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Llywodraeth Cymru  
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# Eastern Bay Link Road Assessment of Implications on European Sites

December 2015



CAPITA



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Assessment of Implications on European Sites

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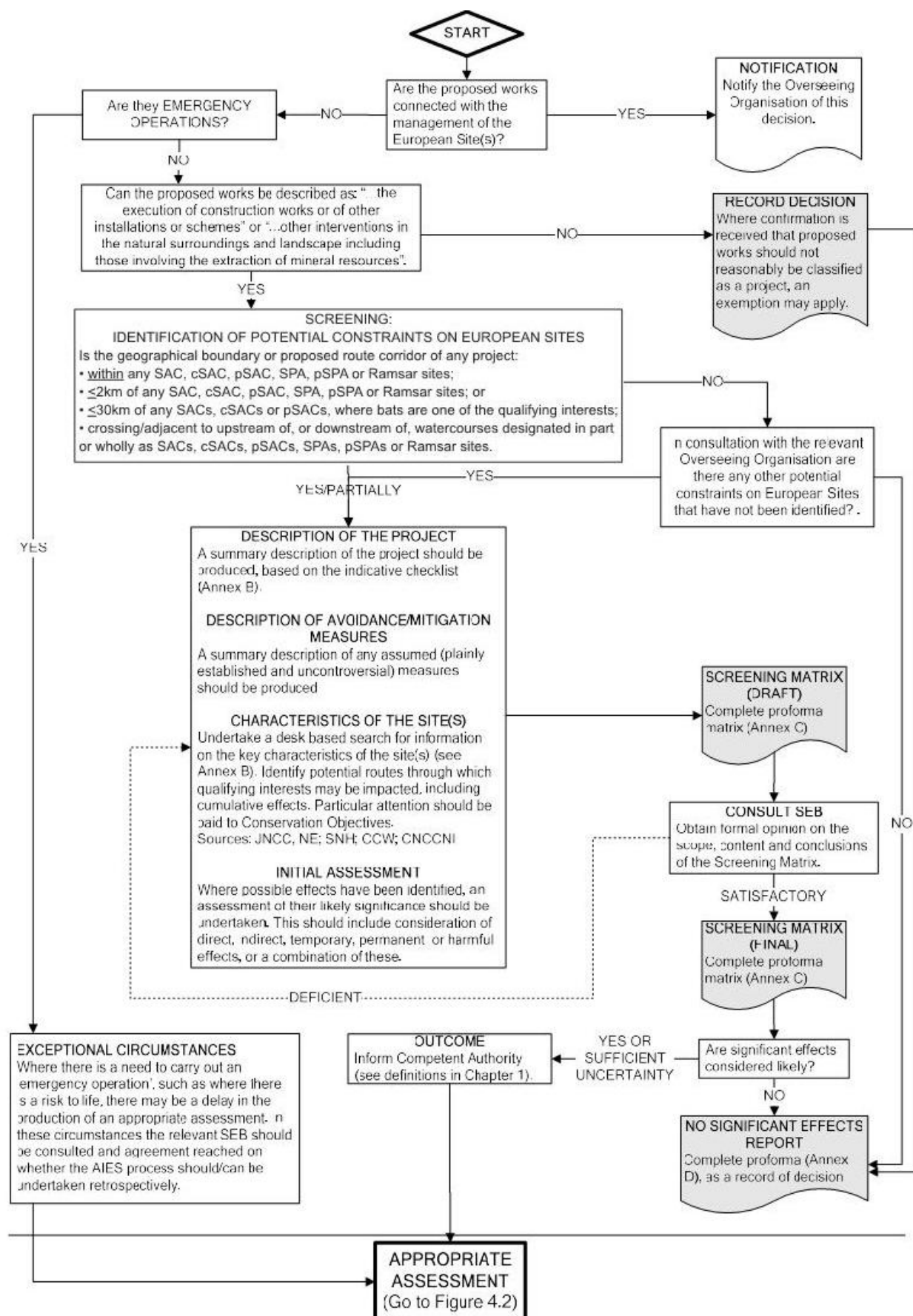


## 1.2 Guidance Used in Preparing the Report

1.2.1 The document follows the guidance on Assessment of Impacts on European Sites (AIES) set out in HD 44/09. It also considers:

