Marine Management Organisation

Scoping Opinion

The Harbours Act 1964

Title: Looe Harbour Flood Defence and Regeneration Scheme

Applicant: Ashfords LLP. on behalf of Looe Harbour Commissioners or Cornwall Council

MMO Reference: HRO/2021/00002/pre-app

Contents

1 Proposal

On 14 July 2021 Ashfords LLP. submitted a notice of intention for a Harbour Revision Order to authorise a project on behalf of the future applicant who would either be the Looe Harbour Commissioners or Cornwall Council. The applicant is proposing the creation of a new flood defence scheme within the town of Looe and Looe Bay, Cornwall. The proposal consists of the construction of a new southern breakwater, extension of the existing Banjo Pier to act as a breakwater, and construction of a tidal barrier across the Looe Estuary. The proposal also includes the construction of associated infrastructure, including a control room for the tidal barrier and a cut-off wall landward of East Looe Beach to prevent seepage flows during storm surges. Some public realm enahcements have also been proposed, including construction of a raised walkway to connect the town to an existing coastal path and construction of fixed moorings within the breakwater.

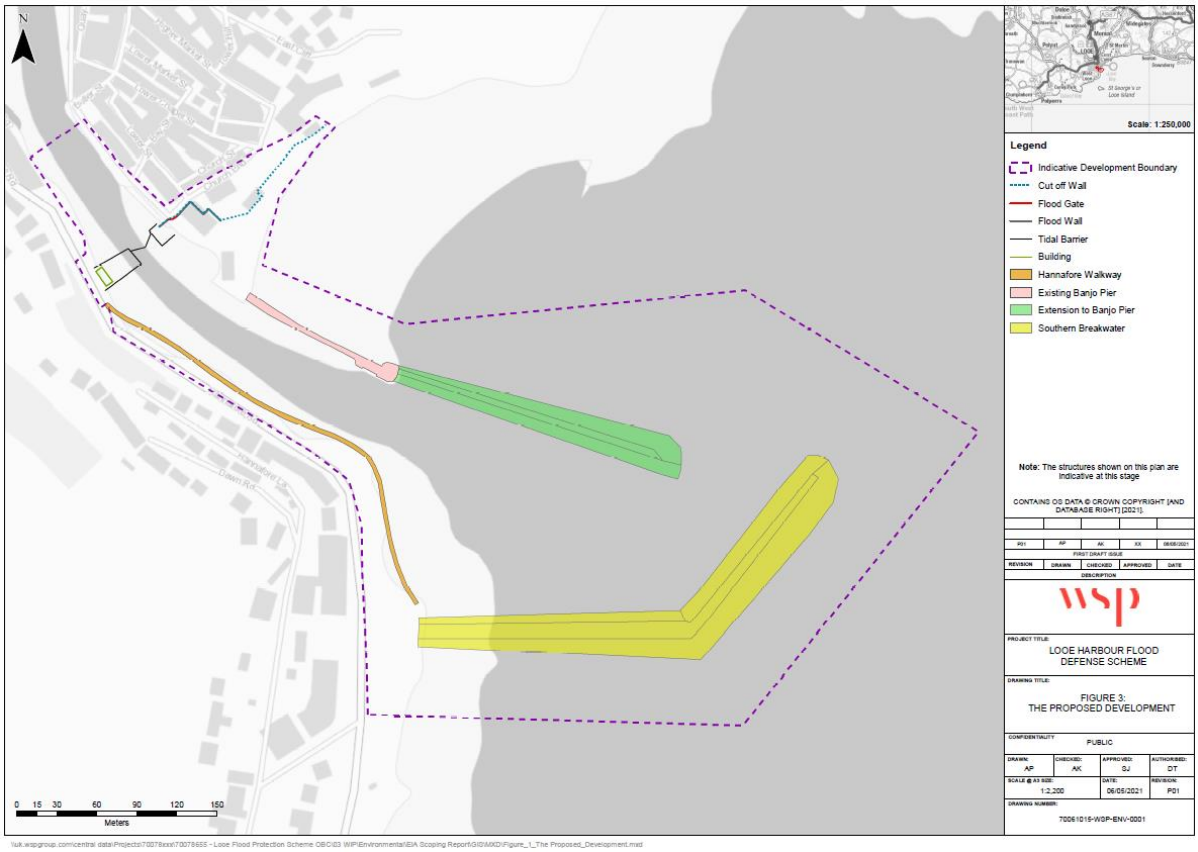
1.1 Project Background

Looe has been identified as one of the most frequently flooded coastal town in the UK, with flooding expected to increase in frequency, extent, and depth over the next 50 years as a result of climate change. Because of this key infrastructure within the town, including the harbour, is coming under increased threat from flooding and a need for intervention has been identified. The proposal is envisaged to protect the town from severe and frequent flooding for the next 100 years.

