



M4 Corridor around Newport

Addendum to the Statement to Inform an Appropriate
Assessment under the Conservation of Habitats and
Species Regulations 2010
Relocation of Businesses in Newport Docks



Welsh Government

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Newport Docks

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Summary

- S. 1. This Addendum to the SIAA has been prepared to provide the Welsh Ministers (“the Competent Authority”) with the information necessary to assess the works and development proposed within Newport Docks to accommodate businesses which would be relocated away from the line of the new section of motorway. This Addendum should be read together with the updated SIAA report to provide a full assessment of the implications of the M4CaN Scheme on internationally designated sites.
- S. 2. 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.
- S. 3. Most of the proposed development is 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 these are not considered in this report.
- S. 4. The proposals also include the 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 further in this report.
- S. 5. The works and development proposed in the south of Newport Docks are set out in the ABP and ABP Tenant Relocation Works report.
- S. 6. The updated SIAA report (section 3) provides information on the methodology followed in carrying out the AIES Stage 1: Screening and Stage 2: Appropriate Assessment for the M4CaN Scheme on European/International sites where Likely Significant Effects (LSEs) have been identified. The same methodology has been followed in this Addendum to the SIAA report. In so far as there may be additional effects on European/International sites these must be considered together with the effects of the Scheme as previously assessed.
- S. 7. The LSEs set out in Table 4.1 of the updated SIAA report have been reviewed for this assessment of the proposed works and development at the south of Newport Docks.
- S. 8. This review has led to the conclusion 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. The nearest component of the SAC (the Mwyngloddfa Mynydd-bach SSSI) is some 18.3 km to the north west of the southern part of Newport Docks and there have been few records of either Greater or Lesser horseshoe bats away from the eastern and western sections of the M4CaN Scheme where there is suitable woodland/hedgerow habitat. This European site is therefore not considered further in this SIAA Addendum.

S. 9. 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.

S. 10. 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:

River Usk SAC	Migratory fish
	European otter
Severn Estuary SAC	Migratory fish
Severn Estuary SPA	Wintering birds
Severn Estuary Ramsar Site	Wintering birds
	Migratory fish

S. 11. It is therefore necessary for an Appropriate Assessment to be carried out for the proposed works and development at the south of Newport Docks on the qualifying features of these five sites. In accordance with DMRB HD44/09 guidance, it is therefore necessary to provide answers to questions (c) and (d) below.

(c) What are the implications of the effects of the proposal on the sites' conservation objectives and will it delay or interrupt progress towards achievement of any of the objectives?

S. 12. It has been 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 Habitat Regulations Assessment of the LDP, and taking into account normal good practice in construction, that 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.

(d) Can it be ascertained that the proposal will not adversely affect the integrity of the site beyond reasonable scientific doubt?

S. 13. Based on the assessment set out in this SIAA Addendum, it is 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.

S. 14. 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.

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1 Introduction and Purpose of the Assessment

1.1 Purpose of this report

- 1.1.1** A draft Statement to inform an Appropriate Assessment (SIAA) for the M4CaN Scheme was submitted with the draft Orders in March 2016, in accordance with the requirements of Regulation 61 of the Conservation of Habitats and Species Regulations (2010) (the Habitats Regulations) and the Assessment of Implications for European Sites (AIES) (including the SIAA) process, as set out in Design Manual for Roads and Bridges (DMRB) HD44/09 guidance (Highways Agency, 2009). This was updated taking into account the findings of additional surveys carried out for relevant species in 2016 and 2017, and also changes to the Scheme which had been made since March 2016 where these are relevant to the SIAA. The updated SIAA was published concurrently with this SIAA Addendum on 15th August 2017.
- 1.1.2** This Addendum to the SIAA has been prepared to provide the Welsh Ministers (“the Competent Authority”) with the information necessary to assess the works and development proposed within Newport Docks to accommodate businesses which would be relocated away from the line of the new section of motorway. This Addendum should be read together with the updated SIAA report to provide a full assessment of the implications of the M4CaN Scheme on internationally designated sites.
- 1.1.3** The justification for the Scheme and an account of the relevant legislation are provided in the updated SIAA report.
- 1.1.4** The proposed works and development associated with the relocation of businesses within Newport Docks are also the subject of an Environmental Statement (ES) Supplement (the August 2017 ES Supplement), and reference is made to that report where appropriate.
- 1.1.5** Most of the proposed development is in the southern part of Newport Docks, south of the South Dock (Land Parcels A and C) as shown on Figure 1. 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 these are not considered further in this report.
- 1.1.6** The proposals also include the 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. Since these works would be carried out in the impounded dock there is no likelihood of impacts on the European Sites and they are not considered further in this report.

2 The Proposed Relocation of Businesses

2.1 Introduction

2.1.1 The updated SIAA report sets out the aims and goals for the M4CaN Scheme.

2.1.2 The works and development proposed specifically in the south of Newport Docks are described in the ABP and ABP Tenant Relocation Works report and in the August 2017 ES Supplement.

2.2 The proposed works and development

2.2.1 The location of the proposed works and development in the south of Newport Dock is shown on the plan at Figure 1.

2.2.2 As explained in the August 2017 ES Supplement, the relocation proposals have been developed based on information received from ABP relating to Newport Docks and observations following site visits. The information has been used to identify potential constraints and to provide a basis for informing the works proposed to address the impacts identified. The details will be reviewed and worked up in more detail at subsequent design stages including that for any application(s) to gain consent to build the relocation infrastructure. Consequently, whilst the use of Land Parcels A, B and C are fixed the location and orientation of individual buildings shown within each plot within each land parcel are indicative.

2.2.3 The proposed relocation works generally compromise relocating ABP's assets and the leaseholders (ABP's tenants) to undeveloped land parcels within the docks on a like for like basis. The majority of the existing assets and tenants will be relocated to three land parcels, as shown on August 2017 ES Supplement Figure ESS5 2.1. They are:

- a) Land Parcel A – located south of South Dock
- b) Land Parcel B – located between the SDR and north quay of South Dock
- c) Land Parcel C – located south east of South Dock

2.2.4 The relocated parcels will generally consist of new buildings, hard standings, fencing and service roads as well as infrastructure provision on a like for like as their existing facilities. Building heights to eaves will vary, with height typically between 5m – 10m.

2.2.5 ABP have prepared The Port of Newport Masterplan 2015 – 2035 which sets out ABP's vision for the future development of Newport Docks. The proposed relocation works shown in August 2017 ES Supplement Figure ESS 2.2 are broadly in line with the objectives, but not the detail or proposed scheduling of ABP's masterplan. In addition to showing the reorganisation of the docks Figure ESS5 2.2 provides details of those land plots affected and the proposals to mitigate the effects.

2.3 Timescale

- 2.3.1** Further information on the key dates for progressing proposals in the south of Newport Docks will be issued in due course.

2.4 Relationship between the proposed Relocation of Businesses and European/International Sites

- 2.4.1** The boundaries of the European/International sites in the vicinity of Newport Docks are shown in Figure 1. 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.

2.5 Physical land-take

- 2.5.1** Table 2.1 of the updated SIAA presented the land take for the M4CaN Scheme for each of the habitats identified during Phase 1 mapping of the Scheme corridor. Permanent land take is associated with the operational new section of motorway, while temporary land take may occur during construction (e.g. temporary construction compounds) or operation (e.g. use of easements for access). The new section of motorway would pass over the River Usk/Afon Wysg SAC.

- 2.5.2** The report of the Phase 1 Habitat Survey of the land at the south of Newport Docks is at Appendix ESS5 2.3 of the August 2017 ES Supplement. The findings are shown on Figure 2 of this SIAA Addendum. The terrestrial habitats recorded on the site included:

- ephemeral/short perennial vegetation (the most widespread vegetation type);
- scattered areas of grassland;
- tall ruderal vegetation (that reflected the mosaic of differing substrates and waste materials that were scattered across the survey area);
- scrub (generally comprising goat willow and *Buddleia* with dense stands of bramble and some birch seedlings);
- small parcels of broadleaved woodland (including white poplar, sycamore and willow); and
- areas of bare ground and hard-standing.

- 2.5.3** Aquatic habitats included:

- several ponds and areas of marshland, primarily located in the north-east and north-west of the survey area, which contained limited amounts of aquatic and semi-aquatic vegetation and appeared likely to dry up during the summer months;

- a reedbed of approximately 0.1 hectares in the west of the survey area; and
- two main drainage ditches.

2.5.4 The additional land take which would occur as a result of the proposed works and development at the south of Newport Docks (i.e. beyond the land take for the main M4CaN Scheme) is set out in Table 2.1.

Table 2.1: Land take for the proposed works and development at the south of Newport Docks.

Habitat	Land take (ha)
Ephemeral/short perennial vegetation	8.00
Tall ruderal	0.59
Grassland	0.74
Amenity grassland	0.09
Scrub (scattered)	0.67
Scrub (dense continuous)	4.45
Broadleaved woodland	0.23
Drainage ditch	0.05
Ephemeral pond	0.21
Reed bed	0.22

2.5.5 There would be no land take from the River Usk SAC or other European Sites.

2.6 Resource Requirements and Waste Products

2.6.1 Resource requirements for the Scheme are described in the updated SIAA report. The proposed works and development at the south of Newport Docks would not significantly affect the requirements for materials, other than that there would be an increase in the requirements for building materials for construction of new industrial buildings.

Construction Waste

2.6.2 The types and estimated quantities of waste likely to be generated during the construction phase of the Scheme were identified in the Outline Site Waste Management Plan (Annex F to Appendix 3.2 of the March 2016 ES) based on experience from similar projects. The Plan sets out a series of measures for managing the waste, which are in accordance with the waste hierarchy principle, duty of care requirements and industry best practice. The Site Waste Management Plan is a live document that would be updated during the detailed design and construction process to document the management of waste.

2.6.3 It is likely that the proposed works and development at the south of Newport Docks would be carried out in accordance with similar good practice procedures.

Operational Waste

2.6.4 As explained in the updated SIAA, the main operational 'waste' from the use of the new section of motorway would be residues deposited on the road surface

from traffic which would be carried in road drainage. The proposals for treatment and discharge of the road drainage for the Scheme are set out therein.

- 2.6.5** In addition, there would be discharges of sewage from the relocated businesses, which would require treatment and disposal.

Stormwater drainage

- 2.6.6** As explained in the ABP and ABP Tenant Relocation Works report, a new storm drainage network would be to be installed to serve the proposed development. It is proposed to collect any storm water flows generated from the proposed roofs and hardstandings via gulleys, downpipes and linear drainage channels.

- 2.6.7** For Land Parcels A and C (see Figure 1), storm flows would then be transmitted via a new storm gravity network and discharged to either South Dock or into the existing drainage ditch located to the east of the development via a new outfall. Any existing storm drainage networks or watercourses would be diverted to accommodate the proposals.

- 2.6.8** For Land Parcel B (see Figure 1), a hierarchical approach would be used to inform the storm drainage strategy. If ground conditions allow, storm flows are proposed to be infiltrated to ground. Infiltration tests and ground investigation will be required to confirm if this is acceptable. Alternatively, storm flows would be transmitted via a new storm gravity network and discharged to the existing storm networks located in the vicinity of the site. This is subject to confirmation of available capacity and condition of the existing storm network.

- 2.6.9** Pollution control measures such as catchpits and petrol interceptors would be installed prior to discharging to any water body. Subject to the operational requirements of the businesses, surface water runoff generated from parts of the relocated facilities which may be harmful to the environment may need to be stored and disposed of to a licensed treatment facility to be dealt with appropriately.

- 2.6.10** No attenuation of storm flows is considered necessary as the discharge location is either under tidal influence or regulated by the locks. Consideration would need to be given to conditions when the storm outfalls are surcharged. Storage provision may be required to avoid any flooding of the proposed development.

Foul sewage

- 2.6.11** As explained in the ABP and ABP Tenant Relocation Works report, for Land Parcels A and C (see Figure 1) it is proposed to install a new foul gravity sewer network to serve the proposed relocated facilities. Since no other means of transmitting foul flows away from the proposed development is available and that the existing networks are discharged into treatment tanks, it is proposed to gravitate all foul flows generated from the relocated facilities into either packaged treatment works, septic tanks or cesspits. Foul flows would then be treated to an appropriate level before being discharged into a nearby water body such as the docks. A new centralised treatment facility could be proposed or individual treatment facilities for each of the tenants which are relocated into the area. A pumped solution may be required following treatment of foul flows generated from the relocated facilities subject to confirmation of site levels and inverts of existing foul sewage infrastructure. Alternatively, a pumped connection to a public foul sewer off site could be considered. However, this is not likely to be a viable option.

- 2.6.12** If the existing foul sewers can accept the relocated facilities, a connection to the existing foul network would be preferred. A foul flow assessment will be done to compare existing and proposed flows following relocation to determine whether there is capacity in the existing networks. Condition surveys will also be needed of the existing foul networks if this option is progressed.
- 2.6.13** Trade effluent separation may also be needed subject to confirmation of the processes proposed within the relocated facilities.
- 2.6.14** For Land Parcel B (see Figure 1), since this is allocated for storage provision and no buildings would be relocated, it is assumed that no foul flows would be generated from the relocated facilities.
- 2.6.15** The drainage infrastructure would be designed for all events up to a 1 in 100 year rainfall event, with a 30% allowance for climate change.

Other Services and Existing Utilities

- 2.6.16** Other services associated with the proposed works and development at the south of Newport Docks would include, electricity, gas, water and telecommunications.

Electricity

- 2.6.17** Three electricity transformer stations are located either within or in the vicinity of the proposed relocated facilities. These are:
- a) To the south of the proposed refurbished quay;
 - b) To the north east of Land Parcel A; and
 - c) Centrally within Land Parcel A.
- 2.6.18** Since the proposals are for the relocation of existing facilities within the docks, it is likely that there is capacity within the existing substations to supply the relocated facilities. Capacity enquiries will be required to determine points of connection and whether any reinforcement is required.
- 2.6.19** There is a wind turbine within and Parcel A and another to the east of the parcel. Neither would be affected by the proposals.

Gas

- 2.6.20** No gas mains are identified in the vicinity of the proposed development plots on service plans. No mains gas supply would be provided as part of the proposed development. It may be that some tenants use, and would continue to use, bottled gas.

Water supply

- 2.6.21** There are cast iron water mains in the vicinity of the proposed development land parcels, the condition and capacity of which are not known. Since the proposals are for the relocation of existing facilities, it is likely that there is capacity within the existing water main network. Water demands for the relocated businesses would be reconciled with the existing supply, with new connecting mains being provided as necessary.

Telecommunications

- 2.6.22** There are underground telecommunication cables in the vicinity of the proposed development plots. New connections would be required for some of the relocated facilities. Appropriate connection locations and capacity would need to be confirmed by the utility provider.
- 2.6.23** Consideration would also be given to any existing telecommunication signals between buildings to ensure these are not affected.