- Technical Advice Note (TAN) 5: Nature Conservation and Planning (WG, 2009) – Annex 6 The Assessment of Development Plans in Wales under the Provisions of the Habitat Regulations;
- Design Manual for Road and Bridges (DMRB) HD 44/09. Assessment of implications (of Highways and/or Roads Projects) on European Sites (including Appropriate Assessment) (HA, 2009) (hereafter HD 44/09);
- Draft Guidance for Plan Making Authorities in Wales: The Appraisal of Plans under the Habitats Regulations (Tyldesley D. , 2012);
- Managing NATURA 2000 Sites. The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC3;
- The Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC;
- The Severn Estuary / Môr Hafren European Marine Site - Natural England & the Countryside Council for Wales' advice given under Regulation 33(2)(a) of the Conservation (Natural Habitats &c.) Regulations 1994, as amended. (CCW, 2009); and
- Guidelines on Ecological Impact Assessment produced by the Chartered Institute for Ecology and Environmental Management (CIEEM, 2006).







2.1.3 The flow diagram is followed in the sections below.

2.1.4 Step 1. Are the proposed works connected with the management of the European Site(s):

- Within this context 'management' refers to the management measures required in order to maintain in favourable condition the features for which the site(s) has or have been designated.
- The proposed works are neither directly connected with, nor necessary for, the management of any of the European Sites. An examination of the nature of the work (Step 2) is therefore necessary.

2.1.5 Step 2. Examination of the nature of the work:

- The proposed works are not emergency works and can be described as "...the execution of construction works or of other installations or schemes". Therefore a screening of potential effects on European Sites (Step 3) is required.

2.1.6 Step 3. Screening: identification of potential constraints on European Sites:

- European Sites are those sites making up the European ecological network of Natura 2000 sites. These should be taken as including: Sites of Community Importance (SCIs); Special Protection Areas (SPAs), and potential SPAs (pSPAs); Special Areas of Conservation (SACs), and candidate or possible SACs (cSACs or pSACs); and Ramsar sites.
- The Zone of Influence of a route corridor, within which constraints on any European Site should be considered, is 2km, extended to 30km for any SAC for which bats are one of the qualifying interests. The 2km zone may be extended if there is evidence or professional judgement that qualifying species use areas outside the European Site, for example waterbirds feeding on arable or with flight lines between two or more SPAs.
- The proposed works are within 175m of the three overlapping European Sites of the Severn Estuary SPA/SAC/Ramsar and within 30 km of two SACs for bats (**Table 2.1** below and **Figure 1**). Therefore a description of the project, which may have a significant effect one on or more of the sites, is required (step 4).

Table 2.1 - European sites within the Zone of Influence

Site Code	Site name	Designation	Area (ha)	Distance from proposed works
UK11081	Severn Estuary / Môr Hafren	Ramsar	24662.98	0.175km south east (SE)
UK9015022	Severn Estuary / Môr Hafren	Special Protection Area	24700.91	
UK0013030	Severn Estuary / Môr Hafren	Special Area of Conservation	73715.4	
UK0030203	Mendip Limestone Grasslands	Special Area of Conservation	417.47	28km SE
UK0030052	North Somerset and Mendip Bats	Special Area of Conservation	561.19	29km SE



#### 2.1.7 Step 4. Description of the Project

- The project description comprises: its purpose and objectives; size and land-take; resource requirements for the construction, operation and decommissioning; indicative timescales; emissions and waste arising and their likely means of disposal; the type and location of other services that may be required to implement the project; avoidance and mitigation measures; and any alternative solutions.

##### *Project Objectives*

#### 2.1.8 The Welsh Government has three overarching Scheme objectives as follows:

- Increase accessibility from east Cardiff to major employment sites in the East Moors area, Cardiff Bay and the Central Cardiff Enterprise Zone;
- Provide a more direct route between the A4232 Butetown tunnel and Rover Way; and
- Provide congestion relief to the junctions on Tyndall Street by removing traffic currently using the Ocean Way-East Tyndall Street – Central Link route. This road is a major access route into the new enterprise zone.

#### 2.1.9 These three over-arching objectives are split into 10 scheme-specific objectives as follows;

- Reduce journey times for private and commercial road users;
- Facilitate economic regeneration;
- Enhance road safety and reduce casualties;
- Deliver a scheme that is sustainable;
- Reduce journey time variability and improve resilience on the EBL;
- Use the Eastern Bay Link: Queens Gate to Ocean Way to manage traffic effectively and improve resilience on the strategic road network around Cardiff;
- To deliver a scheme that integrates public transport and the local transport network;
- Promote cycling and walking and provide opportunities for healthy lifestyles;
- Deliver a scheme which minimises future maintenance requirements and disruption to the network; and
- Ensure all of these objectives are met with due consideration given to the impact on the environment.