2 Location

The Looe Harbour Flood Defence and Regeneration Scheme will be located within Looe Harbour area with infrastructure being constructed on the banks of Looe Estuary, within Looe Estuary, and within Looe Bay, which is displayed in Figure 1 below.

Figure 1: Proposed development location (taken from application documents)



3 Environmental Impact Assessment (EIA)

3.1 Council Directive 2011/92/EU (as amended) on the assessment of the effects of certain public and private projects on the environment ("the EIA Directive") aims to protect the environment and the quality of life by ensuring that projects which are likely to have significant environmental effects by virtue of their nature, size or location are subject to an EIA before permission is granted.

3.2 The Marine Management Organisation ("MMO") considers the proposed works to be an Annex II project under the EIA Directive 2011/92/EU, specifically:

> Article 4(2) 10 (e) "Construction of roads, harbours and port installations, including fishing harbours (projects not included in Annex I)", and
> Article 4(2) 10 (k) "Coastal work to combat erosion and maritime works capable of altering the coast through the construction, for example, of dykes, moles, jetties and other sea defence works, excluding the maintenance and reconstruction of such works."

3.3 Pursuant of Schedule 3 Paragraph 3 of Harbours Act 1964 (the Act), Ashfords LLP., on behalf of the future applicant, have requested a Screening Opinion from the MMO. The MMO is satisfied that the proposed development is of such a scale that it requires an environmental impact assessment and, therefore, the MMO provides the following opinion regarding the scope of information to be supplied in an Environmental Statement (ES) if an application for a Harbour Order is made. This opinion is set out below.

4 EIA Scoping Opinion

4.0.1 The MMO agrees with the topics outlined in the document titled “Looe Harbour Flood Defence and Regeneration Scheme, Information to Support a Request for an EIA Screening Opinion under Schedule 3 of the Harbours Act 1964” and in addition, we outline that the following aspects be considered further during the EIA and must be included in any resulting ES.

4.0.2 In order to assess the impacts to the natural environment the following general necessary information must be included within the ES:

- A description of the development – including physical characteristics and the full land use requirements of the site during construction and operational phases.
- Expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc.) resulting from the operation of the proposed development.
- An assessment of alternatives and clear reasoning as to why the preferred option has been chosen, including a clear statement of need.
- A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the interrelationship between the above factors.
- A description of the likely significant effects of the development on the environment – this should cover direct effects but also any indirect, secondary, cumulative, short, medium and long term, permanent and temporary, positive and negative effects. Effects should relate to the existence of the development, the use of natural resources and the emissions from pollutants. This should also include a description of the forecasting methods to predict the likely effects on the environment.
- A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.
- A non-technical summary of the information.
- An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information.

4.1 Conservation of Habitats and Species Regulations 2017

4.1.1 The ES must thoroughly assess the potential for the proposal to affect marine protected sites. European sites (e.g. designated Special Areas of Conservation and Special Protection Areas) fall within the scope of the Conservation of Habitats and Species Regulations 2017. In addition paragraph 118 of the National Planning Policy Framework (NPPF) requires that potential Special Protection Areas (SPA), possible Special Areas of Conservation (SAC), listed or proposed Ramsar sites, and any site identified as being necessary to compensate for adverse impacts on classified, potential or possible SPAs, SACs and Ramsar sites be treated in the same way as classified sites.

4.1.2 Under Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended) an appropriate assessment needs to be undertaken in respect of any plan or project which is (a) likely to have a significant effect on a European site (either alone or in combination with other plans or projects) and (b) not directly connected with or necessary to the management of the site.

The development site could have a potential impact on the following designated nature conservation sites:

Polruan to Polperro SAC

4.1.3 Polruan to Polperro SAC was designated as an SAC on 1 April 2005. The site must be considered within any assessments and all interest features of the site need to be included in the ES. The MMO recommends that there must be a separate section of the ES to address the impacts upon European and Ramsar sites entitled 'Information for Habitats Regulations Assessment'. It is important that all impact pathways are considered including impacts both direct and indirect through all phases of the development including construction and operation.