3 Methodology

3.1 Introduction

- 3.1.1** The updated SIAA report (section 3) provides information on the methodology followed in carrying out the AIES Stage 1: Screening and Stage 2: Appropriate Assessment for the M4CaN Scheme on European/International sites. The same methodology has been followed in this Addendum to the SIAA report. In so far as there may be additional effects on European/International sites associated with the proposed works at Newport Docks these must be considered together with the effects of the Scheme as previously assessed.

3.2 Policy and Guidance

- 3.2.1** The relevant policy and guidance documents taken into account in undertaking the SIAA are set out in the updated SIAA report (section 3.1). The same documents have been taken into account in production of this Addendum to the SIAA report.

3.3 Data Sources

- 3.3.1** The sources of information on the European protected sites that may be potentially affected by the M4CaN are set out in the updated SIAA report (section 3.3). The same information has been used in preparing this Addendum to the SIAA report.

3.4 Evidence Base

- 3.4.1** The desk studies and ecological surveys which informed the SIAA for the M4CaN Scheme are described in the updated SIAA report (section 3.4). Relevant data from these desk studies and surveys have also informed this Addendum to the SIAA report.

- 3.4.2** Additional desk study information has been compiled to inform this Addendum. This comprises:

- ABP Newport Second Wind Turbine: Environmental Report:
 - Appendix D. Preliminary Ecological Appraisal
 - Appendix H. Overwintering Birds
 - Appendix I. Breeding Birds

- 3.4.3** Additional ecological surveys have been carried out in the southern part of Newport Docks in 2017 to further inform this Addendum to the SIAA report. These are:

- Phase 1 Habitat Survey (August 2017 ES Supplement Appendix ESS5 2.3))
- Botanical Survey (August 2017 ES Supplement Appendix ESS5 2.4))

- Great crested newt eDNA Survey (August 2017 ES Supplement Appendix ESS5 2.5REF)
- Breeding Bird Survey (August 2017 ES Supplement Appendix ESS5 2.6)

3.4.4 Further surveys are being or will be carried out and will be reported in due course. These are:

- Otter Survey
- Reptile Survey
- Terrestrial Invertebrate Survey
- Wintering Bird Survey

3.5 Assessment Methodology

3.5.1 Section 3.5 of the updated SIAA report sets out the methodology and assumptions for the consideration of the M4CaN with regard to the requirements of the Habitats Regulations and the AIES (including the SIAA) process as set out in DMRB HD44/09 guidance (Highways Agency, 2009).

3.5.2 The same methodology has been followed in preparing this Addendum to the SIAA. In so far as there may be additional effects on European/International sites associated with the proposed relocation works at Newport Docks, these must be considered together with the effects of the Scheme as previously assessed.

AIES Process

3.5.3 The updated SIAA report explains that the AIES is principally a five stage process (as explained below) involving one or more of the following sequential stages:

- Stage 1: Screening
- Stage 2: Appropriate Assessment
- Stage 3: Alternative Solutions
- Stage 4: Imperative Reasons of Overriding Public Interest (IROPI)
- Stage 5: Compensatory Measures

3.5.4 The first stage of the AIES process is Stage 1: Screening Assessment to determine whether likely significant effects (LSEs) on the features of European sites could occur. If the outcome of this Screening Assessment determines that there could be a LSE (or such an effect cannot be discounted), then Stage 2: Appropriate Assessment is triggered and a determination of whether there would be an effect on the integrity of the European site is undertaken.

3.5.5 For the M4CaN Scheme, the initial Stage 1: Screening Assessment was undertaken and LSEs could not be discounted for all qualifying features of the River Usk/Afon Wysg SAC; the Severn Estuary/Môr Hafren SAC, SPA and Ramsar Site and the Wye Valley and Forest of Dean Bat Sites/ Safleoedd Ystlumod Dyffryn Gwy a Fforest y Ddena SAC.

3.5.6 Stage 2: Appropriate Assessment was thus triggered and is reported in the updated SIAA report. The conclusion of the updated SIAA is that there would be no adverse effect on the integrity of the European sites considered either alone or in-combination with other plans and projects.

3.5.7 The proposals for works and development to accommodate relocated businesses at the south of Newport Docks are outside the footprint of the M4CaN Scheme as previously assessed. It was therefore necessary to undertake a further screening assessment to determine whether there are LSEs which have not previously been assessed or whether there is the potential for additional impacts in relation to LSEs which were previously identified. The methodology for the Stage 1: Screening Assessment is summarised in section 3.5 of the updated SIAA and this also applies to the further screening assessment carried for this Addendum to the SIAA.

3.5.8 Where Stage 2: Appropriate Assessment is triggered, it is necessary to determine whether or not there would be an effect on the integrity of the European site of the project, either alone, or in combination with other plans or projects. As for the wider M4CaN Scheme, the initial Stage 1: Screening Assessment for the proposed works and development at the south of Newport Docks was undertaken, and as LSEs could not be discounted, a Stage 2: Appropriate Assessment has been undertaken for this element of the Scheme and is reported in this Addendum to the SIAA.

Professional Judgement

3.5.9 As for the SIAA of the wider Scheme, professional judgement was used in the carrying out of this work where specific guidance was not available, and in the interpretation of results. Where there was insufficient information regarding the likelihood of qualifying interests being present, or of the risk of impacts, the assessment used the precautionary principle to inform the judgement. The precautionary principle has been applied to ensure that any assessment errs on the side of caution, without being overly cautious. This principle means that the conservation objectives should prevail where there is uncertainty or that harmful effects will be assumed in the absence of evidence to the contrary.

3.5.10 The authors of this Addendum to the SIAA report were Dr Keith Jones, with advice from Dr Simon Zisman and Joanne Wilson. Surveys were carried out by a team of ecologists managed by Joanne Wilson. Summaries of the experience of the members of the team are provided in section 3.5 of the updated SIAA.

4 Stage 1: Screening

4.1 Summary of Screening Assessment

4.1.1 The updated SIAA report explains at section 4.1 that a screening exercise was carried out in October 2015 (Welsh Government, 2015), which identified five International/European sites that required consideration in the SIAA (Appropriate Assessment), these were:

- River Usk/Afon Wysg SAC;
- Severn Estuary/Môr Hafren SAC;
- Severn Estuary/Môr Hafren SPA;
- Severn Estuary/Môr Hafren Ramsar site; and
- Wye Valley and Forest of Dean Bat Sites/ Safleoedd Ystlumod Dyffryn Gwy a Fforest y Ddena SAC.

4.1.2 The full conservation objectives for these sites were provided in Appendix C of the updated SIAA report.

4.1.3 The estuary of the River Usk extends around the eastern and southern margins of the land proposed for relocation of businesses within Newport Docks. The fringing saltmarsh immediately south of the proposed development area at the south of Newport Docks is partly within the River Usk SAC, and the intertidal mud beyond is all within the SAC. The Severn Estuary SAC/SPA and Ramsar Site is some 450 m to the south.

4.1.4 The Screening Assessment for the M4CaN Scheme considered all the potential impacts, pathways and effects on European sites. Impacts considered included land take, physical presence, hydrological changes, dust deposition, discharge of pollutants to watercourses, aerial emissions (including effects on air quality), changes to traffic flows/speeds, noise and vibration, and visual disturbance and lighting impacts. The possible pathways for effects on European sites (i.e. SACs, SPAs and Ramsar sites) were fully considered including effects on mortality, disturbance and displacement of qualifying species, and loss or degradation of supporting habitats of those qualifying features.

4.1.5 A summary of the LSEs predicted to occur as a result of the M4CaN Scheme and the sites and features affected was provided in Table 4.1 of the updated SIAA report. Screening tables (following the DMRB recommended format) for the sites where LSEs were predicted to occur were presented in Appendix B of the updated SIAA report.

4.1.6 The LSEs set out in Table 4.1 of the updated SIAA report have been reviewed for this assessment of the proposed works and development at the south of Newport Docks. In undertaking this review, in addition to the information set out in the updated SIAA, consideration has also been given to relevant policies of the Newport Local Development Plan (LDP) (Newport City Council, 2015a) and, specifically, to the HRA of the LDP. For the purposes of this assessment it is assumed that any development within the Docks (including the relocation works proposed within this document) would comply not only with the LDP policies but also with the HRA of the Plan.

4.1.7 Policy EM2 is concerned with development within Newport Docks. The supporting text to this policy (paragraph 6.21) states that:

“The allocation at Newport Docks may result in barriers to movement and disturbance of features of the River Usk as well as the qualifying bird species of the Severn Estuary SPA and Ramsar site. Effects can be avoided or minimised through appropriate mitigation measures. In accordance with Policy GP5, the developer will be expected to provide sufficient information in order for a Habitat Regulation Assessment to be undertaken to ensure there are no likely significant effects upon the River Usk SAC and the Severn Estuary SPA and Ramsar site.”

4.1.8 The Habitats Regulations Assessment (HRA) of the LDP (Newport City Council, 2015b) states with regard to this policy's implications for the River Usk SAC that:

“The proposal is located adjacent to the River Usk. Due to the location of the proposed development adjacent to the River Usk, the Plan states that work must be completed in an environmentally sensitive manner as stated in the supporting text. This will include employing construction methods that minimise vibration (as to not disturb, or prevent a barrier to the movement of qualifying features of the SAC including allis and twaite shad). If night time working is required then a lighting scheme and specific design will be required to prevent light spill onto the Usk. Timings of works must be sensitive to qualifying features of the SAC. The works will result in loss of suitable otter habitat. As such, in accordance with the additional text in the Policy, 5 m of bank side habitat must be maintained. An otter survey within the proposed development site must be completed prior to construction, and appropriate mitigation put in place, this may include obtaining a licence from CCW. The additional dwellings could lead to an increase in disturbance through recreational pressure on the Usk. Furthermore, it is considered very unlikely that this development would have a significant effect as there are other accessible green spaces, e.g. Newport Wetlands, near by that new residents can use. In accordance with Policy GP5 the developer will be required to provide sufficient information to enable a HRA to be undertaken as part of the planning process. Unless the HRA can demonstrate that any effects on the SAC can be mitigated through measures described in the supporting text, the development will not be permitted.

Furthermore, due to policies within the Plan, this development proposal is not anticipated to contribute to coastal squeeze and Policy SP4 states that water quality will be protected during construction (as such there will be no effects from diffuse pollution or increased suspended solids as a result of the works). Due to the nature of the works there will be no abstraction from the River.

Therefore this policy proposal will not lead to any likely significant effects on the qualifying features of the River Usk SAC.”

4.1.9 With respect to the effects of Policy EM2 on the Severn Estuary SAC, the HRA states:

“The proposal is located adjacent to the River Usk which is a migratory route for some of the qualifying features of the Severn Estuary SAC including Allis shad. Due to the location of the proposed development adjacent to the River Usk, the supportive text in this Policy states that work must be completed in an environmentally sensitive manner. This will include employing construction methods that minimise vibration (as to not disturb, or prevent a barrier to the movement of qualifying features of the Severn Estuary SAC including allis and

twaité shad). If night time working is required then a lighting scheme and specific design will be required to prevent light spill onto the Usk. Timings of works must be sensitive to qualifying features of the SAC). In accordance with Policy GP5 the developer will be required to provide sufficient information to enable a HRA to be undertaken as part of the planning process. Unless the HRA can demonstrate that any effects on the SAC can be mitigated the development will not be permitted. Policy SP4 states that water quality will be protected during construction and as such there will be no effects from diffuse pollution or increased suspended solids as a result of the works. Due to the nature of the works there will be no abstraction from the Severn Estuary SAC.

Furthermore, due to policies within the Plan, this development proposal is not anticipated to contribute to coastal squeeze.

Therefore no likely significant effects are anticipated on the qualifying features of the Severn Estuary SAC as a result of this policy.

A HRA was carried out on this proposal in September 2008 and agreed with CCW. The appropriate assessment carried out identified the likely significant effects that this proposal would have on the Severn Estuary SAC, however, as stated within the report, the mitigation measures described should result in the proposal having no significant effects on the integrity of the SAC.

Therefore, no likely significant effects are anticipated on the qualifying features of the Severn Estuary SAC as a result of this policy."

4.1.10

With respect to the effects of Policy EM2 on the Severn Estuary SPA, the HRA states:

"The proposal is located adjacent to the River Usk which is a migratory route for some of the qualifying bird features of the Severn Estuary SPA. Due to the location of the proposed development, the Plan states that work must be completed in an environmentally sensitive manner. In accordance with Policy GP5 the developer will be expected to carry out a Habitat Regulation Assessment of these works as part of the planning process. Unless the HRA can demonstrate that any effects on the SPA can be mitigated the development will not be permitted.

A HRA was carried out on this proposal in September 2008 and agreed with CCW. The appropriate assessment carried out identified the likely significant effects that this proposal would have on the qualifying bird features of the Severn Estuary SPA, however, as stated within the report, the mitigation measures described should result in the proposal having no significant effects on the integrity of the Severn Estuary SPA.

Furthermore, due to policies within the Plan, this development proposal is not anticipated to contribute to coastal squeeze.

Policy SP4 states that water quality will be protected during construction and as such there will be no effects from diffuse pollution or increased suspended solids as a result of the works.

Therefore no likely significant effects are anticipated on the qualifying features of the Severn Estuary SPA site as a result of this policy."

4.1.11

With respect to the effects of Policy EM2 on the Severn Estuary Ramsar Site, the HRA states:

“The proposal is located adjacent to the River Usk which is a migratory route for some of the qualifying bird features of the Ramsar site. Due to the location of the proposed developments the Plan states that work must be completed in an environmentally sensitive manner. This will include employing construction methods that minimise vibration (as to not disturb, or prevent a barrier to the movement of qualifying features of the Ramsar site including allis and twaite shad). If night time working is required then a lighting scheme and specific design will be required to prevent light spill onto the Usk. Timings of works must be sensitive to qualifying features of the Ramsar site. In accordance with Policy GP5 the developer will be expected to carry out a Habitat Regulation Assessment of these works as part of the planning process.

Unless the HRA can demonstrate that any effects on the Ramsar site can be mitigated the development will not be permitted.

Furthermore, a HRA was carried out on the River Usk Strategy which outlines potential development along the River Usk. As outlined above, [the River Usk] is a migratory route for the qualifying bird features of the Ramsar site and as such the Severn Estuary Ramsar site was considered in this HRA. The conclusion was that the Strategy alone, and/or in combination could have significant effects on the integrity of the Severn Estuary Ramsar site. An Appropriate Assessment was then carried out and identified measures to avoid adverse effects on the Severn Estuary Ramsar site and this therefore concluded that there would be no adverse effects on the integrity of this European site as a result.

Furthermore, due to policies within the Plan, this development proposal is not anticipated to contribute to coastal squeeze.

Policy SP4 states that water quality will be protected during construction and as such there will be no effects from diffuse pollution or increased suspended solids as a result of the works.

Therefore no likely significant effects are anticipated on the qualifying features of the Severn Estuary Ramsar site as a result of this policy.”

4.1.12 The full text of Policy EM2 Newport Docks and the other relevant policies, GP5 General Development Principles – Natural Environment and SP4 Water Resources, and the supporting text, are set out in Appendix A.