##### *Project Description*

#### 2.1.10 The Scheme comprises the construction of a new 1km long, two lane dual carriageway road connecting the existing A4232 Queens Gate Roundabout and the Ocean Way Roundabout.

#### 2.1.11 Moving from west to east the road will be constructed on embankment for approximately 250 m (Section 1 ), on an approach viaduct for the next 300m (Section 2) on viaduct over the Celsa Access Road and Celsa railway for approximately 250m (Section 3) and finally on an approach viaduct to Ocean Way Roundabout for 200m.



*Other Services which will be Required to Implement the Project*

- 2.1.23 Signage along the main link will be minimal comprising mainly speed limit repeater signs and 2 Advanced Direction Signs (ADS). Lighting will be to current highway standards.

*Avoidance and Mitigation Measures*

- 2.1.24 No specific avoidance or mitigation measures are required with regards to the European Designated sites during the operational phase. A Construction Environmental Management Plan (CEMP) will be in force during all construction to avoid any potential effects arising from surface water run-off to Roath Dock.

*Alternative Solutions*

- 2.1.25 Five alternative design options were considered (Capita 2015, Chapter 4). The alternatives do not vary in relation to the European Sites.

## 2.2 Characteristics of the European Sites

- 2.2.1 The citations, Conservation Objectives and Natura 2000 information sheets for the European Sites are summarised below.

*Severn Estuary SAC*

- 2.2.2 The SAC is considered one of the best examples of a tidal estuary in the UK. Its primary reasons for selection are the Annex I habitats **Estuaries, Mudflats and sandflats not covered by seawater at low tide** and **Atlantic salt meadows (Glauco-Puccinellietalia)** and populations of the Annex II fish **Sea lamprey *Petromyzon marinus*, River lamprey *Lampetra fluviatilis* and Twaite shad *Alosa fallax*.**
- 2.2.3 The SAC is considered “vulnerable to large scale interference”, including from land claim, commercial development, industrial pollution and disturbance. Under the 2010 Habitat Regulations the management scheme previously produced is being reviewed and expanded to cover the not only the SPA but also the SAC and Ramsar site.
- 2.2.4 The SAC’s **Conservation Objectives** are to ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;
- The extent and distribution of qualifying natural habitats and habitats of qualifying species
  - The structure and function (including typical species) of qualifying natural habitats
  - The structure and function of the habitats of qualifying species
  - The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
  - The populations of qualifying species, and,
  - The distribution of qualifying species within the site.

### *Severn Estuary SPA*

- 2.2.5 The SPA is important for wintering swans, ducks and waders and on passage, waders. It qualifies for the Annex I species **Bewick's Swan** *Cygnus columbianus bewickii* and under Article 4.2 of the Birds Directive (79/409/EEC) through regularly supporting populations of European importance of the migratory waterbird species **Greater white-fronted goose** *Anser albifrons albifrons*, **Gadwall** *Anas strepera*, **Dunlin** *Calidris alpina alpina*, **Redshank** *Tringa totanus* and **Shelduck** *Tadorna tadorna*. The SPA also qualifies under Article 4.2 by regularly supporting at least 20,000 waterfowl over winter; the site regularly supports 84,317 individual waterfowl (5 year mean peak to April 1998).
- 2.2.6 The SPA is considered vulnerable to large scale interference, including land-claim, aggregate extraction/dredging, physical developments such as barrage construction flood defences, pollution
- 2.2.7 (industrial, oil spillage), eutrophication and tourism based activities and disturbance. These issues are being addressed through existing control measures and as part of the Severn Estuary Strategy.
- 2.2.8 The SPA's Conservation objective are to ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;
- The extent and distribution of the habitats of the qualifying features
  - The structure and function of the habitats of the qualifying features
  - The supporting processes on which the habitats of the qualifying features rely
  - The population of each of the qualifying features, and,
  - The distribution of the qualifying features within the site.

