 habitat survey of the Land Parcels A and C reported the presence of a mosaic of scrub, woodland edge, grassland, ruderals, ephemeral vegetation and bare ground, which provided a range of microhabitats suitable to reptiles. However, the isolated nature of the area, surrounded by the River Usk and the docks, and the recent levels of disturbance in the area, greatly reduced the potential value to reptiles. Taking this into account, as well as the results of previous reptile surveys of other parts of the docks (Appendix 10.27 to the March 2016 ES), it is expected that, if present, any reptile population is likely to be small.
- 3.3.41. No reptiles were observed during the Phase 1 habitat survey visit; however, a full seven-day survey was undertaken during summer 2017 and is reported in the October 2017 ESS (see Section 3.5 of this proof of evidence).

Otters

- 3.3.42. The first of four survey visits specifically for otters was undertaken in June 2017. The results of the first survey visit reported no signs that could indicate the presence of otters, including no signs of potential resting places or holts. The results of the full otter survey are reported in the October 2017 ESS and summarised in Section 3.5 below.

Breeding Birds

- 3.3.43. In the time available, a single visit has been made to Land Parcels A and C during the 2017 bird breeding season. That is reported as Appendix ESS5 2.6. Three species named in Schedule 1 of the Wildlife and Countryside Act (1981) were recorded: little ringed plover, green sandpiper and Cetti's warbler. A single record of each species was made. In addition, seven species of Principal Importance for Biodiversity, as defined under Section 7 of the Environment (Wales) Act 2016, were recorded: lapwing, herring gull, song thrush, dunnoek, bullfinch, linnet and reed bunting.
- 3.3.44. It should be noted that dunnoek was erroneously omitted from Table 2.4 of the main text of ESS5 (and Table 1 of ESS5 Appendix 2.5) that listed the legal and breeding status of those avian species recorded during the July 2017 ornithological survey. Dunnoek is confirmed as breeding.
- 3.3.45. The impact assessment noted that the mitigation plans developed as part of the wider M4CaN Scheme would provide alternative habitat for most of the breeding bird species, and specific mitigation for lapwing would be implemented at Maerdy Farm.
- 3.3.46. The additional number of bird breeding territories at the south of Newport Docks identified in previous surveys and in 2017 does not affect the evaluation of the species recorded, with the exception of the little ringed plover, which was not previously recorded in the breeding bird surveys for the M4CaN Scheme.
- 3.3.47. The assessment concluded (ESS5 paragraph 2.7.138; Document 2.8.6) that *"the assessment of effects for Cetti's warbler remains the same as previously assessed in the March 2016 ES. There would be significant adverse effects as a result of land take, construction (short term only) and operation. The effects on other bird species, including little ringed plover, would remain as not significant"*.

Wintering Birds

- 3.3.48. With regard to wintering birds the main impact of the development of Land Parcels A and C would be the loss of suitable winter habitat for roosting and foraging birds, and a greater level of anthropogenic disturbance than currently occurs in those and adjacent areas. Wintering birds are therefore likely to be displaced when the relocations are under construction and in place.
- 3.3.49. ESS5, at paragraph 2.7.135, concluded, on the basis of the information available, that the assessment of the effects of the proposed Scheme as a whole for wintering birds would remain as previously assessed in the March 2016 ES and the September 2016 ESS: *“The effects would be not significant, other than for the effects of construction on redshank for which there would be a significant effect in the short and medium terms.”*
- 3.3.50. A wintering bird survey is being undertaken as part of the Town and Country Planning Act EIA required to construct and operate the relocated businesses within Newport Docks.

Other Species

- 3.3.51. No buildings or trees suitable for bat roosts would be removed from Land Parcels A and C.

Geology and Soils, including Contaminated Land

- 3.3.52. The Geology and Soils section of ESS5 refers to an extensive desk study and preliminary risk assessment report that covers those parcels of land associated with ABP's operations and their tenant's relocation, which includes additional historical ground investigation and environmental data not previously included in the M4CaN ES (Appendix ESS5 2.7).
- 3.3.53. Land Parcel B is covered by Contaminated Land report CL-14 (see September 2016 ESS Appendix R11.1, Annex D).

- 3.3.54. Much of Land Parcel A to the south, and south-east, of South Dock is located on historic landfills referred to as South Dock Phase 1 and South Dock Phase 2 (ESS5 Figure 2.11; Document 2.8.6).
- 3.3.55. In addition to landfilling, the land parcels have been subject to a range of historic and current potentially contaminative uses related to the docks, including timber floats and timber storage yards, railway sidings, engine sheds, shipbuilding and engineering works, coal and petroleum storage.
- 3.3.56. Potential contaminants of concern associated with those former and current land uses include heavy metals, metalloids, sulphate, sulphides, cyanides, Polycyclic aromatic hydrocarbons (PAH), coat dust, weathered diesel, petrol and mineral oils, pesticides, preservatives and asbestos-containing materials.
- 3.3.57. There is therefore a risk, without mitigation, that such contaminated materials, particularly once disturbed during construction, could impact upon construction works, or migrate into ground and surface waters, including ultimately the River Usk. Whilst those risks are considered to be moderate to high without mitigation, with commonly used mitigation measures, procedures and protocols in place they would be reduced to levels acceptable to the regulatory authorities. Such mitigation measures would need to mirror those to be put in place for the main highway works for the proposed Scheme.
- 3.3.58. In addition to implementing mitigation measures during construction, the risk of mobilising contaminated materials would be reduced, to a degree, by the need to raise existing land levels within Land Parcels A and C above current and predicted future flood levels.