4.1.13 Relevant provisions of Policy GP5 are that development will be permitted where:

- The proposals demonstrate how they avoid, or mitigate and compensate negative impacts to biodiversity, ensuring that there are no significant adverse effects on areas of nature conservation interest including international, and European protected habitats and species; and
- The proposal will not result in an unacceptable impact on water quality.

4.1.14 Relevant provisions of Policy SP4 are that development proposals should protect water quality during and after construction and result in no net increase in surface water run-off through the sustainable management of water resources by:

- the use of sustainable drainage systems;
- the reuse of water and reduction of surface water run-off through high quality designed developments;

- careful consideration of the impact upon finite water resources, particularly in terms of increased pressures on abstraction and the impact of climate change; and
- ensuring development is appropriately located and phased so that there is capacity in the waste water, sewerage and water supply as well as the protection of water quality.

4.1.15 This review has led to the conclusion 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. The nearest component of the SAC (the Mwyngloddfa Mynydd-bach SSSI) is some 18.3 km to the north west of the southern part of Newport Docks and there have been few records of either Greater or Lesser horseshoe bats away from the eastern and western sections of the M4CaN Scheme where there is suitable woodland/hedgerow habitat. This European site is therefore not considered further in this SIAA Addendum. The LSEs for the other four sites listed in paragraph 4.1.1 are presented below.

4.1.16 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.

4.1.17 The LSEs on European sites presented in Table 4.1 below are those which have been identified for the proposed works and development in the southern part of Newport Docks.

Table 4.1 Likely Significant Effects on European sites and features resulting from the proposed works and development associated with the relocation of businesses within Newport Docks (without mitigation).

Site	Qualifying Feature	Likely Significant Effect
River Usk SAC	Sea lamprey River lamprey Twaite shad Allis shad Atlantic salmon	Release of pollutants leading to water quality changes - physiological/behavioural and barrier effects on features during construction and operation.
		Noise and vibration - disturbance and barrier effects during migration, during construction.
		Lighting - behavioural and barrier effects during construction and operation.
	European Otter	Land take - habitat loss/fragmentation of otter habitat (e.g. resting areas) during construction.
		Physical presence - barrier to movement during construction and operation.
		Risk of injury on construction site/becoming trapped in excavations during construction and potential vehicle collision effects.
		Release of pollutants leading to water quality changes resulting in physiological effects which in turn could affect otters and/or their prey populations during construction and operation.
		Noise and vibration - disturbance and barrier effects during construction and operation.
		Visual and lighting - disturbance and barrier effects during construction and operation.
Severn Estuary SAC	River lamprey Sea lamprey Twaite shad	Release of pollutants leading to water quality changes in the SAC - physiological/behavioural/ barrier effects in features as they migrate during construction and operation.
		Noise and vibration - disturbance and barrier effects, outside of the SAC, during construction.
		Lighting - disturbance/behavioural and barrier effects, during bridge construction and operation.
Severn Estuary SPA	Ringed plover (during passage) Bewick's swan Dunlin Redshank Shelduck Curlew	Direct land take leading to habitat loss/fragmentation of roosting and foraging areas of features outside the Severn Estuary SPA during construction and operation.
		Physical presence leading to disturbance/ displacement/interruption of flight lines/roosts during construction and operation.

Site	Qualifying Feature	Likely Significant Effect
	Pintail	Use of the area - disturbance and displacement of species and interruption of flight lines/roosts, outside the site, during construction and operation.
	Assemblage of nationally important populations of wintering waterfowl	Noise and vibration - disturbance/displacement effects.
		Visual and lighting - disturbance of behavioural patterns during construction and operation.
Severn Estuary Ramsar Site	Bewick's swan	Direct land take - habitat loss /fragmentation of roosts and foraging habitat outside the Severn Estuary Ramsar site during construction and operation.
	Wintering European white-fronted goose	Physical presence - leading to interruption of flight lines/roosts outside the Ramsar Site during construction and operation.
	Dunlin	Use of the area - disturbance and displacement of species and interruption of flight lines/roosts outside the Ramsar Site during construction and operation.
	Redshank	Noise and vibration - disturbance to roosting and foraging areas outside the Ramsar Site during construction and operation.
	Gadwall	Visual and lighting - disturbance to normal behavioural patterns outside the Ramsar Site during construction and operation.
	Shelduck	
	Assemblage of nationally important populations of waterfowl.*	
	Assemblage of migratory fish:	Release of pollutants leading to water quality changes in the River Usk - physiological/behavioural/barrier effects in features outside of the Ramsar Site during construction and operation.
	Salmon	
	Sea trout	Noise and vibration - disturbance and barrier effects to migratory species, outside of the Ramsar site, during construction.
	Sea lamprey	
	River Lamprey	Lighting - behavioural and barrier effects, during construction and operation.
	Allis shad	
	Twaite shad	
	European eel	

4.2 In-combination assessment

4.2.1 The AIES Screening Assessment for the M4CAN Scheme (Welsh Government, 2015) identified a number of plans and projects which were to be considered in-combination with the M4CaN in the SIAA. As explained in section 4.2 of the updated SIAA report, the list of other projects was updated to include the period up to 24 August 2016 and an updated list provided as September ES Supplement (Appendix R17.2). Only one additional relevant application was identified. This was an application for the continued use of a site for motor racing on a limited number of days per year. The land has been used for this purpose under a series

of temporary consents and had therefore been considered as part of the baseline within the assessments undertaken to date.

4.2.2 Full details of the in-combination assessment are provided in section 4.2 of the updated SIAA report. No further consideration is necessary for this SIAA Addendum.

5 Stage 2: Appropriate Assessment

5.1.1 As explained in Section 4, based on the Screening Assessment of the proposed works and development at the south of Newport Docks, four European/International sites have been taken forward to the SIAA (Appropriate Assessment) stage. These are:

- River Usk/Afon Wysg SAC;
- Severn Estuary/Môr Hafren SAC;
- Severn Estuary/Môr Hafren SPA; and
- Severn Estuary/Môr Hafren Ramsar site.

5.1.2 The full conservation objectives for these sites are provided in in Appendix C of the updated SIAA report.

5.2 River Usk/Afon Wysg SAC

5.2.1 The screening assessment identified the potential for LSEs on migratory fish species (i.e. sea lamprey, river lamprey, twaite shad, allis shad and Atlantic salmon), all Annex II qualifying species of the River Usk SAC. The LSEs on migratory fish were:

- Release of pollutants into water courses leading to water quality changes and potential physiological/behavioural/barrier effects (construction and operation);
- Noise and vibration leading to disturbance/barrier effects to migratory fish (construction); and
- M4CaN bridge lighting shining on water causing behavioural/barrier effects (construction and operation).

5.2.2 The screening assessment also identified potential for LSEs on European otter, an Annex II qualifying species of the River Usk SAC. The LSEs on European otter were:

- Direct land take - habitat loss/fragmentation of otter habitat during construction.
- Physical presence/barrier to the movement of otters during construction and operation.
- Risk of injury on construction site/becoming trapped in excavations during construction and potential vehicle collision effects.
- Release of pollutants into watercourses leading to water quality changes and potential for physiological changes (e.g. toxicological) which in turn could impact upon otters and/or their prey during construction and operation.
- Noise and vibration leading to disturbance/displacement and potential barrier effects during construction and operation.
- Visual disturbance and lighting impacts leading to barrier effects during construction and operation.

Migratory Fish (i.e. sea lamprey, river lamprey, twaite shad, allis shad and Atlantic salmon)

Baseline

5.2.3 As explained in section 5.2 of the updated SIAA, Chapter 10 of the March 2016 ES describes the baseline for the migratory fish species occurring within the River Usk and wider Severn Estuary (see Section 10.4 of Chapter 10 to the ES and Appendix 10.18: Aquatic Environmental Baseline Study to the ES). No site-specific surveys were undertaken for migratory fish, and therefore the baseline is based on desk study information only. This was considered to be appropriate due to the availability of information and data on fish migration (particularly timing of migrations) from a range of sources around the Severn Estuary and River Usk, including long term monitoring at the Hinkley Power Station (e.g. Claridge *et al.*, 1986; EDF, 2011) and the information presented within the Severn Tidal Power reports (DECC, 2008), and also on the basis that the SIAA assumes that all of the qualifying migratory fish features of the River Usk SAC are present and would be passing through the Usk Estuary to reach spawning grounds.

5.2.4 The updated SIAA provides details of the baseline information for each of the relevant fish species, and their seasonal patterns of migration.

Potential Effects on Conservation Objectives

5.2.5 The conservation objectives for the features of the River Usk SAC are provided in Appendix C1 of the updated SIAA, including the vision for the migratory fish species features of the SAC, i.e. that these are to be in a favourable conservation status where all the specified conditions are satisfied. Appendix C1 also includes details of performance indicators for each of the migratory fish species which are part of the conservation objective and therefore may be relevant to the assessment. The favourable conservation status components for migratory fish in the River Usk SAC are summarised here:

- The conservation objectives for the River Usk watercourse must be met. This includes the sufficiency of the ecological status of the water environment to maintain a stable or increasing population of each feature/species, with elements of water quantity, quality, physical habitat and community composition and structure.
- The population of the features in the SAC is stable or increasing over the long term.
- The natural range of the features in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. The natural range is taken to mean those reaches where predominantly suitable habitat for each life stage exists over the long term. Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms.
- There is, and will probably continue to be, a sufficiently large habitat to maintain the features' populations in the SAC on a long term basis.

5.2.6 The following sections provide an assessment of the effects of the proposed works and development at the south of Newport Docks on the conservation objectives above, with the assessment undertaken under headings for the LSEs listed in paragraph 5.2. The assessments also consider mitigation to be implemented as part of the project for migratory fish (paragraph 5.2.7 *et seq.*). The effects on the

conservation objectives for the relevant migratory fish features of the River Usk SAC (and thereby potential for adverse effects on the integrity of the River Usk SAC) are then considered for each conservation objective individually using the information presented within the assessments below (see paragraph 5.2.31 *et seq.*). Effects on the integrity of the River Usk SAC are considered in paragraph 5.2.84, with consideration of effects on the conservation objectives of both migratory fish and otters. Where appropriate, reference is made to the relevant sections of the March 2016 ES and to the updated SIAA report.

Construction

Release of pollutants into watercourses during construction leading to water quality changes and potential physiological/behavioural/barrier effects

- 5.2.7** As explained in the updated SIAA report, Chapter 10 of the March 2016 ES assesses the impacts of releases of pollutants during construction leading to water quality changes and potential physiological/behavioural/barrier effects. With respect to the migratory fish listed as qualifying features of the River Usk SAC, these include pollution from inappropriate storage of chemicals and run-off from the construction area resulting in particulate pollution of watercourses (March 2016 ES Chapter 10, Section 10.8). The provisions of Policy SP4 of the Newport LDP require that development proposals should protect water quality during construction. It is likely that this protection would be delivered through the implementation of a Construction Environmental Management Plan (CEMP) following best practice. There would thus be no adverse effects on the water quality of the River Usk SAC as a result of the works and development at the south of Newport Docks considered in this Addendum to the SIAA.

Potential effects of pollution from inappropriate storage of chemicals or spillages on nearby or more distant receptors

- 5.2.8** The updated SIAA report concluded that in the unlikely event that pollutants did enter the Rivers Usk and Ebbw during the construction phase (noting that best practice measures would minimise the likelihood and magnitude of such a spill) they would be rapidly dispersed on the surface and in the water column, and subject to twice-daily tidal flushing, and so any effects on river water quality, and in turn migratory fish, are likely to be limited. As indicated above, the protection under Policy SP4 of the Newport LDP, and implementation of a CEMP, would ensure that there were no adverse effects on the River Usk SAC as a result of the construction of the works and development at Newport Docks considered in this Addendum to the SIAA.

Potential effects of run-off from the construction area resulting in particulate pollution of watercourses.

- 5.2.9** As reported in the updated SIAA, in addition to measures designed into the M4CaN Scheme, a Surface Water Management Plan (SWMP) would be developed and implemented to consider all drainage required during the construction phase. This would reference all industry and regulatory pollution prevention guidelines (see March 2016 ES Chapter 16: Drainage and the Water Environment). The SWMP would consider all construction related discharges into all waterbodies, including the River Usk, River Ebbw and Gwent Levels, to ensure

negative effects on water quality of these features are minimised during construction. It is anticipated that the works and development required to relocate businesses within Newport Docks would be subject to similar controls of discharges, and that this, taken together with the protection under Policy SP4 of the Newport LDP, and implementation of a CEMP, would ensure that there were no adverse effects on the River Usk SAC as a result of the construction of the works and development at the south of Newport Docks considered in this Addendum to the SIAA report.

Noise and vibration leading to disturbance/barrier effects to migratory fish

- 5.2.10** As explained in section 5.2 of the updated SIAA, Chapter 10 of the March 2016 ES assesses the impacts of underwater noise and vibration during construction of the M4CaN River Usk Crossing (see Chapter 10 of the ES, Section 10.8).
- 5.2.11** The supporting text of Policy EM2 of the Newport LDP (para 6.21) advises that the allocation at Newport Docks may result in barriers to movement and disturbance of features of the River Usk. These effects can be avoided or minimised through appropriate mitigation measures. The HRA of the LDP states with respect to Policy EM2 that the requirements for environmentally sensitive construction methods will:
- “.....include employing construction methods that minimise vibration (as to not disturb, or prevent a barrier to the movement of qualifying features of the SAC including allis and twaite shad).”*
- 5.2.12** The potential risks of noise effects on migratory fish as a result of piling for the foundations of the River Usk crossing, the east pylon of which would be adjacent to the river channel, were recognised and the requirements for restrictions on piling for the crossing to avoid such effects have been discussed with NRW. The agreed position is set out in Commitment 95 (previously 63) which states:
- “Piling to install the cofferdam and pylon piles for the east pylon of the River Usk Crossing would be scheduled to avoid the period of highest sensitivity for underwater noise related impacts on migratory fish in the River Usk (April to June inclusive). Outside of the period 1st April to 30th June there would be no restrictions on the timing of piling activities. In the exceptional circumstance that piling is required within the period 1st April to 30th June piling activities would not take place during the period 3 hours before high water to one hour after high water.”*
- 5.2.13** No other restrictions on piling were deemed to be necessary.
- 5.2.14** Where new buildings proposed for the area at the south of Newport Docks would be closer than 30 m to the River Usk, then similar restrictions on piling are likely to be required.
- 5.2.15** Where new buildings would be further than 30 m from the River Usk, provided bored or vibro-piling methods are used, and percussive piling techniques are avoided, no timing restrictions on piling should be necessary.
- 5.2.16** Based on the above considerations, there would be no adverse effects on the migratory fish populations of the River Usk SAC as a result of noise and vibration from construction of the works and development at the south of Newport Docks.