### *Severn Estuary Ramsar*

- 2.2.9 The Ramsar site is designated for criteria that largely overlap those of the SAC and SPA, but with some additional features. The habitat justification (Criterion 1) is for the qualifying habitats of the SAC. The migratory species justification (Criterion 4) additionally mentions **Salmon** *Salmo salar*, **sea trout** *S. trutta* and **eel** *Anguilla anguilla*. A number of waterbird species in addition to those for which the SPA qualifies are noted (Criterion 6) for future possible consideration as having important populations. The fisheries Criterion 8 notes the diversity of species in a British context and the estuary's function for migration, feeding, nursery and spawning.
- 2.2.10 The site is included with the SPA and SAC in future planned management under the 2010 Habitat Regulations. There are no Conservation Objectives specifically for the Ramsar site.

### *Mendip Limestone Grasslands SAC*

- 2.2.11 The grasslands have, as a qualifying feature though not a primary reason for selection, "caves not open to the public" that support **Greater horseshoe bat** *Rhinolophus ferrumequinum* and **Lesser horseshoe bat** *Rhinolophus hipposideros*. The bats are also a qualifying, but not primary reason for selection.





### 3. Statement to Inform Appropriate Assessment: Screening Assessment of Effects

#### 3.1 Methods

- 3.1.1 The assessment of effects follows the check list of potential effects in Appendix C (Screening Matrix) of HD 44/09 and methods in that document and the IEEM guidance on Ecological Impact Assessment (IEEM 2006). The results of the assessment are summarised in **Appendix B**.

#### 3.2 Data Consulted and Surveys Undertaken

- 3.2.1 The baseline data on the qualifying features of the European Sites and their condition are taken from the sites' citations and Natura 2000 forms. Additional data collected and analysed for the Environmental Statement (ES) and of relevance to this AIES are contained in the following appendices to the ES:

- Bat survey (Parsons Brinckerhoff 2014c)
- Wintering birds survey (Parsons Brinckerhoff 2014d)
- Extended Phase 1 survey (Parsons Brinckerhoff 2013)
- National Vegetation Classification Assessment (Parsons Brinckerhoff 2014e)

#### 3.3 Professional Judgement

- 3.3.1 Professional judgement was used in the carrying out of this work where professional guidance was not available, and in the interpretation of results. Where there was not enough information about the risk of qualifying interest 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.

#### 3.4 Effects on Mendip Limestone Grasslands SAC and North Somerset and Mendip Bats SAC

- 3.4.1 The two SACs are considered together due to their shared interest (*Rhinolophus* bats) and locations, 27 to 28km to the south-east of the proposed works.
- 3.4.2 The distance between the SACs and the proposed works is beyond the limit of the known daily flight ranges of winter or maternity roosts (CCW undated), therefore the proposed works are unlikely to be within daily flight routes. The proposed works, near to an illuminated, urban area, provides no habitat that would be considered of high value for *Rhinolophus* bats and no species of this genus were recorded during the bat surveys for the Environmental Statement (Parsons Brinckerhoff 2014c). Both species occur, though not as qualifying features, at several SACs on the Welsh side of the Severn Estuary. There is therefore the possibility of seasonal movement