3.3.59. With appropriate mitigation measures in place, the assessment concludes (paragraphs 2.8.35 and 2.8.36) that the development of Land Parcels A, B and C to address the impacts on Newport Docks would lead to no likely significant effects during either the construction phase or the operational phase.

3.3.60. Andy Clifton gives detailed evidence in this regard (WG 1.11.5).

Drainage and the Water Environment

3.3.61. The assessment notes that there are no Water Framework Directive (WFD) groundwater bodies present beneath the land parcels.

3.3.62. No surface (WFD) waterbodies are directly affected by the relocation proposals.

3.3.63. The identified risks to the water environment are very similar to those identified above with respect to contaminated land. Such risks are considered to be moderate with regard to the water environment without mitigation, but with commonly-used mitigation measures, procedures and protocols in place they would be reduced to levels acceptable to the regulatory authorities. Such mitigation measures would need to mirror those to be put in place for the main highway works for the proposed Scheme.

3.3.64. The assessment concludes that with the implementation of the proposed mitigation measures there will be no significant effects.

3.3.65. With regard the Water Framework Directive, the results of this assessment have shown that when all the relevant mitigation measures are considered, the extent of the likely construction works required for the proposed relocations will have no adverse effects on WFD quality status of any of the water bodies assessed. However, due to the nature of the works, there is likely to be some small, temporary and localised impact on the water environment but which will not cause an overall deterioration in status.

Flood Risk

- 3.3.66. Welsh Government's Development Advice Map illustrates that parts of the proposed sites are included in both Flood Zone B (areas known to have flooded in the past) and Flood Zone C2 (areas of the floodplain without significant flood defence infrastructure).
- 3.3.67. Consequently, studies will be required as part of the consenting strategy for the relocation works to assess the potential flood risk associated with each plot of the proposed relocation works, particularly in relation to climate change, and to identify appropriate mitigation measures.
- 3.3.68. However, considering the type of development proposed, and the extent of flooding shown within the site, flood risk will be negligible during present-day conditions (see also proof of evidence of John Davies MBE for a planning consideration; paragraph 3.2.38, WG 1.23.6).
- 3.3.69. Preliminary analysis indicates that to accommodate climate change, slab levels will need to be raised as part of the building designs to either 9.52m AOD (flood-free during a 1 in 200 tidal flood), or 9.95m AOD (flood-free during a 1 in 1,000 tidal flood), depending on the use to which each building or storage area is designed.

Air Quality, Noise and Vibration

- 3.3.70. During construction, without mitigation, there is a high risk of dust effects on local ecological receptors, particularly during earthworks. Dust suppression mitigation measures can greatly reduce or eliminate those risks.
- 3.3.71. Potential air quality effects during the operational phase are anticipated to be negligible.
- 3.3.72. With regard to noise and vibration, the relocation works can be implemented with no, or very little, significant environmental consequence.

- 3.3.73. Good construction practice with regards to noise and vibration, and adherence to the mitigation as proposed within the CEMP (as far as is reasonably practicable), will ensure that no significant adverse effects will occur to neighbouring properties or users of the PRoW.
- 3.3.74. No significant change to noise emitted by the ABP facilities during their use would occur.

Bridge Protection Measures and Other Works in South Dock

- 3.3.75. The likely significant environmental effects of the bridge protection works at Junction Cut were assessed in the April 2017 ESS, which I have described in section 3.2 of this Scheme Evidence Update. Whilst the parameters for the bridge protection measures have changed following further technical discussions between Welsh Government and ABP, the assessment of the likely significant environmental effects remains the same.
- 3.3.76. The main elements requiring assessment are the effects on the marine ecology within South Dock, particularly effects on habitats and fish (including potential acoustic effects during construction).
- 3.3.77. Similarly, the potential environmental effects of creating 303m of new quay, and to a much lesser extent the refurbishment of 250m of existing quay, will be very similar to that for the bridge protection measures.
- 3.3.78. For both the bridge protection measures and the creation of a new quay, a marine licence will be required for construction activities within the marine environment. Further marine licences will be required in respect of the dredging requirements for the creation of the new length of quay and at the bridge protection measures, should dredging be required there. Welsh Government has been in pre-application discussions with the Marine Licencing Team (MLT) at NRW responsible for the issuing of all marine licences in Welsh waters. The August 2017 ESS is structured in part to accommodate the MLT's requirements, including responding to queries raised by

Cadw on MLT's consultation of the April 2017 ESS, and providing an updated Navigation Risk Assessment following ABP's response to the same consultation. I believe that the information provided to the MLT in both the April 2017 ESS and the August 2017 ESS is full and complete, apart from the results of sampling of material to be dredged from South Dock, and I therefore see no reason that the required marine licenses could not be granted by the MLT.

- 3.3.79. A further Navigation Risk Assessment has been prepared to account for the changed bridge protection measures proposed at Junction Cut, and to address ABP's concerns. The Navigation Risk Assessment is included as Appendix ESS5 3.1 in the August 2017 ESS (Document 2.8.6).