Operation

- 5.2.17** As explained in the updated SIAA, Chapter 10 of the March 2016 ES assesses the impacts of releases of pollutants during the operational phase of the M4CaN leading to water quality changes and potential physiological/behavioural/barrier effects. These include pollution from highway drainage during normal operation of the M4CaN and potential pollution events resulting from collisions or other traffic incidents on the M4CaN (March 2016 ES Chapter 10, Section 10.9). There would be potential risks of pollution associated with the roadways and car parks of the relocated businesses. In addition, there would be discharges of sewage from the relocated businesses, the potential effects of which need to be considered.

Effects of highway drainage and potential for pollution events

- 5.2.18** Policy SP4 of the Newport LDP requires that water quality be protected and that there should be no increase in surface run-off by the use of sustainable drainage systems.
- 5.2.19** As explained in section 2.1, a new storm network would be installed to serve the proposed development. It is proposed to collect any storm water flows generated from the proposed roofs and hardstandings via gulleys, downpipes and linear drainage channels. For Land Parcels A and C, storm flows would then be transmitted via a new storm gravity network and discharged to either South Dock or into the existing drainage ditch located to the east of the development via a new outfall. Any existing storm drainage networks or watercourses would be diverted to accommodate the proposals.
- 5.2.20** Pollution control measures such as catchpits and petrol interceptors would be installed prior to discharging to any water body. Subject to the operational requirements of the businesses, surface water runoff generated from parts of the relocated facilities which may be harmful to the environment may need to be stored and disposed of to a licensed treatment facility to be dealt with appropriately.
- 5.2.21** The proposals would ensure that water quality would be protected as required by Newport LDP Policy SP4 and that there would be no adverse effects on the water quality of the River Usk SAC.
- 5.2.22** No attenuation of storm flows is considered necessary as the discharge location is either under tidal influence or regulated by the locks. Consideration would need to be given to conditions when the storm outfalls are surcharged. Storage provision may be required to avoid any flooding of the proposed development.

Discharge of sewage

- 5.2.23** Policy SP4 of the Newport LDP requires that water quality be protected. As explained in section 2.1, for Land Parcels A and C it is proposed to install a new foul gravity sewer network to serve the proposed relocated facilities. Since no other means of transmitting foul flows away from the proposed development is available and that the existing networks are discharged into treatment tanks, it is proposed to gravitate all foul flows generated from the relocated facilities into either packaged treatment works, septic tanks or cesspits. Foul flows would then be treated to an appropriate level before being discharged into a nearby water body such as the docks. A new centralised treatment facility could be proposed or individual treatment facilities for each of the tenants which are relocated into the area. A pumped solution may be required following treatment of foul flows generated from the relocated facilities subject to confirmation of site levels and

inverts of existing foul sewage infrastructure. Alternatively, a pumped connection to a public foul sewer off site could be considered. However, this is not likely to be a viable option.

5.2.24 If the existing foul sewers can accept the relocated facilities, a connection to the existing foul network would be preferred. A foul flow assessment will be done to compare existing and proposed flows following relocation to determine whether there is capacity in the existing networks. Condition surveys will also be needed of the existing foul networks if this option is progressed.

5.2.25 Trade effluent separation may also be needed subject to confirmation of the processes proposed within the relocated facilities.

5.2.26 The proposals would ensure that water quality would be protected as required by Newport LDP Policy SP4 and that there would be no adverse effects on the water quality of the River Usk SAC.

Lighting - behavioural and barrier effects during construction and operation.

5.2.27 As explained in section 5.2 of the updated SIAA, Chapter 10 of the March 2016 ES assesses the impacts of artificial lighting on fish migration through the River Usk SAC during the construction phase (Section 10.8) and the operational phase (Section 10.9).

5.2.28 The supporting text to Policy EM2 of the Newport LDP (paragraph 6.21) advises that the allocation at Newport Docks may result in barriers to movement and disturbance of features of the River Usk. Effects can be avoided or minimised through appropriate mitigation measures. The HRA of the LDP states in relation to Policy EM2 that:

“.....If night time working is required then a lighting scheme and specific design will be required to prevent light spill onto the Usk.....”

5.2.29 The updated SIAA explains that, as part of the CEMP, lighting required during the construction of the Scheme would be designed and located to ensure that the working areas are precisely lit with minimal light-spill to watercourses including the Rivers Usk and Ebbw, as well as reens and ditches. The careful design and siting of construction lighting to avoid directly illuminating the waters of the River Usk and the River Ebbw would reduce the potential for adverse behavioural effects on migratory fish species during the construction phase.

5.2.30 It is anticipated that similar controls on construction and operational lighting would be implemented with respect to the proposed works and development in the south of Newport Docks thus avoiding impacts on migratory fish.

Effects of the M4CaN on the Conservation Objectives for migratory fish

5.2.31 On the basis of the above assessment, adverse effects (including barrier effects) on the qualifying migratory fish species of the River Usk SAC are not predicted to occur as a result of the construction or operation of the proposed works and development to relocate businesses in Newport Docks. Potential effects on the relevant conservation objectives (as presented in paragraph 5.2.5) are discussed in turn below, including consideration of whether the proposals have the potential: to interrupt progress or cause delays towards achieving these conservation objectives; to disrupt the factors which help maintain favourable condition; and/or

to interfere with the balance, distribution and density of key indicator species of favourable condition of the River Usk SAC. Each of the favourable conservation status components (in italics) are considered in turn.

The conservation objectives for the River Usk watercourse must be met. This includes the sufficiency of the ecological status of the water environment to maintain a stable or increasing population of each feature/species, with elements of water quantity, quality, physical habitat and community composition and structure.

5.2.32 The conservation objectives for the River Usk water course (including sufficiency of the ecological status of the water environment, with elements of water quantity, quality, physical habitat and community composition and structure) would not be affected by discharges from the works and development at the south of Newport Docks. The measures proposed to protect water quality in accordance with Newport LDP Policy SP4 would result in low levels of any potential contaminants and suspended sediments which would be discharged into the River Usk and River Ebbw, and there would be high dilution from the points of discharge.

5.2.33 This conservation objective would not be affected by lighting of the proposed works and development at the south of Newport Docks during construction or operation, or construction-related or operational underwater noise.

The population of the features in the SAC is stable or increasing over the long term.

5.2.34 The ability of the populations of the migratory fish features in the SAC to be stable or increasing over the long term would not be affected by release of pollutants from the works and development at the south of Newport Docks, by underwater noise associated with construction or operation, nor by construction or operational lighting.

The natural range of the feature in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. The natural range is taken to mean those reaches where predominantly suitable habitat for each life stage exists over the long term. Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms.

5.2.35 The proposed works and development at the south of Newport Docks would not involve construction in the wetted channel of the River Usk. The proposals would not affect the hydrological or geomorphological processes and forms of the river which provide suitable habitat to maintain the natural ranges of the migratory fish features of the River Usk SAC. Therefore the natural range of the features would not be reduced.

There is, and will probably continue to be, a sufficiently large habitat to maintain the feature's population in the SAC on a long-term basis.

5.2.36 The proposed works and development at the south of Newport Docks would not affect the extent of the habitat of the River Usk, nor its ability to support the migratory fish features of the River Usk SAC on a long-term basis.

European Otter

5.2.37 The potential for LSEs on European otter include:

- Habitat loss/fragmentation if otter habitats (i.e. breeding sites, resting sites, foraging areas and commuting routes) are present within or in the vicinity of the proposed works and development at the south of Newport Docks;
- Physical presence of the works and development at the south of Newport Docks leading to displacement/barrier effects and a temporary (construction) or long term (operation) restriction in movement;
- Risk of injury/becoming trapped in excavations during construction and potential vehicle collisions (construction and operation);
- Release of pollutants into watercourses leading to water quality changes and potential for physiological changes (e.g. toxicological) which in turn could impact upon otters and/or their prey (construction and operation);
- Noise and vibration leading to disturbance/displacement and potential barrier effects (construction and operation); and
- Visual disturbance and lighting leading to barrier effects and restriction to movement (construction and operation).

Baseline

- 5.2.38** The updated SIAA explains that following a serious decline in the latter half of the 20th century, there has been a significant recovery in the number and range of otters in England and Wales as a result of environmental improvements including a ban on harmful pesticides, and improvements in pollution control and water quality, which in turn have benefitted fish prey.
- 5.2.39** The updated SIAA summarises the baseline information for otter based on desk study and surveys. The ecology desk study identified numerous records of otters focused around the main rivers (Usk, Ebbw and Rhymney) and scattered across the Gwent Levels.
- 5.2.40** In 2014, an otter survey of 1,442 waterbodies included in the M4CaN Scheme study area, identified otter field signs along 18 surveyed waterbodies (Appendix 10.8 of the March 2016 ES). No signs were recorded along the River Usk; however, changing water-levels along this tidal river are likely to have impacted upon the durability of field signs such as footprints.
- 5.2.41** In 2015, a further survey was undertaken of 58 previously unsurveyed watercourses (Appendix 10.25 of the March 2016 ES). No field signs of otter were recorded, despite there being an abundance of suitable habitat.
- 5.2.42** The relatively low number of waterbodies in which evidence of otter activity was recorded in the 2014 and 2015 surveys indicates that although otters are present, they are widely dispersed and at low densities.
- 5.2.43** NRW had reported the presence of a potential otter holt on the Docks Way Landfill site adjacent to the eastern bank of the River Ebbw, and this reflected the desk study information for this area. An otter survey of the landfill was completed during 2016 (as reported in the September 2016 ES Supplement), with follow-up surveys in early 2017. Although spraints were recorded, no breeding or resting sites were found. Many of the areas shown on earlier aerial imagery as being of potential value to otters were found to have been infilled and/or were located within the areas of recent disturbance. Therefore, although there is continued evidence of otter presence in this area, it is now unlikely to support a breeding site owing to the level of disturbance and limited vegetation cover.

5.2.44 An additional otter survey is being carried out specifically within the proposed site of the works and development at the south of Newport Docks. The first of four survey visits was undertaken during the Phase 1 habitat survey on the 14th and 15th June 2017. During the visit the following signs that could indicate the presence of otters were surveyed for:

- holts;
- laying-up/resting sites;
- spraints;
- anal jelly (a jelly-like secretion left by adult otters for scent marking purposes);
- bank slides, runs and tunnels;
- prey remains; and
- footprints.

5.2.45 Results of this first survey visit reported no signs that could indicate the presence of otters, including no signs of potential resting places or holts.

Potential Effects on the Conservation Objectives

5.2.46 The conservation objectives for the features of the River Usk SAC are provided in Appendix C1 of the updated SIAA, including the vision for European otter (i.e. that it is to be in a favourable conservation status, where all the conditions detailed below are satisfied). The favourable conservation status components for European otter in the River Usk SAC are summarised here:

- The population of otters in the SAC is stable or increasing over the long term and reflects the natural carrying capacity of the habitat within the SAC, as determined by natural levels of prey abundance and associated territorial behaviour.
- The natural range of otters in the SAC is neither being reduced nor is it likely to be reduced for the foreseeable future. The natural range is taken to mean those reaches that are potentially suitable to form part of a breeding territory and/or provide routes between breeding territories. The whole area of the River Usk SAC is considered to form potentially suitable breeding habitat for otters. No otter breeding site should be subject to a level of disturbance that could have an adverse effect on breeding success. Where necessary, potentially harmful levels of disturbance must be managed.
- The safe movement and dispersal of individuals around the SAC is facilitated by the provision, where necessary, of suitable riparian habitat and underpasses, ledges, fencing etc. at road bridges and other artificial barriers.

5.2.47 The following sections provide an assessment of the effects of the proposed works and development at the south of Newport Docks on the conservation objectives above, with the assessment undertaken under headings for the potential LSEs listed in paragraph 5.2.37 above. The assessments also consider mitigation for otter to be implemented as part of the Scheme (paragraph 5.2.50 *et seq.*). The

effects on conservation objectives for otters of the River Usk SAC (and thereby potential for adverse effects on integrity of the feature) are then considered for each conservation objective in turn using the information presented within the assessments below (see paragraph 5.2.47 *et seq.*). Effects on the integrity of the River Usk SAC are considered in paragraph 5.2.84, with consideration of effects on the conservation objectives of both migratory fish and otters.

- 5.2.48** The assessment takes account of the HRA of the Newport LDP which, in considering the effects of Policy EM2, states that:

“.....The works will result in loss of suitable otter habitat. As such, in accordance with the additional text in the Policy, 5 m of bank side habitat must be maintained. An otter survey within the proposed development site must be completed prior to construction, and appropriate mitigation put in place, this may include obtaining a licence from CCW.....”

- 5.2.49** This assessment assumes that the relocation works would be carried out in accordance with Policy EM2 and the HRA assessment of the LDP.

Land take - habitat loss/fragmentation of otter habitat (construction)

- 5.2.50** Much of the habitat which would be lost in the development area at the south of Newport Docks (see Table 2.1) is of little value for otter. The major part of the site comprises ephemeral/short perennial vegetation. However, some of the habitats which would be lost would provide potentially suitable conditions for otter holts or resting places (though not breeding sites owing to the levels of human disturbance. These include tall ruderal vegetation (0.59 ha), dense scrub (4.45 ha), broadleaved woodland (0.23 ha) and reed bed (0.22 ha).

- 5.2.51** Should otters use the area of Land Parcels A and C, with the relocated buildings and their associated infrastructure in place, dense scrub would remain in the vicinity of, and around the perimeter of the land parcels adjacent to the saltmarsh and edge of the river, which would be of value to otters.

Physical presence - barrier to the movement of otters

- 5.2.52** The proposed works and development at the south of Newport Docks would not encroach on the channel of the River Usk. There would thus be no impediment to otters moving up and down the river itself as a result of the development.

- 5.2.53** The HRA of the Newport LDP notes with respect to Policy EM2 that:

“....the works will result in loss of suitable otter habitat. As such, in accordance with the additional text in the Policy, 5 m of bank side habitat must be maintained.”

- 5.2.54** Provision of such a corridor of bankside habitat would further ensure that otters would be able to move past the development site.

- 5.2.55** The assessment in the updated SIAA assumed that otters from the River Usk SAC do use watercourses/waterbodies and associated terrestrial habitat on the Gwent Levels and could interact with otters from the Levels. Given that the works and development at the south of Newport Docks would not impact upon movement of otters along the river, it would not compromise the ability of the otters from north of Newport to access the Levels, should they wish to. It also would not affect the ability of the small proportion of the population south of Newport to access the Levels or the upstream sections of the River Usk.

Risk of injury on construction site/becoming trapped in excavations during construction and potential collision effects

- 5.2.56** The assessment in the updated SIAA report took into account that the extent of the M4CaN construction corridor, the nature of construction works (including major works such as piling and major excavation), and the amount, size and/or type of vehicles, machinery and equipment that would be required, meant that construction works could present a risk of injury or fatality to any otters that might enter the site.
- 5.2.57** This would also be the case for the proposed works and development at the south of Newport Docks. The construction site boundary alongside the river would be fenced with appropriate exclusion fencing suitable for otters, and it is also assumed that lighting and disturbance would deter them during this period.
- 5.2.58** A means of escape would be provided as necessary from larger excavations (i.e. greater than 0.5 m deep), such as the provision of a plank of wood against the walls of an excavation to act as a ladder, or the profiling of at least one wall of an excavation to provide a gentle slope that otters could use to walk out of the excavation.
- 5.2.59** Toxic or otherwise potentially harmful stored materials or equipment would be secured against possible access by humans and this would also exclude otters.
- 5.2.60** An emergency procedure to be followed in the event of encountering an otter or potential otter rest/holt would be given to contractors. An appropriately qualified and experienced ecologist would attend the site as soon as practicable in order to confirm reports of otter activity, and to assess the need for further surveys to confirm the presence of otter holts/resting places and/or the need for a development licence for otters to enable works to recommence.