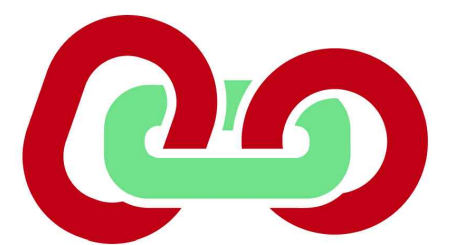
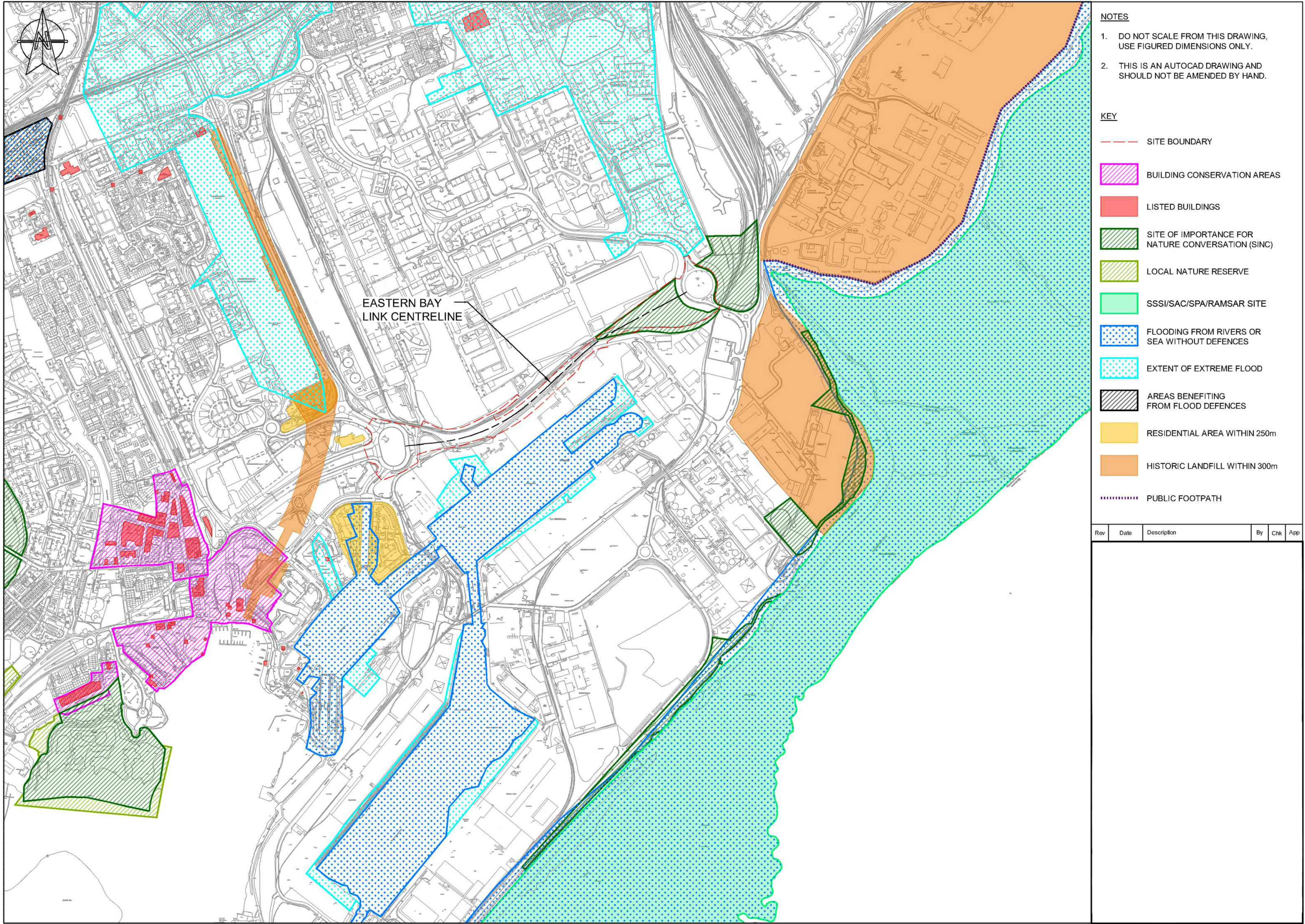
## 5. References

- Capita. 2015. Eastern Bay Link Road Scheme, Cardiff. Environmental Statement.
- Countryside Council for Wales. Undated. Justification for the use of a 10km buffer around the Usk Bat Sites SAC.
- IEEM. 2006. Guidelines for Ecological Impact Assessment in the United Kingdom. IEEM.
- Parsons Brinckerhoff. 2013. Eastern Bay Link Road, Cardiff: Extended Phase 1 survey report. Welsh Government. 3512646C-HHC. V1.
- Parsons Brinckerhoff. 2014a. Eastern Bay Link Road: Queens Gate roundabout to Ocean Way roundabout. Assessment of Implications on European Sites (AIES). Statement to Inform Appropriate Assessment (SIAA).
- Parsons Brinckerhoff. 2014b. Eastern Bay Link Road: Queens Gate roundabout to Ocean Way roundabout. Assessment of Implications on European Sites (AIES). Statement to Inform Appropriate Assessment (SIAA). Addendum.
- Parsons Brinckerhoff. 2014c. Eastern Bay Link Road, Cardiff: Bat survey report. Welsh Government. 3512558C-HHC. V1
- Parsons Brinckerhoff. 2014d. Eastern Bay Link Road, Cardiff: Wintering bird survey. Welsh Government. 3512646C-HHC/008. Final.
- Parsons Brinckerhoff. 2014d. Eastern Bay Link Road, Cardiff: National Vegetation Classification Assessment. Welsh Government. 3512558C-HHC. Final.

