

Lower Thames Crossing

6.3 Environmental Statement
Appendices
Appendix 9.2 Marine
Biodiversity
Legislation and Policy

APFP Regulation 5(2)(a)

Infrastructure Planning (Applications: Prescribed Forms and Procedure)
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Appendix 9.2 Marine Biodiversity Legislation and Policy

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1 Marine Biodiversity legislative and policy framework

1.1 Legislation and Policy

1.1.1 The Marine Biodiversity assessment has been undertaken in accordance with relevant legislation, together with national, regional and local plans and policies.

Legislation

- 1.1.2 Relevant legislation that has been considered in the environmental assessment is presented in Table 1.1. The Planning Statement (Application Document 7.2) provides an assessment of the Project's strategic alignment and conformity with the National Policy Statement for National Networks (NPSNN).
- 1.1.3 A number of the sources of legislation referred to throughout the ES, including this chapter, derive from the law of the European Union (EU). It is noted that the impact of European legislation may need to be revised following the UK's exit from the EU but much EU-derived domestic legislation continues to have effect in domestic law. Relevant legislation is included in Table 1.1.

Table 1.1 Legislative requirements

Scale	Description of legislation
National	Marine Strategy Regulations 2010
	The Marine Strategy Regulations transpose the requirements of the EU's Marine Strategy Framework Directive (MSFD) (2008/56/EC) into domestic law.
	The MSFD requires that European Union (EU) member states manage their seas in order to achieve or maintain good environmental status by 2020. The MSFD has been transposed into UK law through the Marine Strategy Regulations 2010.
	This assessment has considered the potential for the Project to adversely affect the marine environment with respect to achieving good environmental status in the River Thames area.
National	Conservation of Habitats and Species Regulations 2017
	The Conservation of Habitats and Species Regulations 2017 implements Council Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna (the Habitats Directive).
	The regulations also set out protection for European Protected Species, including marine mammals.
	This assessment has considered the potential for the Project to cause likely significant effects on designated habitats and features, as a result of proximity of designated sites, and the potential presence of cetaceans and pinnipeds.
National	Environment Act 2021
	The Environment Act 2021 makes provisions about targets, plans and policies for improving the natural environment, including requirement for biodiversity net gain in the marine environment; for statements and reports about environmental protection; for the Office for Environmental Protection; about waste and resource efficiency; about air quality; for the recall of products that fail to meet environmental standards; about water; about nature and biodiversity; for conservation covenants; about the regulation of chemicals; and for connected purposes.

Scale	Description of legislation		
European	The Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 (the Ramsar Convention or Wetlands Convention) Ramsar sites are wetlands of international importance designated under the above convention. Government policy affords Ramsar sites the same level of protection as Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) designated as part of the EU Natura 2000 network under the Birds and Habitats Directives. This assessment has considered the potential for the Project to have likely significant effects on the Thames Estuary and Marshes Ramsar site.		
National	The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017		
	These regulations transpose Directive 2000/60/EC and establish a legal framework to protect and restore clean water across England and Wales. The directive sets out a series of objectives which include improving the water environment to achieve good ecological status or potential (for 'heavily modified' and 'artificial' water bodies) by 2027 and implementing mitigation to support the water environment at a catchment and water body scale.		
	This assessment has considered the Project activities that could affect the Thames Estuary (a transitional water body) achieving Good Ecological Status and no deterioration of status.		
European	Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention 1979)		
	The Bonn Convention 1979 aims to ensure conservation of migratory species and their habitats by providing strict protection for endangered migratory species (listed in Appendix I of the Bonn Convention 1979), concluding multilateral agreements for the conservation and management of migratory species which require or would benefit from international cooperation (listed in Appendix II of the Bonn Convention 1979), and by undertaking cooperative research activities.		
	This assessment has considered the Project activities that could affect the conservation of migratory species and their habitats, during the planning stages.		
European	Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1979)		
	The Bern Convention 1979 aims to ensure conservation of wild flora and fauna species and their habitats, particularly those that are endangered or vulnerable. Such species are specified in the appendices to the text of the international treaty agreed at the convention.		
	This assessment has considered the Project activities that could affect the conservation of wild flora and fauna.		
European	Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS)		
	The aim of the agreement is to promote cooperation between countries in order to achieve and maintain a favourable conservation status for small cetaceans within the agreement area.		
	This assessment has considered the Project activities that could affect the conservation of small cetaceans.		