Summary and Conclusion of the August 2017 ES Supplement

- 3.3.80. The main environmental topics assessed in the August 2017 ESS were landscape and visual effects (LVIA; including seascape), cultural heritage, ecology and nature conservation, geology and soils (including land contamination) and the water environment.
- 3.3.81. The LVIA concluded that the impacts would have a neutral significance of effect on landscape character and seascape, and a slight adverse significance of effect on visual amenity.
- 3.3.82. With regard to cultural heritage, whilst there is some potential for impacts on buried archaeology as a result of the relocation proposals, the presence of historic landfilling, and the need for land raising, would limit any likely significance of effect to slight or neutral, provided construction was preceded by a proportionate and suitable programme of archaeological investigation.

- 3.3.83. A Phase 1 habitat survey and National Vegetation Classification survey of the relocation areas were completed in July 2017. The main habitat effect would be the loss of ephemeral, short perennial vegetation and scrub; however, significant areas of such habitat would remain within and between the relocation land parcels after development.
- 3.3.84. The 2017 ecological surveys reported in the August 2017 ESS concluded that the habitats and/or conditions present do not support dormouse, badger, great crested newt or water vole. No bat roosts have been recorded. In common with other undeveloped areas in Newport Docks, habitat is suitable for terrestrial invertebrates, the loss of which would be of moderate significance in EIA terms. Terrestrial invertebrate, otter and reptile surveys completed since the publication of ESS5 are reported in the October 2017 ESS (see Section 3.5).
- 3.3.85. The assessment of the potential effect on breeding birds is based on recent surveys of adjacent areas and a site visit in July 2017. Key species recorded were Cetti's warbler, Lapwing and Little ringed plover, all of which are listed under either Section 7 of the Environment (Wales) Act 2016 or Schedule 1 of the Wildlife and Countryside Act 1981. Mitigation plans as part of the M4CaN project would provide alternative habitat for most of the breeding bird species, including specific mitigation for lapwing at Maerdy Farm. Overall, the assessment of effects for Cetti's warbler would remain as significant, and the effects on other bird species, including Little ringed plover, would remain as not significant.

- 3.3.86. Wintering birds would be likely to be displaced; however, based on previous assessments of adjacent areas in the March 2016 ES and September 2016 ESS, the effects would not be significant, other than for redshank, for which there would be a moderate significant effect in the short and medium terms. A site-specific wintering bird survey is being undertaken during this winter (2017/18) as part of the documentation required to gain consent for the relocation proposals.
- 3.3.87. With regard to the effect on the local marine ecology from the bridge protection works and the creation of new quays, and refurbishment of existing quays and provision of a moveable bridge, the assessment concluded a neutral significance of effect.
- 3.3.88. The conclusion of the assessment of potential adverse effects arising from the combination of contaminated land, surface and/or groundwaters was, with the implementation of suitable mitigation measures, that there would be no significant effects.
- 3.3.89. Overall, the assessment reported in ESS5 concluded that, should the port relocation plan be implemented with reasonable and non-controversial mitigation measures during construction, together with best construction practice, the relocation works, together with the works in South Dock, would not have any greater significant adverse effect than that already reported in the M4CaN ES.

3.4. August 2017 Statement to Inform an Appropriate Assessment

- 3.4.1 A Statement to Inform Appropriate Assessment (SIAA) for the M4CaN was published at the same time as the ES in March 2016 (Document 2.3.4). In accordance with a commitment to NRW to update the SIAA at the PLI (Commitment 191 (formerly 177)), an updated SIAA report (Document 2.8.17) was published in September 2017.

- 3.4.2 In addition, in association with ESS5, an Addendum to the M4CaN SIAA (Document 2.8.9) was published in August 2017 to take account of the proposed relocation works within Newport Docks, for the reasons given below. The Addendum should be read together with the updated SIAA report (Document 2.8.17) to provide a full assessment of the implications of the M4CaN Scheme on internationally designated sites.
- 3.4.3 The fringing saltmarsh at the south of the docks is partly within the River Usk SAC, and the mud beyond is all within the SAC. The Severn Estuary SAC, SPA and Ramsar Site is some 450 m south at its closest point. One further European Site was considered in the SIAA for the M4CaN Scheme, the Wye Valley and Forest of Dean Bat Sites/ Safleoedd Ystlumo Dyffryn Gwy a Fforest y Ddena SAC. The closest component of this SAC is the Mwyngloddfa Mynydd Bach SSSI which is some 17.7 km to the northwest of this part of Newport Docks.
- 3.4.4 Most of the proposed relocations are in the southern part of Newport Docks, south of the South Dock (Land Parcels A and C). It is this element of the proposals which is close to the River Usk SAC and which must be considered in terms of its potential impacts on European Sites. There are also individual development plots further north in the docks (Land Parcel B) which do not have this potential and are not considered in the SIAA Addendum.
- 3.4.5 The proposals also include the phased construction of 303 m of new quay at the north west corner of the South Dock (with associated capital dredging to provide access for vessels), and the refurbishment of 250m of new quay to the south west of the South Dock. These works have no potential for impacts on the European Sites and are not considered in the Addendum SIAA.