4.2 Other Nature Conservation

Whitsand and Looe Bay Marine Conservation Zone (MCZ)

4.2.1. Marine Conservation Zones are areas that protect a range of nationally important, rare or threatened habitats and species. The proposed development site is within the Whitsand and Looe Bay MCZ. The ES must include a full assessment of the direct and indirect effects of the development on the designated features of this site, and should identify such mitigation measures as may be required in order to avoid, minimise or reduce any adverse significant effects. Where elements of the project are likely to cause permanent, unavoidable, and irreparable effects to the features of the MCZ full details of these impacts must be provided within the ES and measures to provide equivalent environmental benefit must be set out.

Further information on Whitsand and Looe Bay MCZ can be found here: Marine site detail (naturalengland.org.uk).

The MMO advises that in assessing impacts to the site the following guidance page is followed: Marine Conservation Zones (MCZs) and marine licensing - GOV.UK (www.gov.uk)

Polruan to Polperro SSSI

4.2.2 Notification for the site was made on 30th March 1998 and extends for approximately 10km along the south Cornwall coast between Polruan in the west and Polperro in the east. A range of habitat types are present within the site. The ES must include a full assessment of the direct and indirect effects of the development on the features of special interest within the site and must identify such mitigation measures as may be required in order to avoid, minimise or reduce any adverse significant effects.

Regionally and Locally Important Sites

4.2.3 The ES must consider any impacts upon local wildlife and geological sites. Local sites are identified by the local wildlife trust, geo-conservation group or a local forum established for the purposes of identifying and selecting local sites. These sites are of county importance for wildlife or geodiversity. The ES needs to therefore include an assessment of the likely impacts on the wildlife and geodiversity interests of such sites. The assessment must include proposals for mitigation of any impacts.

4.2.4 The potential impact of the proposal upon features of nature conservation interest and opportunities for habitat creation/enhancement must be included within this assessment in accordance with appropriate guidance on such matters. Guidelines for Ecological Impact Assessment (EcIA) have been developed by the Chartered Institute of Ecology and Environmental Management (CIEEM) and are available on their website.

4.2.5 EcIA is the process of identifying, quantifying and evaluating the potential impacts of defined actions on ecosystems or their components. EcIA may be carried out as part of the EIA process or to support other forms of environmental assessment or appraisal.

4.2.6 The ES must consider whether there is likely to be a loss of intertidal habitats due to the construction causing a change in the hydrodynamic regime within the estuary. The MMO recommends the use of modelling to assess the potential changes in the hydrodynamic functioning of the estuary (tidal propagation, tidal prism etc.) due to the development of the new berth. The ES must assess the additional boat wash resulting from more heavily laden vessels and present any evidence available on the current impacts of wash on the erosion of the intertidal and subtidal habitats in the area.

Protected Species

4.2.7 The ES must assess the impact of all phases of the proposal on protected species (including, for example, great crested newts, reptiles, birds, water voles, badgers and bats). Records of protected species should be sought from appropriate local biological record centres, nature conservation organisations, groups and individuals; and consideration must be given to the wider context of the site for example in terms of habitat linkages and protected species populations in the wider area, to assist in the impact assessment.

4.2.8 The area likely to be affected by the proposal must be thoroughly surveyed by competent ecologists at appropriate times of year for relevant species and the survey results, impact assessments and appropriate accompanying mitigation strategies included as part of the ES. Surveys must always be carried out in optimal survey time periods and to current guidance by suitably qualified and where necessary, licensed, consultants. There is standing advice for some protected species which includes links to guidance on survey and mitigation.

4.2.9 The ES must thoroughly assess the impact of the proposals on habitats and/or species listed as ‘Habitats and Species of Principal Importance’ within the England Biodiversity List, published under the requirements of S41 of the Natural Environment and Rural Communities (NERC) Act 2006. Section 40 of the NERC Act

2006 places a general duty on all public authorities, including local planning authorities, to conserve and enhance biodiversity.