Release of pollutants leading to water quality changes/physiological effects which in turn could affect prey populations

- 5.2.61** The updated SIAA recognised that construction would result in the production of dust and run-off which could affect both the watercourses and potential otter prey that may be present. Protective measures for the handling and storage of potentially hazardous liquids, response to spillages, provisions for surface water drainage (including interception of oil and sediment) and dust control during construction would be undertaken in accordance with the:
- Pollution Control and Prevention, Ground and Surface Water, Materials and Site Waste Outline Management Plans;
 - Outline Construction Environmental Management Plan;
 - Legislative requirements; and
 - NRW best practice guidelines.
- 5.2.62** Measures would include the appropriate locating of soil, equipment and vehicle storage sites away from sensitive areas, including the River Usk.
- 5.2.63** It is assumed, taking into account the provisions of Newport LDP policies GP5 and SP4 regarding water quality, that similar protective measures would be implemented for the construction of the works and development at the south of Newport Docks.

5.2.64 With such pollutant management measures in place, there would be no significant adverse effect on water quality in the River Usk SAC during construction or operation of the works and development at the south of Newport Docks and, therefore, no impact on otters, their population size and range would be expected as a result of changes in water quality.

Noise and vibration - disturbance and barrier effects

5.2.65 The updated SIAA recognises that, although otters have been observed on construction sites during the daytime, measures would be implemented to limit the potential impact of noise during construction of the new section of motorway, and would include the following:

- Measures to control noise and vibration during construction would be included in the CEMP, and these are referred to in section 6.8 of the pre-CEMP (Appendix SR3.2 of the December 2016 ES Supplement).
- Normal working hours would be 07:00 to 19:00 Monday to Friday and 07:00 to 17:00 on Saturdays, excluding public holidays. The majority of construction activities would be undertaken within this period. In certain circumstances, specific works may have to be undertaken outside the normal working hours. Night working would also be required in some cases but, whenever practicable, construction would be limited to day-time hours, when typically, otters are not moving around.
- Use of silenced or quieter plant where available and turning off plant when not in use.

5.2.66 These measures would ensure that the impacts of construction noise on otters are minimised. Given the requirements of Newport LDP Policy EM2 regarding the need for mitigation measures with respect to the features of the River Usk SAC, it is assumed that similar measures would need to be in place for construction of the works and development at the south of Newport Docks.

5.2.67 As concluded at paragraph 5.2.34 underwater noise would not have a significant long term adverse effect on the fish population in the River Usk SAC, a source of food for the SAC otter population.

Visual disturbance and lighting impacts - barrier effects

5.2.68 The updated SIAA recognises that, although otters are known to travel through built-up areas, lighting can result in a disturbance impact on otters (Highways Agency 2001).

5.2.69 The supporting text to Policy EM2 of the Newport LDP (paragraph 6.21) advises that the allocation at Newport Docks may result in barriers to movement and disturbance of features of the River Usk, and that effects can be avoided or minimised through appropriate mitigation measures. The HRA of the LDP states in relation to Policy EM2 that:

“.....If night time working is required then a lighting scheme and specific design will be required to prevent light spill onto the Usk.....”

5.2.70 During the construction period for the new section of motorway, lighting would be provided as necessary during normal working hours in the autumn and winter and for night time working. Night working could be undertaken along the M4CaN route

including in the River Usk SAC. Security lighting would be provided at construction compounds on a 24-hour basis.

5.2.71 In order to minimise the impact of light spill on otter, lighting for specific construction tasks would be set at low level wherever practicable; inward-facing security lighting would be provided at construction compounds; and construction and operational light fittings would be directed towards the road and away from other habitats of potential value to otters (including the River Usk, and areas of woodland and scrub along the banks of the River).

5.2.72 The need for screen fencing around the works area would be considered within 100 m of any holt (that might be identified during pre-construction surveys) to provide additional protection against disturbance from movement during construction.

5.2.73 Given the requirements of the HRA of the Newport LDP, it is assumed that similar measures would be implemented for the works and development at the south of Newport Docks.

Effects of the M4CaN on the Conservation Objectives for Otter

5.2.74 Potential effects on the relevant conservation objectives for otter (as presented in paragraph 5.2.46) are discussed in turn below, including consideration of whether the proposed works and development at the south of Newport Docks have the potential to interrupt progress, or cause delays, towards achieving these conservation objectives, disrupt the factors which help maintain favourable condition, and/or interfere with the balance, distribution and density of key indicator species of favourable condition of the River Usk SAC.

The population of otters in the SAC is stable or increasing over the long term and reflects the natural carrying capacity of the habitat within the SAC, as determined by natural levels of prey abundance and associated territorial behaviour.

5.2.75 Otter prey abundance would not be adversely affected by potential pollutant events (as concluded for the assessment of effects on migratory fish, paragraph 5.2.34). Mitigation measures would ensure the protection of the River Usk against any significant effects of pollution during construction and throughout operation and, therefore, would also protect potential otter prey within the River Usk and other watercourses.

5.2.76 As concluded at paragraph 5.2.10 *et seq.*, underwater noise associated with construction of the works and development at the south of Newport Docks would not have a significant adverse effect on the fish population in the SAC, a source of food for the SAC otter population.

5.2.77 Taking into account the limited loss of habitat suitable for otters within the site for the proposed relocation of businesses at the south of Newport Docks, and the retention of a 5m habitat corridor around the margin of the proposed development as referred to in the HRA of the Newport LDP (which would ensure that there would be no constraint on otters being able to access the full length of the SAC), the relocation of businesses would not have any effects that would reduce the carrying capacity of the SAC for otters.

The natural range of otters in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. The natural range is taken to mean those reaches that are potentially suitable to form part of a breeding territory and/or

provide routes between breeding territories. The whole area of the River Usk SAC is considered to form potentially suitable breeding habitat for otters. No otter breeding site should be subject to a level of disturbance that could have an adverse effect on breeding success. Where necessary, potentially harmful levels of disturbance must be managed.

5.2.78 Taking into account that the River Usk SAC otter population is known largely to inhabit stretches of the river to the north of Newport, and considering the mitigation measures proposed (including the medium- to long-term provision of additional habitat of potential value to otters, including breeding otters, across the M4CaN Scheme), it is not expected that the land take for the relocation of businesses to the south of Newport Docks would result in an adverse effect on the natural range of otters in the SAC.

5.2.79 No otter breeding site is known to be located within the footprint of the site for the relocation of businesses at the south of Newport Docks, nor in the immediate surrounding area.

5.2.80 Mitigation measures to limit construction and operational light-spill onto surrounding habitat of potential value to otters, including the banks of the River Usk, would ensure that lighting would not impact upon the range of otters in the SAC.

5.2.81 The natural range of otters in the SAC would not therefore be affected by the proposed works and development at the south of Newport Docks.

The safe movement and dispersal of individuals around the SAC is facilitated by the provision, where necessary, of suitable riparian habitat and underpasses, ledges, fencing etc. at road bridges and other artificial barriers.

5.2.82 The safe movement and dispersal of otters along the River Usk during construction of the works and development at the south of Newport Docks would be facilitated by the provision of a 5m corridor of bank side habitat. Otters would also be able to continue to use the river itself for movement and dispersal along the river. Therefore, the relocation of businesses would not impact significantly on the movement and dispersal of otters around the SAC.

5.2.83 Thus, the otters of the River Usk SAC would continue to be able to move freely within this part of their range, both during the construction and operation of the relocated businesses.

Effect on Site Integrity

5.2.84 Based on the information presented above, no adverse effect on the integrity of the River Usk SAC, with specific regard to the qualifying fish and otter populations, is predicted as a result of the proposed works and development at the south of Newport Docks, either alone or in-combination with other plans and projects. The proposed development in Newport Docks would not affect the overall assessment of the M4CaN Scheme with respect to the River Usk SAC.

5.3 Severn Estuary/Mor Hafren SAC

5.3.1 The Screening Assessment identified potential for LSEs on migratory fish species (i.e. sea lamprey, river lamprey and twaite shad), Annex II qualifying species of the Severn Estuary SAC. The LSEs on migratory fish were predicted to occur

outside the boundaries of the Severn Estuary SAC (i.e. adults migrating upstream through the Severn Estuary to spawning grounds in the River Usk and juveniles migrating downstream to the Severn Estuary from spawning/nursery grounds in the River Usk) and were identical to those described in paragraph 5.2 for the River Usk SAC.

Baseline

- 5.3.2** The baseline characterisation for migratory fish associated with the Severn Estuary SAC is described under the River Usk SAC in paragraphs 5.2.3 and 5.2.4.

Potential Effects on the Conservation Objectives

- 5.3.3** The conservation objectives for the migratory fish interest features of the Severn Estuary SAC are provided in Appendix C2 of the updated SIAA. The conservation objectives for these interest features are to maintain the features in a favourable condition. Appendix C2 of the updated SIAA provides details of the specific attributes, measures and targets for determining favourable condition for the relevant migratory fish interest features. In summary, the interest features will be considered to be in a favourable condition when, subject to natural processes, the following conditions are met:

- The migratory passage of both adult and juvenile stages of the interest feature is not obstructed or impeded by physical barriers, changes in flows or poor water quality.
- The size of the interest feature's population within the Severn Estuary and rivers draining into it is at least maintained and is at a level which is sustainable in the long term.
- The abundances of prey species forming the interest feature's food resource within the estuary are maintained.
- Toxic contaminants in the water column and sediment are below levels which would pose a risk to the ecological objectives described above.

- 5.3.4** The following sections provide an assessment of the effects of the proposed works and development at the south of Newport Docks on the conservation objectives above, with the assessment undertaken under the headings for the LSEs listed in paragraph 5.3.1. The assessments also consider mitigation to be implemented for migratory fish. The effects on conservation objectives for the relevant migratory fish features of the Severn Estuary SAC (and thereby potential for adverse effects on the integrity of the Severn Estuary SAC) are then considered for each conservation objective individually using the information presented within the assessments below (see paragraph 5.3.19 *et seq.*). Effects on the integrity of the Severn Estuary SAC are considered in paragraph 5.3.25.

Construction

Release of pollutants into water courses during construction leading to water quality changes and potential physiological/behavioural/barrier effects

- 5.3.5** As explained at paragraph 5.2.7, the provisions of Policy SP4 of the Newport LDP require that development proposals should protect water quality during construction. It is likely that this protection would be delivered through the

implementation of a Construction Environmental Management Plan (CEMP) following best practice. There would thus be no adverse effect on water quality in the River Usk or the River Severn as a result of the construction of the works and development at Newport Docks considered in this Addendum to the SIAA.

Potential effects of pollution from inappropriate storage of chemicals or spillages on nearby or more distant receptors

- 5.3.6** As explained at paragraph 5.2.8, in the unlikely event that pollutants did enter the Rivers Usk and Ebbw during the construction phase (noting that best practice measures would minimise the likelihood and magnitude of such a spill) they would be rapidly dispersed on the surface and in the water column, and subject to twice daily tidal flushing, and so any effects on river water quality, and in turn migratory fish, are likely to be limited. As indicated above, the protection under Policy SP4 of the Newport LDP, and implementation of a CEMP, would ensure that there were no adverse effects of pollution on the River Usk or the Severn Estuary SAC as a result of the construction of the works and development at Newport Docks considered in this Addendum to the SIAA.

Potential effects of run-off from the construction area resulting in particulate pollution of watercourses.

- 5.3.7** As explained in paragraph 5.2.9, it is anticipated that the works and development required to relocate businesses within Newport Docks would be subject to similar controls of discharges to those which would be implemented for the construction of the new section of motorway, and this, taken together with the protection under Policy SP4 of the Newport LDP, and implementation of a CEMP, would ensure that there were no adverse effects of pollution on the River Usk or the Severn Estuary SAC as a result of the construction of the works and development at Newport Docks considered in this Addendum to the SIAA report.

Operation

- 5.3.8** As explained at paragraph 5.2.17, there would be potential risks of pollution associated with the roadways, hardstandings and car parks of the proposed works and development at the south of Newport Docks. In addition, there would be discharges of sewage from the relocated businesses, the potential effects of which need to be considered.

Effects of highway drainage and potential for pollution events

- 5.3.9** As explained at paragraph 5.2.18, Policy SP4 of the Newport LDP requires that water quality be protected and that there should be no increase in surface run-off by the use of sustainable drainage systems.
- 5.3.10** As explained in section 2.1, a new storm network would be to be installed to serve the proposed development. As set out in section 5.2, the proposals would ensure that water quality would be protected as required by Newport LDP Policy SP4, and that there would be no adverse effects on the water quality of the River Usk SAC. This in turn would ensure that there were no adverse effects on water quality in the Severn Estuary SAC.

Discharge of sewage

- 5.3.11** Policy SP4 of the Newport LDP requires that water quality be protected. As explained in section 2.1, for Land Parcels A and C it is proposed to install a new foul gravity sewer network to serve the proposed relocated facilities. As set out in section 5.2, the proposals would ensure that water quality would be protected as required by Newport LDP Policy SP4 and that there would be no adverse effects on the water quality of the River Usk SAC. This in turn would ensure that there were no adverse effects on water quality in the Severn Estuary SAC.

Noise and vibration leading to disturbance/barrier effects to migratory fish (construction)

- 5.3.12** As explained at paragraphs 5.2.10 to 5.2.16, the supporting text of Policy EM2 of the Newport LDP (para 6.21) advises that the allocation at Newport Docks may result in barriers to movement and disturbance of features of the River Usk SAC. These effects can be avoided or minimised through appropriate mitigation measures, and the HRA of the LDP states with respect to Policy EM2 that the requirements for environmentally sensitive construction methods will:

“.....include employing construction methods that minimise vibration (as to not disturb, or prevent a barrier to the movement of qualifying features of the SAC including allis and twaite shad).”

- 5.3.13** As explained at paragraphs 5.2.14 to 5.2.16, where new buildings proposed for the area at the south of Newport Docks would be closer than 30 m to the River Usk, then similar restrictions on piling are likely to be required.

- 5.3.14** Where new buildings would be further than 30 m from the River Usk, provided bored or vibro-piling methods are used, and percussive piling techniques are avoided, no timing restrictions on piling should be necessary.

- 5.3.15** Based on the above considerations, there would be no adverse effects on the migratory fish populations of the Severn Estuary SAC as a result of noise and vibration from construction of the works and development at the south of Newport Docks.

Lighting - behavioural and barrier effects during construction and operation.