- 3.4.6 The SIAA Addendum follows the same methodology as the M4CaN SIAA and the updated M4CaN SIAA.
- 3.4.7 The likely significant effects (LSE) identified in the updated M4CaN SIAA were reviewed. The conclusion of the review was that there is no LSE with respect to the Greater and Lesser horseshoe bat populations of the Wye Valley and Forest of Dean Bat Sites/ Safleoedd Ystlumod Dyffryn Gwy a Fforest y Ddena SAC. This European site is therefore not considered further in the SIAA Addendum.
- 3.4.8 Other than the adjacent River Usk, there is no suitable habitat for European eel at the south of Newport Docks. There would therefore be no habitat loss or fragmentation of eel habitat during construction or operation, or barrier effects resulting from the presence of the relocated businesses.
- 3.4.9 LSEs have been identified for the proposed works and development in the southern part of Newport Docks on the following interest features of the European sites:
- a) River Usk SAC Migratory fish and European otter
 - b) Severn Estuary SAC Migratory fish
 - c) Severn Estuary SPA Wintering birds
 - d) Severn Estuary Ramsar Wintering birds and migratory fish
- 3.4.10 The Appropriate Assessment was therefore carried out for the proposed works at the south of Newport Docks on the qualifying features of these four sites in accordance with DMRB HD44/09 guidance.

Conclusion to the SIAA Addendum

- 3.4.11 The SIAA Addendum concluded that, assuming the implementation of mitigation measures in accordance with the requirements of the policies of the Newport LDP and the recommendations of the Habitats Regulations Assessment of the LDP, and taking into account normal good practice in construction, the proposals would not adversely affect the sites' conservation objectives nor delay or interrupt progress towards achieving these. Nor would the proposals affect the overall assessment of the M4CaN Scheme that this would similarly not affect the sites' conservation objectives nor delay or interrupt progress towards achieving these.
- 3.4.12 The SIAA Addendum also concluded "*beyond reasonable scientific doubt, that the proposals for works and development at the south of Newport Docks would not adversely affect the integrity of the sites. Nor would the proposals affect the overall assessment of the M4CaN Scheme that this would similarly not affect the integrity of the sites... Therefore, for the purposes of Regulation 61 of the Conservation of Habitats and Species Regulations 2010, it is considered that there would be no adverse effect of the proposed works and development at the south of Newport Docks on the integrity of the relevant European sites, either alone or in-combination with other plans and projects. Nor would the proposals affect the overall assessment of the M4CaN Scheme that this would similarly have no adverse effect on the integrity of the relevant European Sites*".
- 3.4.13 It should be noted that the Conservation of Habitats and Species Regulations 2010 were superseded by the Conservation of Habitats and Species Regulations 2017 on 30th November 2017. The new regulations consolidate various amendments made to the 2010 Regulations since their publication, introduce a number of minor amendments designed to take account of changes to other related

legislation, such as amendments to Town and Country Planning legislation, and rectify previous omissions. With regard to the general provisions for the protection of European sites, including for the purposes of AIES, regulation paragraph numbers have changed by adding on two to the original 2010 regulation number (i.e Regulations 61 to 67 become Regulations 63 to 69). Thus, in respect of the SIAA Addendum, Regulation 61 of the 2010 Regulations becomes Regulation 63 of the 2017 Regulations.

3.4.14 In terms of the AIES process there is no change to DMRB Advice, HD44/09.

3.5. October 2017 Environmental Statement Supplement

3.5.1 The purpose of the October 2017 Environmental Statement Supplement (also referred to as ESS6) is to report on both the implications of the abolition of the Severn Crossing tolls and the results of the ecological surveys undertaken during the summer of 2017 on land within Newport Docks

3.5.2 The October 2017 ESS, is concerned with three matters:

- a) proposed minor design changes of the bridge protection works at Junction Cut, and minor changes to the proposed layout of relocated premises in Newport Docks (Figure ESS6 2,1);
- b) the environmental implications of the UK Government's decision to abolish tolls on the Severn Crossings by the end of 2018; and
- c) the reporting of further ecological surveys undertaken during the summer of 2017 within Newport Docks in support of the proposed relocation works.

3.5.3 In July 2017, the Secretary of State for Wales announced that the Severn Crossing tolls would be abolished by the end of 2018. Consequently, the Do Minimum and predicted future traffic flows in 2022 and 2037 on the highway network are predicted to change. Those changes are set out in the October 2017 ESS Appendix 2.1.

- 3.5.4 The effects of the changed traffic flows with respect to traffic noise and air quality are described qualitatively in the main text of the document.

Design Change Implications

- 3.5.5 The layout of the relocated premises in land Parcels A and C to the south and east of South Dock as described in Section 2.2 and Figure ESS6 2.1 is work in progress and subject to minor amendment. Close inspection of Figure ESS6 2.1 shows that a small length of the service road to the south of Parcel A6 crosses the mean high-water mark where a small creek protrudes northwards. Mean high water defines the landward limit of the River Usk SAC and the River Usk (Lower Usk) SSSI. Approximately 115m² of SAC/SSSI land is affected (see Figure A to this updated proof of evidence).
- 3.5.6 Further design work since the publication of the October 2017 ESS has resolved this issue. This update is set out in the updated proof of evidence of Matthew Jones (WG1.1.8) and shown in Figure B to this proof of evidence.
- 3.5.7 The special features that may have been affected by the arrangement shown in the October 2017 ESS are the passage of otters (in respect of the SAC) and the loss of saltmarsh (in respect of the SSSI). Whilst the potential loss of land suitable for the passage of otters would have been insignificant (as otters, at high tide, would be easily as able to cross the small creek as to remain on dry land) the realigned access road provides an improved design which removes this concern.