Scale	Description of legislation		
National	Marine and Coastal Access Act 2009		
	The act provides the framework for strategic marine planning aimed at more efficient, sustainable use and protection of marine resources. Part 4 of the Marine and Coastal Act 2009 puts in place a marine licensing system, which is managed by the Marine Management Organisation (MMO). The activities related to construction elements for the Project will require a Marine Licence from the MMO.		
	The Marine and Coastal Access Act 2009 also enables the designation of Marine Conservation Zones (MCZs) in the territorial waters adjacent to England and W		
	The MMO require that an MCZ assessment is undertaken for projects that could potentially affect relevant sites. However, it has been agreed with the MMO that an MCZ assessment is not required as the Project is not considered likely to adversely affect the MCZ in the Thames Estuary.		
National	Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000)		
	The Wildlife and Countryside Act 1981, as amended by Schedule 9 of the Countryside and Rights of Way Act 2000, provides protection to Sites of Special Scientific Interest (SSSIs) and a schedule of species with elevated protection. This assessment has considered the potential for the Project to affect protected		
	species such as the tentacled lagoon worm Alkmaria romijni and various marine mammals and fish due to the proximity of SSSIs next to the Thames Estuary.		
National	The Natural Environment and Rural Communities Act 2006 (NERC Act)		
	The NERC Act imposes a 'duty to conserve biodiversity' on public authorities, including members of the Examining Authority and the relevant Secretary of State in the case of Nationally Significant Infrastructure Projects (NSIPs). Section 41 of the NERC Act provides details of the habitats and species which are of 'principal importance' for the purposes of conserving biodiversity in England.		
	This assessment has considered the potential for the Project to affect the habitats and species of 'principal importance' which have been previously identified within the Project Order Limits.		
National	Port of London Act 1968 (as amended)		
	Under Section 66 of the Port of London Act 1968 (as amended), a river works licence is required for any works in the River Thames, below the mean high water mark, including any works under the river or overhanging the river.		
National	Eels (England and Wales) Regulations 2009		
	These regulations set targets for the regulators of the recovery of European eel stocks to develop management plans to achieve these targets.		
	This assessment has considered the potential for the Project to affect eel populations, as the Thames Estuary is considered an important area for eel.		
National	Conservation of Seals Act 1970		
	Seals are protected under the Conservation of Seals Act 1970.		
	This assessment has considered the potential for the Project to affect seals, as the Thames Estuary is known as an important site for seals.		
National	The Water Resources Act 1991		
	The Water Resources Act 1991 aims to prevent and minimise pollution of water, which includes the release of silt from dewatering and dredging activities. This assessment has considered the potential for the Project to affect water quality in the Thames Estuary.		

1.1.4 Relevant national policy and the project response is presented in Table 1.2. The review also considered the National Policy Statement for Energy (NPS-EN1).