- 5.3.16** As explained at paragraphs 5.2.27 to 5.2.30, the supporting text to Policy EM2 of the Newport LDP (paragraph 6.21) advises that the allocation at Newport Docks may result in barriers to movement and disturbance of features of the River Usk SAC. Effects can be avoided or minimised through appropriate mitigation measures, and that the HRA of the LDP states in relation to Policy EM2 that:

“.....If night time working is required then a lighting scheme and specific design will be required to prevent light spill onto the Usk.....”

- 5.3.17** As part of the CEMP of the M4CaN Scheme, lighting required during the construction of the Scheme would be designed and located to ensure that the working areas are precisely lit with minimal light spill to watercourses including the Rivers Usk and Ebbw, as well as reens and ditches. The careful design and siting of construction lighting to avoid directly illuminating the waters of the River Usk and the River Ebbw would reduce the potential for adverse behavioural effects on migratory fish species during the construction phase. This would in turn minimise the effects on the migratory fish of the Severn Estuary SAC

- 5.3.18** Noting the requirements of Policy EM2 of the Newport LDP, it is anticipated that similar controls on construction and operational lighting would be implemented with respect to the proposed works and development in the south of Newport Docks avoiding impacts on migratory fish.

Effects of the M4CaN on the Conservation Objectives for migratory fish

- 5.3.19** Potential effects on the relevant conservation objectives (as presented in paragraph 5.3.3) for migratory fish of the Severn Estuary SAC are discussed in turn below, including consideration of whether the Scheme has the potential to interrupt progress or cause delays towards achieving these conservation objectives, disrupt the factors which help maintain favourable condition and interfere with the balance, distribution and density of key indicator species of favourable condition of the Severn Estuary SAC:

The migratory passage of both adult and juvenile stages of the interest feature is not obstructed or impeded by physical barriers, changes in flows or poor water quality.

- 5.3.20** The measures which would be expected to be implemented to protect water quality in accordance with Newport LDP Policy SP4 would result in low levels of any potential contaminants and suspended sediments which would be discharged into the River Usk and River Ebbw, and there would be high dilution from the points of discharge. The migratory passage of the fish interest feature of the Severn Estuary SAC would not be obstructed or impeded by discharges from the works and development at the south of Newport Docks.

- 5.3.21** This conservation objective would also not be affected by lighting of the proposed works and development at the south of Newport Docks during construction or operation, or construction-related or operational underwater noise.

The size of the interest feature's population within the Severn Estuary and rivers draining into it is at least maintained and is at a level which is sustainable in the long term.

- 5.3.22** The size of the populations of migratory fish of the Severn Estuary SAC, and the maintenance of those populations in the long term, would not be affected by release of pollutants from the works and development at the south of Newport Docks, by underwater noise associated with construction or operation, or by construction or operational lighting.

The abundances of prey species forming the interest feature's food resource within the estuary are maintained.

- 5.3.23** Neither the abundance of prey species in the Rivers Ebbw and Usk, nor the Severn Estuary itself, forming the food resource of the migratory fish feature of the Severn Estuary SAC would be adversely affected by the release of pollutants, noise or lighting from the proposed works and development at the south of Newport Docks.

Toxic contaminants in the water column and sediment are below levels which would pose a risk to the ecological objectives described above.

- 5.3.24** Toxic contaminants in the water column and sediment would not be increased by discharges arising from construction or operation of the proposed works and

development at the south of Newport Docks, and would therefore not result in an increase in levels which would pose a risk to the ecological objectives.

Effect on Site Integrity

5.3.25 Based on the information presented above, no adverse effects on the integrity of the Severn Estuary SAC are predicted as a result of the proposed works and development at the south of Newport Docks, alone or in-combination with other plans or projects. The proposed development in Newport Docks would not affect the overall assessment of the M4CaN Scheme with respect to the Severn Estuary SAC.

5.4 Severn Estuary SPA

5.4.1 As explained in the updated SIAA report, the Screening Assessment for the M4CaN Scheme determined there was potential for LSEs on the qualifying bird features of the Severn Estuary SPA. These are Bewick's swan, European white-fronted goose, dunlin, redshank, shelduck, gadwall, and an internationally important assemblage of waterfowl (henceforth referred to as "the assemblage"). The proposed works and development at the south of Newport Docks would not directly affect land within the boundary of the Severn Estuary SPA, and therefore any LSEs would occur outside the Severn Estuary SPA within land that is potentially used by birds from the SPA at certain times of the year, and therefore linked to the SPA (i.e. 'functionally linked land'). These are:

- Direct land take leading to habitat loss of roosting, foraging or refuge sites (construction and operation).
- Presence of the new development leading to potential disturbance/displacement of features, interruption of flight lines and/or potential collision risk (construction and operation). This could be as a result of visual, noise or vibration disturbance.
- Noise and vibration resulting in disturbance to/displacement from roosting, foraging or refuge sites within close proximity to the new development (construction and operation); and
- Disturbance to night behaviour patterns by construction and lighting (construction and operation).

Baseline

5.4.2 As explained in section 5.4 of the updated SIAA report, the Severn Estuary ranks among the top ten British estuaries for the size of visiting waterfowl populations that it supports over winter. It is also of particular importance as a staging area in autumn and spring for migratory waterfowl species as it lies on the East Atlantic Flyway route. This factor is covered more in the Ramsar Site designation (see Appendix C2 of the updated SIAA report).

5.4.3 The wintering and passage populations of birds in the Severn Estuary are designated features of the SPA.

5.4.4 Chapter 10 of the March 2016 ES (Section 10.4) presents the findings of the ecology desk study undertaken in 2015 and the results of bird surveys in 2007/8, 2014 (Appendix 10.12 of the ES) and 2014/15 (Appendix 10.16 of the ES). A further wintering bird survey was carried out along the M4CaN Scheme between

September 2015 and March 2016. The findings of this survey were reported in the September 2016 ES Supplement Appendix S10.4.

5.4.5 A wintering bird survey covering the section of the docks to which it is proposed that tenants would be relocated was carried out on behalf of Associated British Ports by Thomson Ecology over three visits in February and March 2015 (included in August 2017 ES Supplement Appendix 2.2). The survey was carried out as part of the assessment of the proposals to install a wind turbine.

5.4.6 Because of the nature of the works and development at the south of Newport Docks, and the level of human activity that exists in the areas around it, it is judged that birds outwith the study area of this survey would not be susceptible to impacts as a result of this development.

5.4.7 During the wintering bird survey at the south of Newport docks in 2015, the named Severn Estuary SPA species Bewick's swan, European white-fronted goose, dunlin, shelduck and gadwall were not recorded.

5.4.8 One qualifying feature of the Severn Estuary SPA was recorded. This was redshank, with a peak count of 1 bird.

5.4.9 In addition to the named SPA species, a further list of species is considered under the heading of species 'assemblage'. This part of the Severn Estuary SPA citation relates to the species assemblage as a whole, rather than simply referring to each individual species. Of these species, pintail, wigeon, teal, pochard, ringed plover, grey plover, whimbrel, spotted redshank, lapwing and shoveler were not recorded at the site during the Thomson Ecology survey.

5.4.10 The following Severn Estuary SPA assemblage species were recorded at the site in the Thomson Ecology survey (presented with percentages of the Severn Estuary SPA population during WeBS counts 2008/09 to 2012/13):

- Mallard, peak count of 2;
- Tufted duck, peak count of 4; and
- Curlew, peak count of 1.

Potential Effects on the Conservation Objectives for Wintering Birds.

5.4.11 The conservation objective for the Severn Estuary SPA qualifying species considered within this assessment is to maintain the feature's population and supporting habitats (i.e. those within the boundary of the SPA) in a favourable condition. The conservation objectives for the features of the SPA are presented in full in Appendix C2 of the updated SIAA report, including details of the specific attributes, measures and targets for determining favourable condition for the bird interest features of the SPA and their supporting habitats. The relevant conservation objectives are summarised in section 5.4 of the updated SIAA report.

5.4.12 The following sections provide an assessment of the effects of the proposed works and development in the south of Newport Docks on the conservation objectives for the wintering bird features of the Severn Estuary SPA with the assessment undertaken under the headings for the LSEs listed in paragraph 5.4.1.

5.4.13 The assessments also consider mitigation to be implemented as part of the project for wintering birds (paragraph 5.4.14 *et seq.*). The potential for adverse effects on

the conservation objectives is then considered using the information presented within the assessments below (see paragraph 5.4.21 *et seq.*). Overall effects on the integrity of the Severn Estuary SPA (bringing together all of the conservation objectives) are considered in paragraph 5.4.22.

Direct land take leading to habitat loss of roosting, foraging or refuge sites if located outwith the Severn Estuary SPA in the vicinity of the route

- 5.4.14** The development at the south of Newport Docks is not situated within the Severn Estuary SPA. Consequently, the protected site and the habitats contained within it would not be affected by direct land take. The habitats that would be affected are listed in Section 2.2; none of these are considered optimal roosting, foraging or refuge sites for species included in the Severn Estuary SPA citation.

Physical presence of the development leading to potential disturbance/displacement of features due to visual, noise or vibration disturbance

- 5.4.15** Direct effects on features of the Severn Estuary SPA and supporting habitats within the SPA boundary would not occur as the Scheme is entirely outwith the SPA. Construction and operation of the development at the south of Newport Docks is predicted to result in a localised displacement/disturbance effect, which is likely to be apparent within the development site only. This is due to the pre-existing levels of other disturbance sources in the local area, and the suboptimal nature of the habitats in this area for the qualifying features of the Severn Estuary SPA. It is predicted that any ornithological interests, including those associated with the Severn Estuary SPA, will relocate to other areas.

Disturbance to night behaviour patterns by construction and operation

- 5.4.16** Lighting 'spillage' may cause behavioural disturbance to birds, including traits such as extended feeding patterns at night rather than roosting.

- 5.4.17** The supporting text to Policy EM2 of the Newport LDP (paragraph 6.21) advises that the allocation at Newport Docks may result in barriers to movement and disturbance of the qualifying bird species of the Severn Estuary SPA and Ramsar Site. Effects can be avoided or minimised through appropriate mitigation measures and that the HRA of the LDP states (in relation to Policy EM2) that:

“.....If night time working is required then a lighting scheme and specific design will be required to prevent light spill onto the Usk.....”

- 5.4.18** The updated SIAA explains that, as part of the CEMP, lighting required during the construction of the Scheme would be designed and located to ensure that the working areas are precisely lit with minimal light spill to watercourses including the Rivers Usk and Ebbw.

- 5.4.19** It is anticipated that similar controls on construction and operational lighting would be implemented with respect to the proposed works and development in the south of Newport Docks thus reducing the potential for impacts on wintering birds associated with the SPA.

- 5.4.20** In view of the sensitivity of the location, when operational, is it likely that a lighting strategy would be designed to minimise light spill outside the development and thus minimise any impact on Severn Estuary SPA species.

Effects on Conservation Objectives

- 5.4.21** The potential effects on the conservation objectives for the relevant wintering birds of the Severn Estuary SPA (redshank, and the assemblage, as presented in paragraph 5.4.11) are set out in detail in section 5.4 of the updated SIAA. The proposed works and development at the south of Newport Docks would not have any additional effects which would interrupt progress or cause delays towards achieving these conservation objectives, nor would they disrupt the factors which help maintain favourable condition; they would therefore not interfere with the favourable condition of the Severn Estuary SPA.

Effect on Site Integrity

- 5.4.22** Based on the information presented above, no adverse effects on the integrity of the Severn Estuary SPA are predicted as a result of the proposed works and development at the south of Newport Docks, alone or in-combination with other plans or projects. The proposed development in Newport Docks would not affect the overall assessment of the M4CaN Scheme with respect to the Severn Estuary SPA.

5.5 Severn Estuary Ramsar Site

- 5.5.1** As explained in the updated SIAA report, the Screening Assessment for the M4CaN Scheme concluded there was the potential for LSEs on the qualifying bird interest features of the Severn Estuary Ramsar Site (i.e. Bewick's swan, European white-fronted goose, dunlin, redshank, shelduck, gadwall and an internationally important assemblage of waterfowl) and the migratory fish interest features (i.e. sea lamprey, river lamprey, twaite shad, allis shad, Atlantic salmon, sea trout and European eel).
- 5.5.2** In addition to these species, herring gull and lesser black-backed gull are included on the Ramsar Site Information Sheet as a noteworthy species and species for future inclusion, respectively. The citation states that approximately 4,167 apparently occupied lesser black-backed gull nests are present, as well as 1,540 apparently occupied herring gull nests.
- 5.5.3** These species were considered in Chapter 10 of the March 2016 ES, but were not taken forward for assessment in the updated SIAA given the low numbers of individuals recorded and the sporadic nature of the records made. Herring gull and lesser-black backed gull (features of the Severn Estuary Ramsar Site) were reported in the study area. A mixture of adult and juvenile birds of both species were present during a site visit in July 2017, all in association with existing buildings. Given the timing of the survey visit it was difficult to assess whether they actually bred in this location but it is assumed they did. The Ramsar Site citation states that approximately 4,167 apparently occupied lesser black-backed gull nests are present within the SPA, as well as 1,540 apparently occupied herring gull nests. These species are known to range over large areas (50km – 60km from breeding colonies).
- 5.5.4** As set out for the Severn Estuary SAC and SPA in Sections 5.3 and 5.4 above, the proposed works and development at the south of Newport Docks would not directly affect land within the boundary of the Severn Estuary Ramsar Site, and therefore any LSEs would only occur on land in the vicinity rather than within the Ramsar Site itself. Effects on qualifying bird interest features of the Severn

Estuary Ramsar Site are identical to those of the Severn Estuary SPA (see paragraph 5.4.1). Effects on qualifying migratory fish interest features of the Severn Estuary Ramsar Site are identical to those of the River Usk SAC (see paragraph 5.3.1), with the exception of the LSEs identified for European eel and sea trout.

5.5.5 Five additional bird species are included as part of the Ramsar Site designation, in addition to those in the SPA citation. These are migratory species with peak counts in spring/autumn - little egret, ruff, whimbrel, Eurasian curlew (breeding) and greenshank. These species are further discussed in paragraph 5.5.17 *et seq.*

5.5.6 European eel and sea trout are both listed as features of the Severn Estuary Ramsar Site, and migrate through the Severn Estuary to the River Ebbw and River Usk, with European eel also occurring throughout the watercourses of the Gwent Levels. The Screening Assessment therefore identified the following LSEs on migratory fish species:

- Release of pollutants into water courses leading to water quality changes and potential physiological/behavioural/barrier effects during migration through the River Usk (construction and operation).
- Noise and vibration leading to disturbance/barrier effects during migration through the River Usk (construction); and
- Lighting for the relocated businesses at the south of Newport Docks causing behavioural/barrier effect on fish migration through the (construction and operation).

Migratory Fish

Baseline

5.5.7 The baseline characterisation of qualifying migratory fish associated with the Severn Estuary Ramsar Site (excluding European eel and sea trout) is described under the River Usk SAC (paragraphs 5.2.3 and 5.2.4).