- 3.5.8 Similarly, reference to the Phase 1 Habitat Survey map of the area (see, for example, the 2017 Otter Survey, October 2017 ESS, Appendix ESS6 2.3, Figure 1) shows that the amount of saltmarsh affected, if any, would have been negligible, the majority being tall ruderal vegetation. The subsequent engineering and highway design refinement that has been undertaken in this area results in no land take from the saltmarsh special feature of the River Usk (Lower Usk) SSSI at this location, and by aligning the access road further northwards, reduces the risk to it during construction.

Noise

- 3.5.9 Table 3.4 of the October 2017 ESS describes the results of a qualitative assessment of the noise impacts without tolls as follows.

Table 3.4: Qualitative assessment of noise impacts

Scenario	Route section	Noise Change	Noise Impact* on NSRs where these road links are the dominant noise source:
Do Minimum 2022	Existing M4 Junctions 22-24	The increases in traffic flows between junctions 22 and 23a would result in a noise increase of between 0.6 and 0.8 dB; between Junctions 23a and 24 there being a smaller increase of 0.4 dB.	Minor adverse effect
Do Minimum 2022	Existing M4 junction 24-29	The small increases in traffic flows would result in a noise increase of 0.0 dB to 0.2 dB;	Negligible adverse effect
Do Something 2022	Existing M4 Junctions 22-23a	The increases in traffic flows would result in a noise increase of 0.5 dB to 0.7dB;	Minor adverse effect
Do Something 2022	Existing M4 Junctions 23a-29	The majority of the route experiences a small decrease in traffic flows with the tolls removed, equating to a 0.0 dB to -0.2 dB noise decrease	Negligible beneficial effect
Do Something 2022	New M4 section	With the tolls removed, noise levels for properties affected by the new M4 will increase by between 0.4 and 0.7 dB compared to the 2022 published scheme.	Marginal adverse effect. This applies to both residential and ecological receptors around the New M4 section.
Comparison between the predicted percentage changes in traffic flows arising from the proposed Scheme	All existing sections	For NSRs dominated by noise from the existing M4 sections identified above, the scheme will very marginally reduce (by up to -0.4 dB) any noise increase change that would result from the removal of tolls.	Negligible/marginally beneficial

*Note that these changes are assessed qualitatively, and reflect the potential change to the impacts and effects already identified within the ES.

Air Quality

3.5.10 Table 3.8 of the October 2017 ESS describes the results of a qualitative assessment of the air quality impacts without tolls on human health receptors as follows.

Table 3.8 Qualitative assessment of air quality impacts – Human health receptors

Scenario	Route section	Traffic Change	Impact on Air Quality Predictions
Do Minimum 2022	Existing M4 Junctions 22-24	There are increases in traffic flows between junctions 22 and 23a of between 14-21%, between Junctions 23a and 24 there is a smaller increase of 9.1%;	The predicted concentrations at receptors in this area are well below the air quality standards for NO ₂ and PM ₁₀ . Even if it were assumed that total pollutant concentrations increased in the same proportion as the increase in traffic flows an exceedance of air quality standards would be very unlikely.
Do Minimum 2022	Existing M4 junction 24-29	There are small increases in traffic flows of 1.0-3.8%;	Very minor changes of less than 1% of total NO ₂ and PM ₁₀ concentrations would be expected from this level of change.
Do Something 2022	Existing M4 Junctions 22-23a	There are increases in traffic flows of 12-16.9%;	The predicted concentrations at receptors in this area are well below the air quality standards for NO ₂ and PM ₁₀ . Even if it were assumed that total pollutant concentrations increased in the same proportion as the increase in traffic flows an exceedance of air quality standards would be very unlikely.

Scenario	Route section	Traffic Change	Impact on Air Quality Predictions
Do Something 2022	Existing M4 Junctions 23a-29	There are small changes in flows of -4.9%-1%. The majority of the route experiences a small decrease in traffic flows with the tolls removed;	Very minor changes in air quality predictions of less than 1% in total NO ₂ and PM ₁₀ concentrations
Do Something 2022	New M4 section	There are predicted increases in traffic flows of between 9.5 and 17.1% with the tolls removed in 2022;	The predicted concentrations at receptors in this area are well below the air quality standards for NO ₂ and PM ₁₀ . Even if it were assumed that total pollutant concentrations increased in the same proportion as the increase in traffic flows an exceedance of air quality standards would be very unlikely. Predicted concentrations would be likely to increase by up to 5%.
Comparison between the predicted percentage changes in traffic flows arising from the proposed Scheme	All sections	There are very similar percentage traffic changes when comparing Do Minimum and Do Something scenarios with or without the tolls in operation	The percentage change in predicted concentrations arising from the Scheme is likely to be very similar in both cases.