4.2.10 A habitat survey (equivalent to Phase 2) must be carried out on the site, in order to identify any important habitats present. In addition, ornithological, botanical and invertebrate surveys should be carried out at appropriate times in the year, to establish whether any scarce or priority species are present. The ES must include details of:

- Any historical data for the site affected by the proposal (e.g. from previous surveys);
- Additional surveys carried out as part of this proposal;
- The habitats and species present;
- The status of these habitats and species (e.g. whether priority species or habitat);
- The direct and indirect effects of the development upon those habitats and species;
- Full details of any mitigation or compensation that might be required.

4.2.11 The development must seek, where possible, to avoid adverse impact on sensitive
areas for wildlife within the site, and if possible provide opportunities for overall wildlife gain.

4.3 Benthic Ecology

4.3.1 As well as those potential significant effects identified within the screening request document, change in habitat must also be considered within the ES, as the construction (and extension) of the breakwater may potentially represent the introduction of a hard habitat over an otherwise sedimentary habitat. Consideration must also be given to direct and indirect benthic ecology impacts due to change in habitat where naturally occurring hard substrates are replaced with artificial harbour and tidal barrier structures.

4.3.2 The consideration of benthic ecology must also include consideration of benthic habitats (offshore habitats) due to the potentially far reaching direct and indirect impacts within the scheme.

4.4 Coastal Processes

4.4.1 The ES must include a bespoke chapter relating specifically to coastal and estuarine processes, as changes to coastal processes are pertinent to the fundamental design parameters and must be given adequate consideration. This chapter must address scour, impacts to sediment transport patterns and pathways, seabed preparation for the new structures, costal geomorphology, salinity, and pollution pathways.

4.4.2 An assessment must be provided on how the development will impact the coastal processes within the entire Looe Bay stretch, including potential impacts to the features of the MCZ and Benthic habitats. Particular attention must be given as to how changes in coastal and geomorphological processes may impact designated

sites and the wider environment. Other considerations include any impacts from altered wave height and energy and hydrodynamic conditions, if the development will change sediment transport and alter sediment supply within the area, and if the development will act as a barrier within the sediment system and prevent it from carrying out its natural function and change the sediment balance within the sediment system.

4.4.3 The ES must also include assessment of the impacts to the estuarine processes throughout the extent of the entire estuary system whose ecological function and health would be impacted by the scheme, including gate closures. It must be noted that estuarine processes differ from coastal processes and each must be given full consideration.

4.4.4 Mudflats are included as a Priority Habitat under the Natural Environment and Rural Communities (NERC) 2006 Act. Mudflats are present in the range of intertidal habitats within the Looe Estuary. Assessment of these intertidal habitats, species, and processes that create these habitats must be included, specifically relating to the construction, operation and maintenance impacts on coastal and fluvial processes that may potentially impact on such habitats.

4.4.5 Impacts to coastal and estuarine processes must also be considered in the context of gate closures over the lifetime of the scheme. Gate closure frequency is based on current, not future sea level conditions and therefore potentially significantly underestimates the environmental impacts of the development. Based on previous appraisals of future flood risk, at 2020, there is an average of 14 occurrences of flooding (of some description) per year. In line with predicted sea level rise, by 2050, this increases to 60 times per year. By 2080 there is an increase to 180 times per year. Considering this data, when approaching the end of the century (60 years into the 100 year life span of the barrier) the gate may already be spending a substantial percentage of its time closed. The report indicates that the gate would be closed when an extreme tide is forecast. Considering the future scenarios and associated risks, the MMO question whether this is accurate in the long-term. The report also assumes that the gate closure time will be up to 3 hours on each occasion which we would consider to be a minimum. The gates will need to close early in the tide cycle to ensure that there is sufficient allowance of space within the inner estuary to store fluvial flood waters without flooding the town. Similarly, where surges are not in line with tide times, gate closures would need to be further extended. Further consideration of this matter along with robust justification for the assumption must be provided within the ES and any future planning application. Additionally, the ES must consider the potential for extreme “micro- burst” rainfall events (such as experienced in Boscastle in 2004) that may occur over the lifetime of these structures.

4.4.6 Assessments should be backed up with numerical modelling to help inform predications of impacts. Where numerical models are used to test various hypotheses the type, resolution, calibration/validation of these models must be well-documented and robust.

4.4.7 The MMO also require that a wave height and tidal elevation monitoring program (using high frequency pressure transducers) is undertaken along the

potential locations for the tidal barrier to ensure (1) calibration of the numerical model and (2) that the height, frequency and duration of fluvial and marine events are "within" the scenarios test in the models and is included in the ES.