5.5.8 Baseline information on European eel and sea trout (both listed as features of the Severn Estuary Ramsar Site, but not of the River Usk SAC and Severn Estuary SAC) is provided in section 5.5 of the updated SIAA

Potential Effects on the Conservation Objectives for the migratory fish interest of the Seven Estuary Ramsar Site

5.5.9 The conservation objectives for the migratory fish interest features of the Severn Estuary Ramsar Site are identical to those for the Severn Estuary SAC and are provided in Appendix C2 of the updated SIAA. As with the conservation objectives for the interest features of the Severn Estuary SAC, the conservation objectives for these interest features is simply to maintain the features in a favourable condition. Appendix C2 of the updated SIAA provides details of the specific attributes, measures and targets for determining favourable condition for the Seven Estuary Ramsar Site and for the purpose of relevant Ramsar Site interest features. These are identical to those of the Severn Estuary SAC referred to at d at paragraph 5.3.3).

5.5.10 The following sections provide an assessment of the effects of the Scheme on the conservation objectives above, with the assessment undertaken under headings for the LSEs listed in paragraph 5.5.6. The assessments also consider mitigation

to be implemented for migratory fish (as set out for the Severn Estuary SAC at paragraphs 5.3.5 *et seq.*). The potential effects on sea trout and European eel would be the same as for the other migratory species of the River Usk SAC and the Severn Estuary SAC since, in the vicinity of the works and development at the south of Newport Docks, they would be confined to the River Usk and the River Ebbw. The effects on the conservation objectives for migratory fish of the Severn Estuary Ramsar Site are described in paragraphs 5.5.11 *et seq.* Effects on the integrity of the Severn Estuary Ramsar Site as a whole are considered in paragraph 5.5.21, with consideration of effects on the conservation objectives for both migratory fish and wintering birds.

Effects of the Newport Docks relocation on the Conservation Objectives for Migratory Fish

- 5.5.11** The potential effects on the relevant conservation objectives for migratory fish species of the Severn Estuary Ramsar Site (as presented in paragraph 5.3.3) are discussed in turn below.

The migratory passage of both adult and juvenile stages of the interest feature is not obstructed or impeded by physical barriers, changes in flows or poor water quality.

- 5.5.12** As explained for the Severn Estuary SAC at paras 5.3.20 to 5.3.21 above, the migratory passage of the migratory fish interest feature of the Severn Estuary Ramsar Site would not be obstructed or impeded by discharges from the works and development at the south of Newport Docks.

- 5.5.13** This conservation objective would also not be affected by lighting of the proposed works and development at the south of Newport Docks during construction or operation, or construction-related or operational underwater noise.

The size of the interest feature's population within the Severn Estuary and rivers draining into it is at least maintained and is at a level which is sustainable in the long term.

- 5.5.14** As explained for the Severn Estuary SAC (paragraph 5.3.22), the size of the populations of migratory fish of the Severn Estuary Ramsar Site, and the maintenance of those populations in the long term, would not be affected by release of pollutants from the works and development at the south of Newport Docks, by underwater noise associated with construction or operation, or by construction or operational lighting.

The abundances of prey species forming the interest feature's food resource within the estuary are maintained.

- 5.5.15** As explained for the Severn Estuary SAC at paragraph 5.3.23, neither the abundance of prey species in the Rivers Ebbw and Usk, nor the Severn Estuary itself, forming the food resource of the migratory fish feature of the Severn Estuary Ramsar Site would be adversely affected by the release of pollutants, noise or lighting from the proposed works and development at the south of Newport Docks.

Toxic contaminants in the water column and sediment are below levels which would pose a risk to the ecological objectives described above.

- 5.5.16** As explained for the Severn Estuary SAC at paragraph 5.3.24 above, toxic contaminants in the water column and sediment would not be increased by

discharges arising from construction or operation of the proposed works and development at the south of Newport Docks and would therefore not result in an increase in levels which would pose a risk to the ecological objectives of the Severn Estuary Ramsar Site.

Birds

5.5.17 The baseline characterisation for ornithological features of the Severn Estuary SPA and Ramsar Site is described in paragraph 5.4.2 *et seq.*, with a summary of the site-specific survey data provided in Tables 5.3 to 5.5 of the updated SIAA. As explained in paragraph 5.5.5 of the updated SIAA, five additional species are included in the Ramsar Site designation. These are migratory species with peak counts in spring/autumn - little egret, ruff, whimbrel, Eurasian curlew (breeding) and greenshank. Little egret, Eurasian curlew, greenshank and ruff were recorded during transect and vantage point surveys for the M4CaN Scheme, although consistently in low numbers as follows:

- Little egret: maximum count of 5 individuals during transect surveys;
- Curlew: maximum count of 12 individuals during transect surveys;
- Greenshank: maximum count of 1 individual during transect surveys;
- Ruff: 1 individual recorded during all surveys (vantage point survey).

5.5.18 None of these species were recorded at the site for the proposed works and development at the south of Newport Docks in a wintering bird survey carried out in 2015.

5.5.19 These species were considered in Chapter 10 of the March 2016 ES, but were not taken forward for assessment in the updated SIAA given the low numbers of individuals recorded and the sporadic nature of the records made. As discussed in paragraph 5.5.3, herring gull and lesser-black backed gull (features of the Severn Estuary Ramsar Site) were reported in the study area. A mixture of adult and juvenile birds of both species were present during a site visit in July 2017, all in association with existing buildings. Given the timing of the survey visit it was difficult to assess whether they actually bred in this location but it is assumed they did. The Ramsar Site citation states that approximately 4,167 apparently occupied lesser black-backed gull nests are present within the SPA, as well as 1,540 apparently occupied herring gull nests. These species are known to range over large areas (50km – 60km from breeding colonies). The existing buildings would not be demolished and it is not envisaged that the proposed development would have any effect on either species.

5.5.20 The potential LSEs, potential effects on the conservation objectives, and effects on the conservation objectives taking into account mitigation measures for the qualifying bird species of the Severn Estuary Ramsar Site, are the same as those described previously for the Severn Estuary SPA (see section 5.4).

Effect on Site Integrity

5.5.21 Based on the information presented in this section and in section 5.4, no adverse effects on the integrity of the Severn Estuary Ramsar Site are predicted as a result of the proposed works and development at the south of Newport Docks, alone or in-combination with other plans or projects. The proposed development in Newport Docks would not affect the overall assessment of the M4CaN Scheme with respect to the Severn Estuary Ramsar Site.

6 Monitoring and Reporting

- 6.1.1** Section 6 of the updated SIAA sets out the proposals for monitoring and reporting for the qualifying features of the relevant European/International designated sites. To the extent that monitoring may be required as a result of the proposals for works and development at the south of Newport Docks, this will be a matter for the planning applications for the individual developments. It is anticipated that any such monitoring as may be required during or post-construction would be the subject of planning conditions or legal agreements. However, it should be noted that monitoring is a requirement of HRA, whatever the consenting regime,
- 6.1.2** Any such monitoring as may be required in terms of European interest features would be limited to migratory fish, otter and wintering birds.

7 Consultation

- 7.1.1** Section 7 of the updated SIAA summarises the consultations which were undertaken with the regulatory authorities during the preparation of the draft plan level Strategic Habitat Regulations Assessment for the M4CaN (see Welsh Government, 2014) and for the subsequent project-level AIES of the M4CaN Scheme which is reported in the updated SIAA.

8 Conclusions

8.1.1 Section 8 of the updated SIAA demonstrated that the M4CaN Scheme would not have an adverse effect on the integrity of the River Usk SAC, Severn Estuary SAC, SPA and Ramsar Site, or the Wye Valley and Forest of Dean Bat Sites SAC, either alone or in-combination with other projects or plans. This conclusion was reached on the basis of information provided which showed that progress towards achieving the relevant conservation objectives of the qualifying features would not be interrupted or delayed. Nor would the M4CaN disrupt the factors which help maintain favourable condition or interfere with the balance, distribution and density of key indicator species of favourable condition of these European sites.

8.1.2 This assessment of the further implications of the proposed works and development at the south of Newport Docks on European sites has similarly concluded that there would be no adverse effects on the integrity of the River Usk SAC or the Severn Estuary SAC, SPA and Ramsar Site. No additional likely significant effects were identified for the Wye Valley and Forest of Dean Bat Sites SAC, and so no further assessment for this site was required.

8.1.3 Section 8 of the updated SIAA explained that DMRB HD44/09 guidance (Highways Agency, 2009) recommends that, for the purposes of Regulation 61 of the Conservation of Habitats and Species Regulations 2010, answers to the following four questions (a to d) should be provided (based on the information presented) when concluding a SIAA. These are addressed in turn for the proposed works and development at the south of Newport Docks here.

(a) Is the proposal directly connected with or necessary to site management for nature conservation?

8.1.4 The proposed works and development at the south of Newport Docks is neither connected with nor necessary to site management for any of the relevant European sites.

(b) Is the proposal likely to have a significant effect on the features of the site of European Importance, alone or in combination with other plans and projects?

8.1.5 The AIES Stage 1: Screening of the proposed works and development at the south of Newport Docks concluded that LSEs could not be ruled out on qualifying features of the following European sites (summarised in Section 4 of this SIAA Addendum):

- River Usk SAC;
- Severn Estuary SAC;
- Severn Estuary SPA; and
- Severn Estuary Ramsar Site;

8.1.6 It was therefore necessary for an Appropriate Assessment to be carried out for the proposed works and development at the south of Newport Docks on the qualifying features of these four sites. In accordance with DMRB HD44/09 guidance, it is therefore necessary to provide answers to questions (c) and (d) below.

(c) What are the implications of the effects of the proposal on the sites' conservation objectives and will it delay or interrupt progress towards achievement of any of the objectives?

8.1.7 It has been 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 Habitat 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.

(d) Can it be ascertained that the proposal will not adversely affect the integrity of the site beyond reasonable scientific doubt?

8.1.8 Based on the assessment set out in this SIAA Addendum, it is 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.

8.1.9 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.

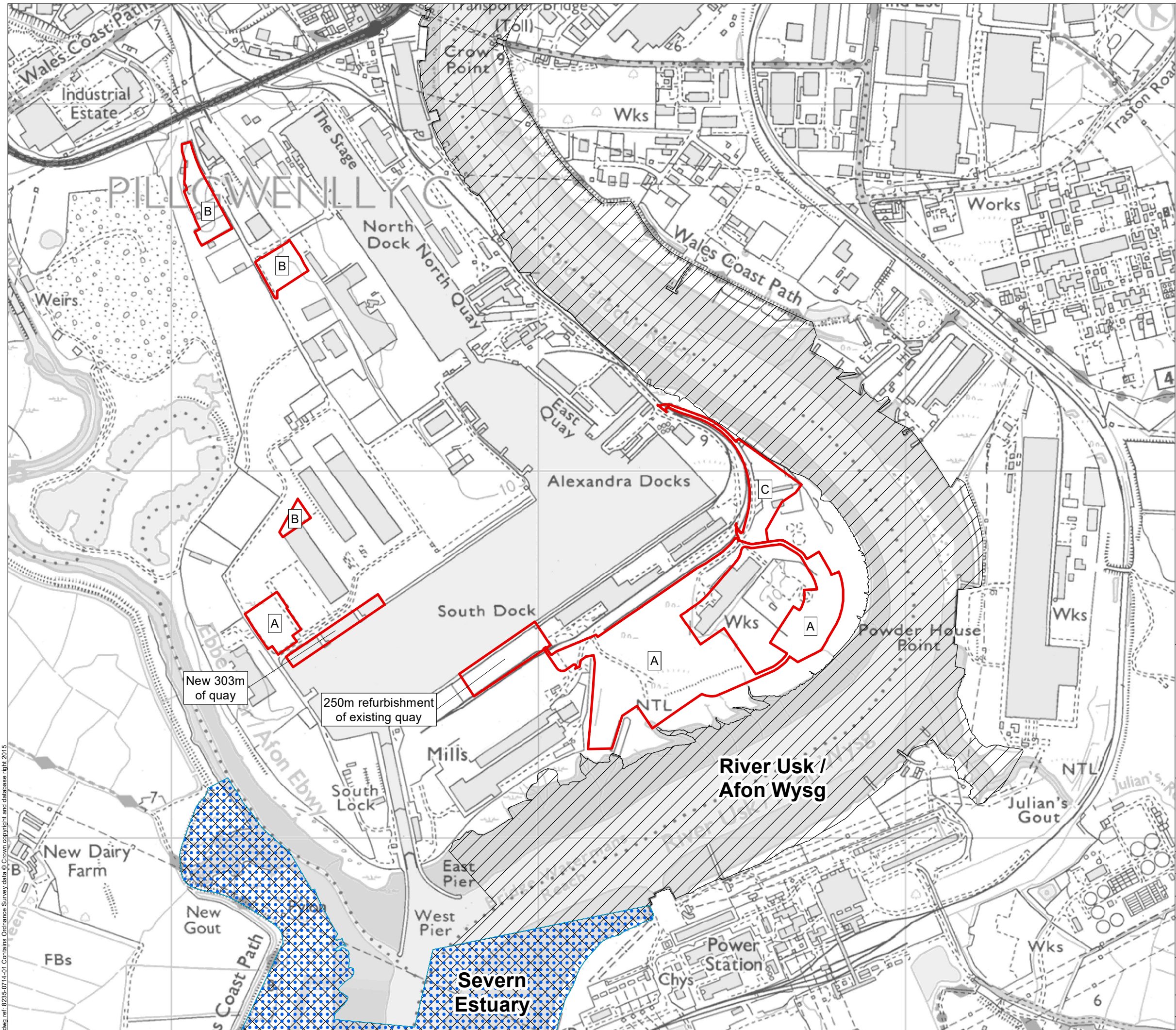
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Figures

Figure 1 Internationally Designated Sites

Figure 2 Phase 1 Habitat Survey



- Legend**
- Land Parcels
 - Ramsar site
 - Special Area of Conservation
 - Special Protection Area



Newport Docks SIAA Addendum

Internationally Designated Sites

Figure: 1	Revision: 1
Date: August 2017	Status: AT ISSUE
Drawn: CR	Checked: NB

Scale: A3 @ 1:10,000
0 165 330m





Legend

- Land Parcels
- Species poor hedgerow
- Non- native treeline
- Broadleaved woodland
- Intertidal mud/ sand
- Saltmarsh habitats (NVC required)
- Drainage ditch
- Standing water (ephemeral)
- Reed bed
- Establishing grassland on made ground
- Amenity grassland
- Building
- Hardstanding
- Ephemeral/ short perennial
- Bare ground
- Scrub dense continuous
- Scattered scrub
- Tall ruderal
- Rubble mound (unvegetated)
- Rubble mound
- Target note



Llywodraeth Cymru
Welsh Government

Newport Docks SIAA Addendum

Phase 1 Habitat Survey

Figure: 2	Revision: 1
Date: August 2017	Status: AT ISSUE
Drawn: CR	Checked: JW

Scale: A3 @ 1:4,000
0 65 130m



Appendices

Appendix A

Newport Local Development Plan 2011-2026 Policies, supporting text and Habitats Regulations Assessment of Policy EM2

Policy SP4 Water Resources

DEVELOPMENT PROPOSALS SHOULD MINIMISE WATER CONSUMPTION, PROTECT WATER QUALITY DURING AND AFTER CONSTRUCTION AND RESULT IN NO NET INCREASE IN SURFACE WATER RUN-OFF THROUGH THE SUSTAINABLE MANAGEMENT OF WATER RESOURCES BY:

- i) THE USE OF SUSTAINABLE DRAINAGE SYSTEMS;
- ii) THE REUSE OF WATER AND REDUCTION OF SURFACE WATER RUN-OFF THROUGH HIGH QUALITY DESIGNED DEVELOPMENTS;
- iii) CAREFUL CONSIDERATION OF THE IMPACT UPON FINITE WATER RESOURCES, PARTICULARLY IN TERMS OF INCREASED PRESSURES ON ABSTRACTION AND THE IMPACT OF CLIMATE CHANGE.
- iv) ENSURING DEVELOPMENT IS APPROPRIATELY LOCATED AND PHASED SO THAT THERE IS CAPACITY IN THE WASTE WATER, SEWERAGE AND WATER SUPPLY AS WELL AS THE PROTECTION OF WATER QUALITY.