Table 1.2 National policy framework and the project response

Reference	Requirement	Project response	
National Policy Statement for National Networks (NPSNN) (Department for Transport, 2014)			
Paragraph 4.15	'All proposals for projects that are subject to the European Union's Environmental Impact Assessment Directive and are likely to have significant effects on the environment, must be accompanied by an environmental statement (ES), describing the aspects of the environment likely to be significantly affected by the project.' The environmental impact assessment must 'identify, describe and assess effects on human beings, fauna and flora, soil, water, air, climate, the landscape, material assets and cultural heritage, and the interaction between them.' The environmental statement must include 'a description of the likely significant effects of the proposed project on the environment, covering the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the project, and also the measures envisaged for avoiding or mitigating significant adverse effects.'	This ES assesses likely significant effects of the Project on marine receptors taking account of both direct and indirect effects, as well as timescales (Section 9.6).	
Paragraph 4.23	'Applicants are required to provide sufficient information with their applications for development consent to enable the Secretary of State to carry out an Appropriate Assessment if required. This information should include details of any measures that are proposed to minimise or avoid any likely significant effects on a European site. The information provided may also assist the Secretary of State in concluding that an appropriate assessment is not required because significant effects on European sites are sufficiently unlikely that they can be excluded.'	A Habitats Regulations Assessment has been undertaken and submitted in support of the DCO application (Application Document 6.5). This ES details the desk study data and field survey work undertaken to ensure sufficient and appropriate information is available for the Habitats Regulations Assessment.	
Paragraph 4.52	, ,	The Project team has held discussions with the MMO, which have considered all aspects of statutory marine licensing with respect to the proposed construction and operational activities.	
Paragraph 5.22	'The applicant should ensure that the environmental statement clearly sets out any likely significant effects on internationally, nationally and locally designated sites of ecological or geological conservation importance (including those outside England) on protected species and on habitats and	This ES sets out the marine baseline regarding designated sites, protected species and habitats of principal importance (Section 9.3). This ES identifies likely significant effects of the	

Reference	Requirement	Project response
	other species identified as being of principal importance for the conservation of biodiversity and that the statement considers the full range of potential impacts on ecosystems.'	Project on these features (Section 9.5).
Paragraph 5.23	'The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.'	This ES identifies the opportunities taken to conserve biodiversity and geological conservation interests through design and mitigation (Section 9.4).
Paragraph 5.25	'Development should avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives.'	The Project has undertaken an appraisal of alternatives (Chapter 3: Assessment of Reasonable Alternatives), the consideration of which has influenced the ongoing design process. The main element of relevance to the marine environment was the relocation of the proposed South Portal, in part owing to the potential effects on the Thames Estuary and Marshes Ramsar site (Chapter 3, Section 3.6). The Project has also considered good practice construction methods to avoid potential effects on marine biodiversity (Section 9.4).
Paragraph 5.25	'The applicant may also wish to make use of biodiversity offsetting in devising compensation proposals to counteract any impacts on biodiversity which cannot be avoided or mitigated. Where significant harm cannot be avoided or mitigated, as a last resort, appropriate compensation measures should be sought.'	Chapter 9: Marine Biodiversity of the ES (Application Document 6.3) considers predicted impacts on marine biodiversity resulting from the tunnel boring operations; construction and decommission of the water management pipeline and outfall; mitigation area water intake structure; and tunnel operation. Largely, the effects to marine biodiversity from the above works are expected to be 'neutral' to 'slight'. With the implementation of mitigation measures such as treating discharge water prior to discharge into the River Thames, there are not expected to be significant effects on marine biodiversity during construction. Additionally, there