3.5.11 With regard to ecological receptors the assessment stated the following at paragraphs 3.3.7 to 3.3.15.

3.5.12 The Environmental Statement identified two ecological sites, Langstone-Llanmartin Meadows SSSI and Severn Estuary SAC/SSSI/SPA/Ramsar where NO_x concentrations exceed the relevant air quality standard. At the St Brides SSSI near to the new M4 it was predicted previously that the NO_x concentrations would be 30µg/m³ so would just comply with the standard. An examination of the traffic data relevant to these three sites shows the following:

- 3.5.13 At Langstone-Llanmartin Meadows SSSI (i.e. between Junctions 23a and 24) with the removal of the tolls, the Do Minimum traffic flows increase by more than 9% whilst the Do Something flows increase by 1.1%. In the March 2016 ES it was identified that the Scheme would result in a Moderate beneficial impact. This is likely to remain the same with the new traffic data although the decrease in NO_x concentrations as a result of the scheme is likely to increase slightly. With the scheme, NO_x concentrations at this location would meet the air quality standard for the protection of vegetation.
- 3.5.14 At the Severn Estuary SAC/SSSI/SPA/Ramsar traffic flows are predicted to increase by up to 21% (Do Minimum) and 16.9% (Do Something). The predicted NO_x concentrations would be expected to increase by approximately 10%, however, this location has been identified as being not sensitive to nitrogen deposition.
- 3.5.15 At St Brides SSSI traffic levels on the new M4 would increase by 9.5% in 2022. This would increase predicted concentrations so that the NO_x standard of 30µg/m³ would be exceeded, resulting NO_x concentrations are likely to be in the range of 31-32µg/m³. Correspondingly, the nutrient nitrogen deposition would increase to 8.5 kg.ha⁻¹.yr¹ within the corresponding part of the SSSI.
- 3.5.16 As explained in the March 2016 ES (paragraph 10.6.11) the annual mean NO_x limit value was applied to all designated sites in the vicinity of the Scheme on a precautionary basis only as all are within 20 km of a town with more than 250,000 inhabitants and therefore the limit value does not apply. Taking this precautionary approach, in the Do Something scenario, annual mean NO_x concentrations at the St Brides SSS were predicted to be 30 µg/m³ at the closest point to the proposed new section of motorway.
- 3.5.17 This predicted exceedance of the precautionary annual mean NO_x objective was only within 20 m of the centre line of each carriageway and thus only a very small proportion of the designated site would be affected and this was considered to be 'not significant'.

- 3.5.18 Removal of the tolls would thus result in a small increase in the predicted exceedance of the standard for protection of vegetation over a very small proportion of the designated site (accepting that this is only applied on a precautionary basis since the limit value does not apply here).
- 3.5.19 The assessment of the effect would remain as 'not significant'.
- 3.5.20 This conclusion is supported by the fact that the associated rate of nutrient nitrogen deposition at the SSSI boundary would be lower than the lower critical load for the site. APIS does not provide a critical load for the grassland within the SSSI. However, the lowest, realistic critical load for grassland (i.e. not alpine or sub-alpine) is 10 kg.ha⁻¹.yr⁻¹ for acid grassland. The predicted nutrient nitrogen deposition is below this rate and therefore, no impacts associated with nitrogen deposition are anticipated and all effects would be 'not significant'.

Species

- 3.5.21 As described in Section 3.3, above, during the summer of 2017 surveys were commenced on land to the south and east of South Dock to determine the presence or otherwise of badger, otter, water vole, reptiles and invertebrates. The first of seven planned monthly visits for the 2017/18 wintering birds survey took place in October 2017. An interim report on that survey will be provided to the Inquiry in December 2017.

Badger

- 3.5.22 A survey looking for signs of badger activity - badger setts, latrines, footprints, runs, paths, hairs and foraging signs – was undertaken in August and September 2017 by ecologists experienced in undertaking such surveys.
- 3.5.23 The report of the survey, undertaken by RPS, is presented in October 2017 ESS Appendix 2.2.

- 3.5.24 No signs that could indicate the presence of badgers were recorded during the survey.
- 3.5.25 The report notes that *“taking into account the results of the survey, and considering the limited extent and foraging resources in the survey area, its isolated location surrounded by heavily built-up areas and two rivers, together with the results of surveys of the north of the docks completed in 2015”* (March 2016 ES, Appendix 10.38) *“which reported no signs of badger activity, it is unlikely that badgers are present and therefore do not present a constraint to development within the docks”*.
- 3.5.26 As a precautionary measure, a pre-construction inspection for badger will be undertaken in order to inform any mitigation strategy that might be required in the unlikely event that badgers move into the area.

Otter

- 3.5.27 Four otter survey visits were undertaken in July, August, September and October 2017 by ecologists experienced in undertaking such surveys.
- 3.5.28 The report of the survey, undertaken by RPS, is presented in October 2017 ESS Appendix 2.3.
- 3.5.29 No signs that could confirm the presence of otters were recorded during the survey.
- 3.5.30 Nevertheless, the report notes that given that the River Usk and River Ebbw support populations of otter, and that otter is a qualifying feature of the River Usk Special Area of Conservation (SAC), the potential for otters to use the area cannot be discounted.

- 3.5.31 Consequently, mitigation to enable otters to continue to use the foreshore of the River Usk will be incorporated in the design of the relocation works, and as a precautionary measure, a pre-construction inspection for otter will be undertaken in order to inform any further mitigation strategy that might be required in the unlikely event that an otter holt or resting place is located.