4.5 Seascape / Landscape

4.5.1 Within the ES you must include details of local landscape character areas mapped at a scale appropriate to the development site as well as any relevant management plans or strategies pertaining to the area. The EIA must include assessments of visual effects on the surrounding area. This must include a full assessment of the potential impacts of the development on local landscape and seascape character using Landscape and seascape character assessments. The Landscape and seascape character assessments provide a sound basis for guiding, informing and understanding the ability of any location to accommodate change and to make positive proposals for conserving, enhancing or regenerating character, as detailed proposals are developed.

4.5.2 The methodology set out in Guidelines for Landscape and Visual Impact Assessment, produced by the Landscape Institute and the Institute of Environmental Assessment and Management in 2013 (3rd edition) should be followed for any landscape and visual impact assessment.

4.5.3 The assessment must include the cumulative effect of the development with other relevant existing or proposed developments in the area including cumulative impacts with any other proposals currently at scoping stage. Due to the overlapping timescale of their progress through the planning system, cumulative impact of the proposed development with those proposals currently at scoping stage would be likely to be a material consideration at the time of determination of the planning application.

4.5.4 Assessment of visual impacts should also consider impacts to Areas of Outstanding Natural Beauty (AONBs), Areas of Great Landscape Value (AGLVs), Landscape Character Areas (LCA) 23 and areas outside of the 3km radius. Over the lifetime of the scheme, there is potential for the impacts to be significant and therefore must be assessed at this stage.

4.5.5 Landscape, seascape, and visual impacts must also be considered in the context of the historic environment, including direct impacts on historic/archaeological fabric (buildings, sites or areas), whether statutorily protected or not; other impacts, particularly the setting of listed buildings, scheduled monuments, registered parks and gardens, conservation areas etc. This also includes long views and any specific designed views and vistas within historic designed landscapes and should include effects on landscape amenity from public and private land and cumulative impacts. All grades of listed buildings must be identified.

4.5.6 You should consider whether there is land in the area affected by the development which qualifies for conditional exemption from capital taxes on the grounds of outstanding scenic, scientific or historic interest. An up-to-date list may be obtained at www.hmrc.gov.uk/heritage/lbsearch.htm.

4.6 Fish Ecology and Fisheries

4.6.1 The ES must include estuarine/marine and migratory fish and significant impacts arising during construction and operation of the proposal (where applicable) must be assessed. As identified within the submitted screening document European eel (*Anguilla anguilla*), Atlantic salmon (*Salmo salar*) brown/sea trout (*Salmo trutta*), brook lamprey (*Lampetra planeri*), bullhead (*Cottus gobio*) and flounder (*Platichthys flesus*) all utilise the West Looe River and must therefore be considered within the ES. You must also consider impacts to Sea Lamprey (*Petromyzon marinus*).

4.6.2 In addition to the above named species you must identify local marine fish species and characterises the area for fish/fish ecology. Data obtained from the Cefas recreational fishing database have identified 41 recreational fishing trips where Looe is in the location name; 27 from a charter boat, 13 from the shore, and 1 private/rental boat. Species caught included blue shark (*Prionance glauca*), whiting (*Merlangius merlangus*), bib (*Trisopterus luscus*), pollack (*Pollachius pollachius*), ling (*Molva molva*), conger eel (*Conger conger*), mackerel (Scomber scombrus), spurdog (Squalus acanthias), lesser-spotted dogfish (Scyliorhinus canicula), coalfish (Polachius virens), cuckoo wrasse (Labrus mixtus), tope (Galeorhinus galeus), bluefin tuna (Thunnus thunnus), bull huss (Scyliorhinus stellaris), garfish (Belone belone), and flounder (Platichthys flesus). Whilst some of these species may be transient to the area, the ES must acknowledge their potential presence and any impacts related to their ecology in the EIA.

4.6.3 For the assessment of impacts from underwater noise and vibration (e.g. from piling) on fish species, you must refer to the sound exposure guidelines for different source types (continuous and non-continuous noise), based on hearing groupings of fish, as described in Popper et al. (2014). The guidance defines noise thresholds for injury and mortality and provides some guidance on behavioural ranges and also includes a threshold for egg and larval stages. Additionally Coull *et al*, (1998) and Ellis *et al*, (2012) provide fish sensitivity maps and spawning ground maps, respectively (see 'references').