Reference	Requirement	Project response
		are no significant effects on marine biodiversity predicted during operation.
Paragraph 5.26	'In taking decisions, the Secretary of State should ensure that appropriate weight is attached to designated sites of international, national and local importance, protected species, habitats and other species of principal importance for the conservation of biodiversity, and to biodiversity and geological interests within the wider environment.'	This ES has considered pathways to protected sites and species (Section 9.5)
Paragraph 5.27	'The following wildlife sites should have the same protection as European sites: potential Special Protection Areas [pSPAs] and possible Special Areas of Conservation; [pSACs] listed or proposed Ramsar sites; and sites identified, or required, as compensatory measures for adverse effects on European sites, [pSPAs, pSACs] and listed or proposed Ramsar sites.'	Within this ES, these sites have all been considered as receiving the same level of protection as European sites (Section 9.3).
Paragraph 5.30	'The Secretary of State is bound by the duties in relation to MCZs imposed by sections 125 and 126 of the Marine and Coastal Access Act 2009.'	This ES has considered potential effects on MCZs and no likely significant effects have been identified (Section 9.5). Through consultation with the MMO, it was agreed that an MCZ assessment was not required as the Project is not considered likely to adversely affect the MCZ in the Thames Estuary.
Paragraph 5.36	 tthe applicant should demonstrate that: during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works; during construction and operation, best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised (including as a result of transport access arrangements); habitats will, where practicable, be restored after construction works have finished; developments will be designed and landscaped to provide green corridors and minimise habitat fragmentation where reasonable; opportunities will be taken to enhance existing habitats and, where practicable, to create new habitats of value within the site landscaping proposals, for example through techniques such as the 'greening' of existing network crossing 	(Section 9.5).

Reference	Requirement	Project response
	points, the use of green bridges and the habitat improvement of the network verge.'	
Paragraph 5.71	'Applications for development in a Coastal Change Management Area (CCMA) should make it clear why there is a need for it to be located in a CCMA. For developments in a CCMA, applicants should undertake an assessment of the vulnerability of the proposed development to coastal change, taking account of climate change, during the project's operational life.'	This aspect is not applicable as the Project is not within a CCMA.
Paragraph 5.72	'For any projects involving dredging or disposal into the sea, the applicant should consult the Marine Management Organisation (MMO).'	This element is not applicable to the Project as there is no dredging or disposal associated with construction or operation. The Project will undertake excavation in the intertidal area; however this will be undertaken when the tide is out, limiting any associated impacts. This has been discussed during the programme of engagement with the MMO.
Paragraph 5.73	'The applicant should examine the broader context of coastal protection around the proposed project, and the influence in both directions, i.e. coast on project, and project on coast.'	The Project team has undertaken a programme of engagement with the Environment Agency, considering all aspects of coastal protection in terms of proposed construction and operational activities. Due to the small-scale nature of the works in relation to the marine environment, it has been concluded that the Project would not influence coastal protection.
Paragraph 5.74	'The applicant should be particularly careful to identify any effects of physical changes on the integrity and special features of Marine Conservation Zones, candidate marine Special Areas of Conservation (SACs), coastal SACs and candidate coastal SACs, coastal Special Protection Areas (SPAs) and potential coastal SPAs, Ramsar sites, Sites of Community Importance (SCIs) and potential SCIs and Sites of Special Scientific Interest. For any projects affecting the above marine protected areas, the applicant should consult Natural England and where appropriate, for cross-boundary impacts, Natural Resource Wales and Scottish Natural Heritage, at an early stage.'	Ramsar site and Thames Estuary and Marshes SPA) have been identified alongside six nationally designated sites (Swanscombe MCZ, South

Reference	Requirement	Project response
		impacted by the Project's activities. Subsequent engagement with the MMO has resulted in agreement that an MCZ assessment is not required as the Project would be unlikely to affect the MCZ in the Thames Estuary.
Paragraph 5.79	considers appropriate. The Secretary of State should consider whether the mitigation requirements put	The Project has had long- standing engagement with the MMO through the EIA process as well as a series of discussions with the EA which have looked at coastal protection. However, due to the small-scale nature of the proposed works in relation to the marine environment, it has been concluded that the Project would not influence coastal protection and therefore no further assessment against the NPSNN tests is required.
Paragraph 5.187	'Noise resulting from a proposed development can also have adverse impacts on wildlife and biodiversity. Noise effects of the proposed development on ecological receptors should be assessed in accordance with the Biodiversity and Geological Conservation section of this NPS.'	The Project has undertaken underwater noise modelling to assess potential impacts on marine biodiversity receptors, and has consulted with MMO and NE.
Paragraph 5.189	'Where a development is subject to EIA and significant noise impacts are likely to arise from the proposed development, the applicant should include the following in the noise assessment, which should form part of the environment statement: the characteristics of the existing noise environment. a prediction on how the noise environment will change with the proposed development: In the shorter term such as during the construction period; in the longer term during the operating life of the infrastructure; at particular times of the day, evening and night	