## Figures

- CS/074527-ENV-ESR-03





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FIG 1  
EUROPEAN SITES IN  
RELATION TO THE  
PROPOSED WORKS

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Project name		Eastern Bay Link, Cardiff	
Natura 2000 site under consideration		Severn Estuary / Môr Hafren Special Protection Area	
date	Author	Verified	
December 2015	Paul Robinson	Geraint Pitman	
Description of project			
Size and scale		1km of new dual carriageway	
Land-take from European Site		None	
Distance from European Site		175m	
Resource requirements from European Site		None	
Emissions to European Site		Reduced aerial NOx, increased pollutants and sediment load from surface water run-off	
Excavation requirements from European Site		None	
Transportation requirements		None	
Duration of construction and operation		Construction February 2016 – April 2017, operation in perpetuity	
Other		None	
Description of avoidance and/or mitigation measures			
Nature of proposals		New outfalls and pollution interceptors	
Location		Roath Docks	
Evidence for effectiveness		Numerous road schemes	
Mechanisms for delivery		Construction Environmental Management Plan	
Characteristics of European Sites			
Name and EU code	UK9015022 Severn Estuary / Môr Hafren Special Protection Area		
Location and distance from proposed works	Severn Estuary, 0.175km from proposed works		
Size	24700.91 ha		
Qualifying Features	<i>Cygnus columbianus bewickii</i> ; Bewick's swan (Non-breeding) <i>Tadorna tadorna</i> ; Common shelduck (Non-breeding) <i>Anas strepera</i> ; Gadwall (Non-breeding) <i>Calidris alpina alpina</i> ; Dunlin (Non-breeding) <i>Tringa totanus</i> ; Common redshank (Non-breeding) <i>Anser albifrons albifrons</i> ; Greater white-fronted goose (Non-breeding) Waterbird assemblage		
Vulnerability	The estuary is therefore vulnerable to large scale interference, including human actions. These include land-claim, aggregate extraction/dredging, physical developments such as barrage construction flood defences, pollution (industrial, oil spillage), eutrophication and tourism based activities and disturbance.		
Conservation Objectives	The SPA's Conservation objective are to ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; <ul style="list-style-type: none"><li>• The extent and distribution of the habitats of the qualifying features</li><li>• The structure and function of the habitats of the qualifying features</li><li>• The supporting processes on which the habitats of the qualifying features rely</li><li>• The population of each of the qualifying features, and,</li><li>• The distribution of the qualifying features within the site.</li></ul>		

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Project name		Eastern Bay Link, Cardiff
Natura 2000 site under consideration		Severn Estuary / Môr Hafren Special Area of Conservation
date	Author	Verified
December 2015	Paul Robinson	Geraint Pitman
Description of project		
Size and scale	1km of new dual carriageway	
Land-take from European Site	None	
Distance from European Site	175m	
Resource requirements from European Site	None	
Emissions to European Site	Reduced aerial NOx, increased pollutants and sediment load from surface water run-off	
Excavation requirements from European Site	None	
Transportation requirements	None	
Duration of construction and operation	Construction February 2016 – April 2017, operation in perpetuity	
Other	None	
Description of avoidance and/or mitigation measures		
Nature of proposals	New outfalls and pollution interceptors	
Location	Roath Docks	
Evidence for effectiveness	Numerous road schemes	
Mechanisms for delivery	Construction Environmental Management Plan	
Characteristics of European Sites		
Name and EU code	UK0013030 Severn Estuary / Môr Hafren Special Area of Conservation	
Location and distance from proposed works	Severn Estuary, 0.175km from proposed works	
Size	73715.4 ha	
Qualifying Features	Sandbanks which are slightly covered by sea water all the time; Subtidal sandbanks Estuaries Mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats Reefs Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> ); Atlantic salt meadows <i>Petromyzon marinus</i> ; Sea lamprey <i>Lampetra fluviatilis</i> ; River lamprey <i>Alosa fallax</i> ; Twaite shad	
Vulnerability	The estuary is vulnerable to large-scale interference, mainly as a result of human actions. These include land-claim, aggregate extraction, physical developments such as barrage construction and other commercial construction activities, flood defences, industrial pollution, oil spillage and tourism-based activities and disturbance.	
Conservation Objectives	The SAC's Conservation Objectives are to ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; <ul style="list-style-type: none"><li>• The extent and distribution of qualifying natural habitats and habitats of qualifying species</li><li>• The structure and function (including typical species) of qualifying natural habitats</li><li>• The structure and function of the habitats of qualifying species</li><li>• The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely</li><li>• The populations of qualifying species, and,</li><li>• The distribution of qualifying species within the site.</li></ul>	