- 2.19 Sustainability is an overriding objective of the Plan with conservation and enhancement of water resources being a main element. SUDS (Sustainable Drainage Systems) are designed to minimise the quantity and improve the quality of surface water before discharge by dealing with run-off water as close to the source as possible. This minimises the pollution discharged into watercourses, reduces the quantity of water discharged to sewer or outfall while increasing the amount of water infiltrating the ground. These effects can benefit the nature conservation, landscape and amenity value of both site and surroundings and be a major contributor to sustainable development. Further advice on SUDS will be provided through anticipated technical guidance at the national scale, local guidance will be provided where necessary. Developers will be expected to demonstrate that they can reduce any adverse effects of their proposed development on the water environment by encouraging the use of SUDS, where appropriate, at an early stage of the process.
- 2.20 Natural Resources Wales has the statutory responsibility to manage water resources and it does this through its abstraction licensing procedures. Almost all water abstractions require a licence. Dwr Cymru/Welsh Water provides mains water supplies to the majority of households and many of the businesses in the plan area. All abstractions, including existing ones, impact on the water environment through removal of water from our rivers and lakes. The recent review of consents undertaken as part of the European Habitat Regulations requirements by the Natural Resources Wales has sought to ensure that the water resource being removed from recognised Natura 2000 ecological sites is not having or will not have a significant

effect on the conservation objectives for the site. Therefore developers are required to ensure that they consider the impact of such a review on future water supply and that they are able to provide a sustainably sourced water supply and waste water treatment in line with any restrictions placed on abstractions set by the Environment Agency (now Natural Resources Wales) review. The developer must ensure that there is environmental capacity to support the development. The Council will seek to ensure that Natural Resources Wales is consulted on any proposal which is likely to affect the supply of water, the quality of water, or is likely to be affected by, or cause flooding, as appropriate.

Policy GP5 General Development Principles – Natural Environment

DEVELOPMENT WILL BE PERMITTED WHERE, AS APPLICABLE:

- i) THE PROPOSALS ARE DESIGNED AND MANAGED TO PROTECT AND ENCOURAGE BIODIVERSITY AND ECOLOGICAL CONNECTIVITY, INCLUDING THROUGH THE INCORPORATION OF NEW FEATURES ON OR OFF SITE TO FURTHER THE UK, WELSH AND/OR NEWPORT BIODIVERSITY ACTION PLANS;
- ii) THE PROPOSALS DEMONSTRATE HOW THEY AVOID, OR MITIGATE AND COMPENSATE NEGATIVE IMPACTS TO BIODIVERSITY, ENSURING THAT THERE ARE NO SIGNIFICANT ADVERSE EFFECTS ON AREAS OF NATURE CONSERVATION INTEREST INCLUDING INTERNATIONAL, EUROPEAN, NATIONAL, WELSH SECTION 42³² AND LOCAL PROTECTED HABITATS AND SPECIES, AND PROTECTING FEATURES OF IMPORTANCE FOR ECOLOGY;
- iii) THE PROPOSAL WILL NOT RESULT IN AN UNACCEPTABLE IMPACT ON WATER QUALITY;
- iv) THE PROPOSAL SHOULD NOT RESULT IN THE LOSS OR REDUCTION IN QUALITY OF HIGH QUALITY AGRICULTURAL LAND (GRADES 1, 2 AND 3A);
- v) THERE WOULD BE NO UNACCEPTABLE IMPACT ON LANDSCAPE QUALITY;
- vi) THE PROPOSAL INCLUDES AN APPROPRIATE LANDSCAPE SCHEME, WHICH ENHANCES THE SITE AND THE WIDER CONTEXT INCLUDING GREEN INFRASTRUCTURE AND BIODIVERSITY NETWORKS;
- vii) THE PROPOSAL INCLUDES APPROPRIATE TREE PLANTING OR RETENTION WHERE APPROPRIATE AND DOES NOT RESULT IN THE UNACCEPTABLE LOSS OF OR HARM TO TREES, WOODLAND OR HEDGEROWS THAT HAVE WILDLIFE OR AMENITY VALUE.

3.21 Newport has a rich diversity of habitats and species of nature conservation importance. National planning policy requires the planning system to play its full role in conserving and improving the natural environment. Those measures required for the protection of recognised biodiversity sites differ according to the scale of designation. The level of protection set at the European and National scale is set out in legislation, and there are a number of sites in Newport in these categories. Those sites recognised at the local scale are a material planning consideration and should be protected in line with national and local planning policy.

- 3.22 Developers should consider wildlife at the pre application stage and must seek to avoid impacting on wildlife features in line with the relevant statutory and non-statutory provisions. Developments should also seek to provide biodiversity enhancement, whatever the current level. Supplementary Planning Guidance on Wildlife and Development will be produced in order to advise developers how to achieve high quality natural environments while addressing statutory duties. Development proposals should be accompanied by appropriate ecological surveys and appraisals as requested by the Council. Please note that mitigations measures might have been identified within the Habitat Regulation Assessment of Supplementary Planning Guidance.

Policy EM2 Newport Docks

THE EXISTING 206 HECTARE EMPLOYMENT SITE AT NEWPORT DOCKS IS PROTECTED FOR B1, B2 AND B8 USES. THE COUNCIL WILL SUPPORT SUCH DEVELOPMENT WHERE IT CAN BE DEMONSTRATED THAT THE DEVELOPMENT IS COMPLEMENTARY TO AND DOES NOT HINDER THE OPERATIONAL USE OF THE PORT.

- 6.18 There is a surplus of land within Newport Docks which could better meet Newport's economic development objectives if brought into alternative, productive, employment generating uses within Use Class B1, B2 or B8. Proposals should be in accordance with Technical Advice Note 18 –Transport (2007) which sets out guidance on the assessment of development in docks areas. Complementary uses should relate to the primary purpose of the port operation namely bulk handling, warehousing and storage facilities. Complementary uses may also include energy and infrastructure projects.
- 6.19 Newport Docks provides a particular opportunity to provide for port related employment. One aspect of this is in energy generation, where it has certain locational advantages, including accessibility for fuel and distance from residential or other uses upon which there might be an impact. Recent schemes granted planning permission have included a biomass powerplant, the erection of wind turbines and the installation of solar PV panels. Development that reduces emissions of greenhouse gases in a sustainable manner similar to those already permitted, including renewable and low carbon energy generation, will be supported.
- 6.20 A Welsh Government Direction concerning a safeguarding corridor for the M4 relief road affects the site (see Constraints Map). The route is still subject to consultation, and has not at this stage been confirmed. Development proposals will need to have regard to this.
- 6.21 The allocation at Newport Docks may result in barriers to movement and disturbance of features of the River Usk as well as the qualifying bird species of the Severn Estuary SPA and Ramsar site. Effects can be avoided or minimised through appropriate mitigation measures. In accordance with Policy GP5, the developer will be expected to provide sufficient information in order for a Habitat Regulation Assessment to be undertaken to ensure there are no likely significant effects upon the River Usk SAC and the Severn Estuary SPA and Ramsar site.
- 6.22 The plan sets out within its Mineral Policies the need to safeguard wharves and rail for the continued transportation of aggregate. Proposals within the dock area will need to consider their impact upon the future transportation requirements as the

majority of aggregate supply for Newport is based on marine won sand and gravel supply.

Habitat Regulations Assessment of Policy EM2

HABITATS REGULATIONS ASSESSMENT SCREENING REPORT

Newport City Council

Newport Local Development Plan (LDP) 2011-2026

Adoption Version – January 2015

River Usk SAC

The Habitat Regulations Assessment (HRA) of the LDP states with reference to Policy EM2's implications for the River Usk SAC that:

“The proposal is located adjacent to the River Usk. Due to the location of the proposed development adjacent to the River Usk, the Plan states that work must be completed in an environmentally sensitive manner as stated in the supporting text. This will include employing construction methods that minimise vibration (as to not disturb, or prevent a barrier to the movement of qualifying features of the SAC including allis and twaite shad). If night time working is required then a lighting scheme and specific design will be required to prevent light spill onto the Usk. Timings of works must be sensitive to qualifying features of the SAC. The works will result in loss of suitable otter habitat. As such, in accordance with the additional text in the Policy, 5 m of bank side habitat must be maintained. An otter survey within the proposed development site must be completed prior to construction, and appropriate mitigation put in place, this may include obtaining a licence from CCW. The additional dwellings could lead to an increase in disturbance through recreational pressure on the Usk. Furthermore, it is considered very unlikely that this development would have a significant effect as there are other accessible green spaces, e.g. Newport Wetlands, near by that new residents can use. In accordance with Policy GP5 the developer will be required to provide sufficient information to enable a HRA to be undertaken as part of the planning process. Unless the HRA can demonstrate that any effects on the SAC can be mitigated through measures described in the supporting text, the development will not be permitted.

Furthermore, due to policies within the Plan, this development proposal is not anticipated to contribute to coastal squeeze and Policy SP4 states that water quality will be protected during construction (as such there will be no effects from diffuse pollution or increased suspended solids as a result of the works). Due to the nature of the works there will be no abstraction from the River.

Therefore this policy proposal will not lead to any likely significant effects on the qualifying features of the River Usk SAC.”

Severn Estuary SAC

The HRA of the LDP states with reference to Policy EM2's implications for the Severn Estuary SAC that:

The proposal is located adjacent to the River Usk which is a migratory route for some of the qualifying features of the Severn Estuary SAC including Allis shad. Due to the location of the proposed development adjacent to the River Usk, the supportive text in this Policy states that work must be completed in an environmentally sensitive manner. This will include employing construction methods that minimise vibration (as to not disturb, or prevent a barrier to the movement of qualifying features of the Severn Estuary SAC including allis and twaite shad). If night time working is required then a lighting scheme and specific design will be required to prevent light spill onto the Usk. Timings of works must be sensitive to qualifying features of the SAC). In accordance with Policy GP5 the developer will be required to provide sufficient information to enable a HRA to be undertaken as part of the planning process. Unless the HRA can demonstrate that any effects on the SAC can be mitigated the development will not be permitted. Policy SP4 states that water quality will be protected during construction and as such there will be no effects from diffuse pollution or increased suspended solids as a result of the works. Due to the nature of the works there will be no abstraction from the Severn Estuary SAC.

Furthermore, due to policies within the Plan, this development proposal is not anticipated to contribute to coastal squeeze.

Therefore no likely significant effects are anticipated on the qualifying features of the Severn Estuary SAC as a result of this policy.

A HRA was carried out on this proposal in September 2008 and agreed with CCW. The appropriate assessment carried out identified the likely significant effects that this proposal would have on the Severn Estuary SAC, however, as stated within the report, the mitigation measures described should result in the proposal having no significant effects on the integrity of the SAC.

Therefore, no likely significant effects are anticipated on the qualifying features of the Severn Estuary SAC as a result of this policy."

Severn Estuary SPA

The HRA of the LDP states with reference to Policy EM2's implications for the Severn Estuary SPA that:

"The proposal is located adjacent to the River Usk which is a migratory route for some of the qualifying bird features of the Severn Estuary SPA. Due to the location of the proposed development, the Plan states that work must be completed in an environmentally sensitive manner. In accordance with Policy GP5 the developer will be expected to carry out a Habitat Regulation Assessment of these works as part of the planning process. Unless the HRA can demonstrate that any effects on the SPA can be mitigated the development will not be permitted.

A HRA was carried out on this proposal in September 2008 and agreed with CCW. The appropriate assessment carried out identified the likely significant effects that this proposal would have on the qualifying bird features of the Severn Estuary SPA, however, as stated within the report, the mitigation measures described should result in the proposal having no significant effects on the integrity of the Severn Estuary SPA.

Furthermore, due to policies within the Plan, this development proposal is not anticipated to contribute to coastal squeeze.

Policy SP4 states that water quality will be protected during construction and as such there will be no effects from diffuse pollution or increased suspended solids as a result of the works.

Therefore no likely significant effects are anticipated on the qualifying features of the Severn Estuary SPA site as a result of this policy”

Severn Estuary Ramsar Site

The HRA of the LDP states with reference to Policy EM2’s implications for the Severn Estuary Ramsar Site that:

“The proposal is located adjacent to the River Usk which is a migratory route for some of the qualifying bird features of the Ramsar site. Due to the location of the proposed developments the Plan states that work must be completed in an environmentally sensitive manner. This will include employing construction methods that minimise vibration (as to not disturb, or prevent a barrier to the movement of qualifying features of the Ramsar site including allis and twaite shad). If night time working is required then a lighting scheme and specific design will be required to prevent light spill onto the Usk. Timings of works must be sensitive to qualifying features of the Ramsar site. In accordance with Policy GP5 the developer will be expected to carry out a Habitat Regulation Assessment of these works as part of the planning process.

Unless the HRA can demonstrate that any effects on the Ramsar site can be mitigated the development will not be permitted.

Furthermore, a HRA was carried out on the River Usk Strategy which outlines potential development along the River Usk. As outlined above, [the River Usk] is a migratory route for the qualifying bird features of the Ramsar site and as such the Severn Estuary Ramsar site was considered in this HRA. The conclusion was that the Strategy alone, and/or in combination could have significant effects on the integrity of the Severn Estuary Ramsar site. An Appropriate Assessment was then carried out and identified measures to avoid adverse effects on the Severn Estuary Ramsar site and this therefore concluded that there would be no adverse effects on the integrity of this European site as a result.

Furthermore, due to policies within the Plan, this development proposal is not anticipated to contribute to coastal squeeze.

Policy SP4 states that water quality will be protected during construction and as such there will be no effects from diffuse pollution or increased suspended solids as a result of the works.

Therefore no likely significant effects are anticipated on the qualifying features of the Severn Estuary Ramsar site as a result of this policy.”