Water vole

- 3.5.32 The water vole survey covered the two watercourses (ditches) in the centre of the relocation site to the south of Atlantic Shed. These have limited potential value to water vole due to their poor condition, presence of pollution and isolated location.
- 3.5.33 Two water vole survey visits were undertaken in July and August 2017 by ecologists experienced in undertaking such surveys.
- 3.5.34 The report of the survey, undertaken by RPS, is presented in October 2017 ESS Appendix 2.4.
- 3.5.35 No signs that could indicate the presence of water voles were recorded during the survey.
- 3.5.36 As a precautionary measure, a pre-construction inspection for water vole will be undertaken in order to inform any mitigation strategy that might be required in the unlikely event that water voles are located.

Reptiles

- 3.5.37 Eight reptile survey visits to check artificial refugia were undertaken in August and September 2017 (during appropriate weather conditions) by ecologists experienced in undertaking such surveys.
- 3.5.38 The report of the survey, undertaken by RPS, is presented in October 2017 ESS Appendix 2.5. In summary, the report stated the following.
- 3.5.39 Grass snakes were recorded during five of the eight survey visits, with a peak count of five individuals recorded on 11th September 2017, indicating a good population size.

- 3.5.40 No other reptile species were recorded during the survey; therefore, if other species are present, it is likely that numbers are very low.
- 3.5.41 Grass snakes were most frequently recorded along vegetated banks in the south-west of the survey area, where grass and scrub provided good ground cover, refuges, foraging resources and relatively undisturbed basking locations.
- 3.5.42 No reptiles were recorded within the east and north-east of the survey area, where grass cover was sparser and more fragmented than elsewhere.
- 3.5.43 Both adult and juvenile grass snakes were recorded at multiple locations across the south-west part of the survey area. The presence of juveniles confirmed that grass snakes were breeding in or near to the survey area.

Invertebrates

- 3.5.44 An invertebrate survey was undertaken on 14th and 15th September 2017, the main objective of which was to identify and catalogue invertebrates found within the relocation area, and to assess the quality of the survey area as a site for invertebrates. The report of the survey, undertaken by EMEC Ecology, is presented in October 2017 ESS Appendix 2.6.
- 3.5.45 The survey generated records for 181 species of invertebrates, which the authors of the report considered a good number for a one-day survey in September. However, the report noted that several taxa were not well represented, particularly Hymenoptera (sawflies, ants, wasps, bees) and Lepidoptera (butterflies). In addition, the authors drew attention to the limitations of the survey, noting that it could not be considered definitive (owing to the short duration and time of year), and that the true number of invertebrate species inhabiting the survey area would be greater than reported.

- 3.5.46 The reported stated *“in conclusion, the survey site has an invertebrate composition commensurate with many post-industrial brownfield sites”*. The authors would not be drawn on the conservation value of the site, other than stating that it has *“considerable potential to support a broad invertebrate fauna in its current state”* and that it should not be considered in isolation from those surveyed in 2015 (March 2016 Appendix 10.31). I acknowledge those comments, and refer to the overall assessment of the scheme impact on invertebrates on industrial land due to habitat loss, which concluded that the impact would be moderate to large adverse in the medium term, which is significant in EIA terms (March 2016 ES Table 10.19). The loss of additional invertebrate habitat to the south of South Dock would not alter the original assessment
- 3.5.47 In addition, as the authors point out *“it should be noted that these habitat types are relatively transient in nature, having a lifespan of approximately 15-20 years before coarse grasses and scrub dominate and the invertebrate interest of the site diminishes”* (p.8).

3.6. Overall Conclusion

- 3.6.1 This Scheme Evidence Update provides evidence on environmental matters, other than contamination, for the Welsh Government's Scheme as modified by the April, May and August 2017 draft Orders Supplement to include proposals for bridge protection measures at the Junction Cut and the accommodation works to address the impact on Newport Docks.
- 3.6.2 It describes the contents and overall conclusions of the April 2017 ESS (ESS4), the August 2017 ESS (ESS5) and the October 2017 ESS (ESS6). ESS4 is concerned with the bridge protection measures proposed at the Junction Cut within Newport Docks. ESS5 updates the proposals for the bridge protection measures, and sets out the preliminary proposals to relocate various premises within the docks, together with the results of some initial

environmental surveys and a high level assessment of those proposals. ESS6 provides a qualitative assessment of removing the tolls from the Severn Crossings with regard to traffic noise and air quality impacts, and summaries the environmental survey updates for the proposed relocation works.

- 3.6.3 The supplements do not however constitute an application for consent to undertake the relocation works. That will be obtained using ABP's and Welsh Government's existing Permitted Development rights. The consenting strategy includes a separate EIA under the Town and Country Planning Act (Environmental Impact Assessment) (Wales) Regulations 2017 and the Marine Works (Environmental Impact Assessment) Regulations 2007 and a Habitats Regulations Assessment under the Conservation of Habitats and Species Regulations 2017. The purpose of the above mentioned Highways Act ES Supplements therefore is to identify any potential show stoppers to the proposed port relocation works.
- 3.6.4 The overall conclusion of the landscape and visual assessment of the port relocation proposals reported in ESS5 is that the impacts would have a neutral significance of effect on landscape character and a slight adverse significance of effect on visual amenity due to slight or negligible magnitudes of impact. Similarly the proposals would not have a significant effect on the local seascape.
- 3.6.5 A Phase 1 Habitat Survey and a National Vegetation Classification survey of the area to which the premises within the docks would be relocated to have been undertaken. The greatest habitat losses would be those of ephemeral/ short perennial vegetation and scrub, although such areas would also remain. Overall, the assessment concluded that the additional losses of habitat as a result of port relocations would not change the overall assessment with respect to brownfield habitats and other habitats.