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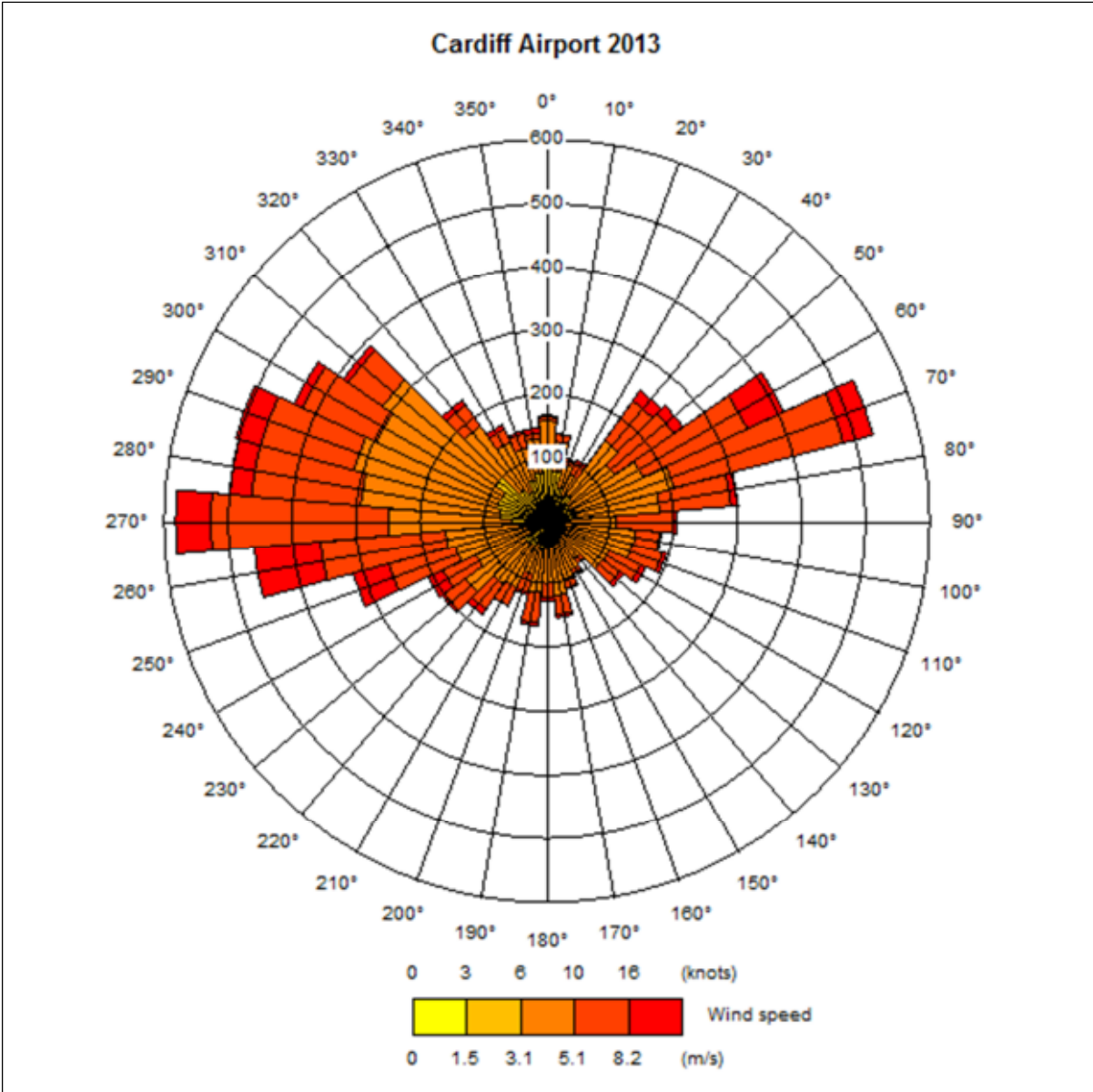
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