Reference	Requirement	Project response
Paragraph 5.192	conservation sites, protected landscapes, protected species or other wildlife. The results of any noise surveys and predictions may inform the ecological	The Project has undertaken underwater noise modelling to assess potential impacts on marine biodiversity receptors, and has consulted with MMO and NE.
Paragraph 5.219	'Infrastructure development can have adverse effects on the water environment, including groundwater, inland surface water, transitional waters111 and coastal waters. During the construction and operation, it can lead to increased demand for water, involve discharges to water and cause adverse ecological effects resulting from physical modifications to the water environment. There may also be an increased risk of spills and leaks of pollutants to the water environment. These effects could lead to adverse impacts on health or or protected species and habitats (see Section paragraphs 5.20 to 5.38 on biodiversity and geological conservation), and could, in particular, result in surface waters, groundwaters or protected areas112 failing to meet environmental objectives established under the Water Framework Directive.'	The Project has considered and assessed adverse effects on coastal waters, and where appropriate has recommended mitigation measures to avoid or reduce any effects.
Paragraph 5.223	 Any environmental statement should describe: the existing quality of waters affected by the proposed project; existing water resources affected by the proposed project and the impacts of the proposed project on water resources; existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project, and any impact of physical modifications to these characteristics; any impacts of the proposed project on water bodies or protected areas under the Water Framework Directive and source protection zones (SPZs) around potable groundwater abstractions; and any cumulative effects. 	The environmental statement has considered all effects on the quality of water resources across areas potentially affected by the Project.

Table 1.3 Relevant plans

Strategy/plan	Policy
Core Strategy and Policies for Management of Development (Thurrock Council, 2015)	PMD1: Minimising pollution and impacts on amenity, health, safety and the natural environment PMD7: Biodiversity, geological conservation and development CSTP28: River Thames
Essex Biodiversity Action Plan	The plan details the habitats and species of priority to Essex, and the measures required to maintain and protect their status.
Kent Biodiversity Action Plan	The plan details the habitats and species of priority to Kent, and the measures required to maintain and protect their status. Outcome 4 relates to the need to enhance the natural environment, including marine biodiversity.
Gravesham Local Plan	As part of its approach to climate change and environmental improvement, the Council will have regard to the delivery of the Water Framework Directive and associated Thames River Basin Management Plan objectives to support water bodies being progressively improved to "good" status over the plan period.
London Biodiversity Action Plan (2006)	The plan details the habitats and species of priority to London, and the measures required to maintain and protect their status. Several migratory fish species migrate past the location of the water management discharges for the Project, hence potential effects have been considered in relation to the London Biodiversity Action Plan.

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Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1979)

Convention on the Conservation of Migratory Species of Wild Animals (CMS) (2018).

Department for Transport (2014). National Policy Statement for National Networks.

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Essex Biodiversity Action Plan. (2011).

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London Biodiversity Action Plan (2006).

Marine Strategy Regulations (2010) (as amended post- EU Exit)

https://www.legislation.gov.uk/uksi/2018/1399/part/4/made

Port of London Act 1968 (as amended)

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The Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 (the Ramsar Convention or Wetlands Convention)

The Eels (England and Wales) Regulations 2009. London.

http://www.legislation.gov.uk/uksi/2009/3344/contents/made

The Marine Environment (Amendment) (EU Exit) Regulations 2018

https://www.legislation.gov.uk/uksi/2018/1399/contents/made

The Natural Environment and Rural Communities Act 2006 (NERC Act)

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