- 3.6.6 Following surveys at the appropriate time of year no evidence of dormice, great crested newt, badgers, otters, water voles or bats was found within the relocation areas. A good population of grass snake was found and the area is considered to have the potential to support a broad invertebrate fauna commensurate with many brownfield sites. Breeding and wintering birds would be affected by the proposed relocation works, however, mitigation already provided as part of the wider M4CaN proposals provide sufficient mitigation for breeding birds.
- 3.6.7 My overall conclusion is that the assessments and survey results reported in ESS5 and ESS6, together with the SIAA Addendum, demonstrate that, should the port relocation plan be implemented with reasonable and non-controversial mitigation measures during construction, together with best construction practice, the relocation works together with the works in South Dock would not have any greater significant adverse effect than that already reported in the M4CaN ES and SIAA.
- 3.6.8 In addition, although the relocation proposals remain to be worked up in detail, including the development of appropriate mitigation measures, I believe that there is no reason to believe that Welsh Government's duty under section 6 of the Environment (Wales) Act 2016 to seek to maintain and enhance biodiversity would be compromised. These duties will be a key consideration in the consenting strategy going forward.

Figure A Potential effect on River Usk SAC/ River Usk (Lower Usk) SSSI as shown in October 2017 ESS

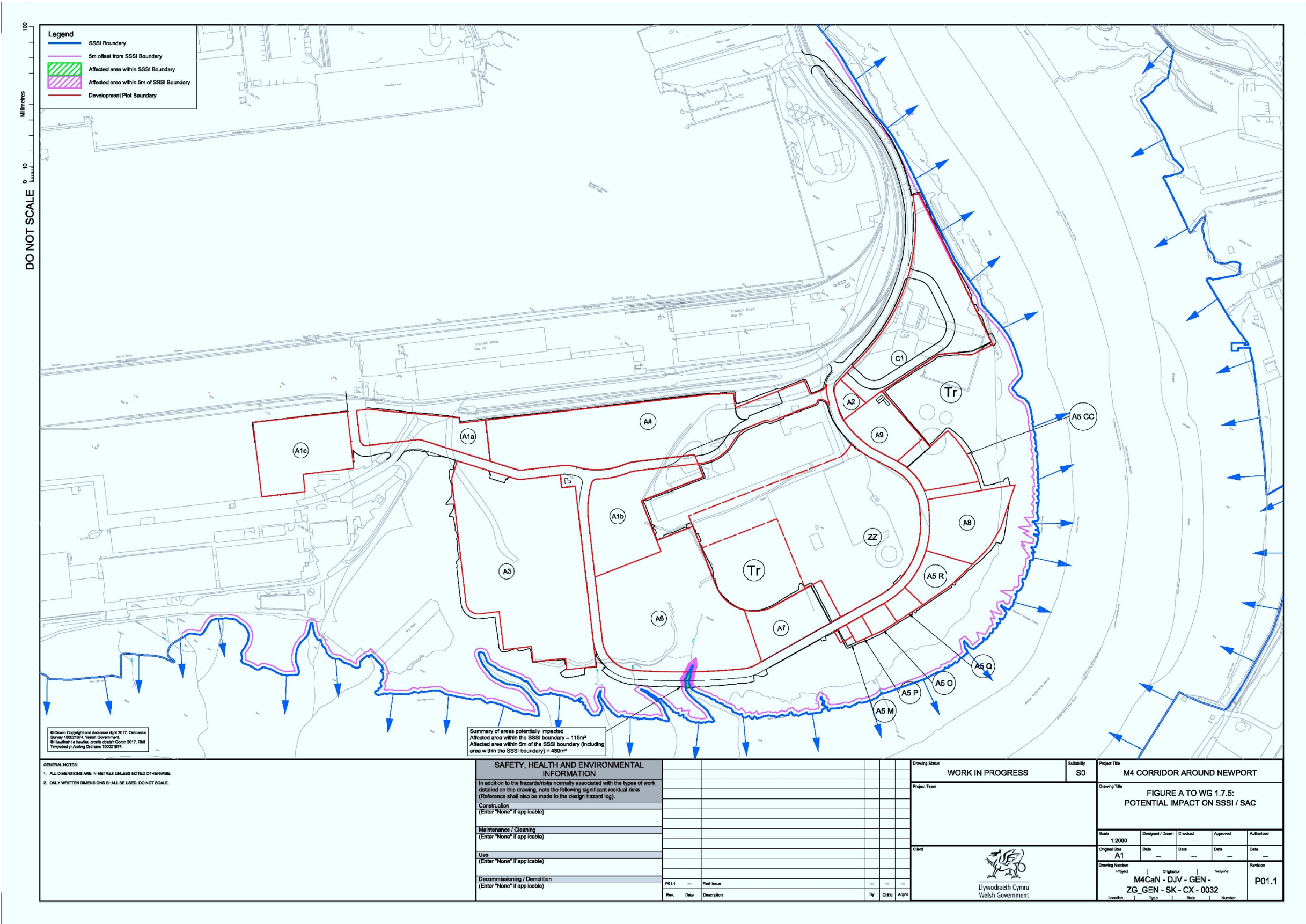


Figure B Port Relocation Plan as at 14th December 2017