4.6.4 Both construction and operational impacts from gate closures must also be included within the ES for migratory species, as gate closures are likely to occur at peak migratory periods, e.g. high spring tides – juvenile eel peak migration, high river flow periods – adult salmonids and adult eel peak migration, and autumn/winter/spring – all migratory species in all life stages. During construction temporary working methods including: piling, dredging, de-watering, pumping, and construction within the water course must all be considered in the context of timing and minimising disturbance to migratory fish species' movement and activity.

4.6.5 The ES must also consider how the proposed pier and breakwater will change the approach to the estuary and experience within transitional waters. Specialised fluvial modelling is required to gain an understanding of the current approach and how fish are likely to be using the coastline as approach/transitional waters. You are advised to consider the possibility of a tagging study to understand current approach.

4.6.6 Within the ES must also be adequate pre-construction monitoring data. This must include freshwater monitoring undertaken via electro fishing and be within the correct monitoring season to avoid migratory periods. Fyke nets must not be used due to the high mortality rate of target and non-target species. It will be necessary to obtain data on:

- which species are present and in what numbers in order to set a baseline for the river which must not be allowed to deteriorate. This data may also inform operational guidelines for the barrier. Monitoring sites should be selected in consultation with the Environment Agency and other interested parties, e.g. Westcountry Rivers Trust, angling groups etc.,
- which areas of the river are used most frequently for spawning/adult habitat and,
- a river corridor assessment to aid in identifying areas of good habitat and areas that would require investment as catchment mitigation e.g. habitat improvement, barrier removal etc.

4.6.7 Additionally, consideration must be given to the fact that the River Looe has been designated as a 'recovering river' for Atlantic salmon, you must therefore liaise with the Environment Agency to identify what data they may hold for the east and west River Looe such as rod catch data and other biological data which may be likely to exist.

4.6.8 All impacts to relevant fish species must be placed in the context of the Natural Environment and Rural Communities (NERC) 2006 Act, the Salmon and Freshwater Fisheries Act (SAFFA) 1975 and the Eel Regs. 2009.

4.6.9 The ES must also include details of post-construction monitoring to provide ongoing evidence that the operations of the scheme are not causing damage to the riverine ecosystem, and that any mitigation measures are sufficient.

4.7 Underwater Noise

4.7.1 It has been noted that the screening document states 'there are no likely significant effects upon receptors anticipated during the operational phase'. Given that the Screening Request report only provided high level information on the site location and proposed development, technical information about the operational phase is missing. As such, the potential effects of noise produced during the operation of tidal gates (from machinery etc.) and effect of the subsequent change in the harbour soundscape on aquatic species cannot be ruled out without a more detailed explanation and as such must be included within the ES.

4.7.2 The ES must also include a baseline noise survey of the local underwater soundscape, this is particularly important for the proposed site of the Southern Breakwater and Banjo Pier extension as the majority of the construction as these locations will be underwater. The baseline survey must use a hydrophone and should be conducted during the summer months as this has been indicated to be the tentative timing for construction.

4.7.3 The ES must also identify and assess the impacts (including auditory injury, barrier effects, and displacement/behavioural impacts) of underwater noise on

migratory fish species, hearing sensitive fish, and marine mammals. In carrying out the assessment you are advised to refer to the current peer-reviewed noise thresholds provided by Popper et al. (2014) and NMFS (2018) for fishes and marine mammals respectively. The assessment must of noise impacts must also consider the timing and duration of works (such as piling, dredging and vessel operations) as this may influence underwater noise exposure levels, as well as the potential overlap with ecologically important times (such as breeding, spawning or migration).

4.7.4 The assessment of underwater noise impacts to marine mammals should include consideration of both temporary threshold shift (TTS) and permanent threshold shift (PTS). This should be accompanied by a set of detailed mitigation measures set out in a Marine Mammal Mitigation Plan/ Protocol (MMMP) for piling. Typical/ standard measures may include soft start procedures during piling, marine mammal observation and/or temporal restrictions.

4.7.5 The assessment of underwater noise impacts on fish species should also be placed in the context of commercial fisheries impacts for commercially important species. It should be noted that commercially important species can include both fishes and invertebrates (for example, crab and lobster species). Currently, there are no established noise criteria for invertebrates; therefore, if any invertebrates are considered commercially important, the applicant will need to draw on relevant scientific literature to support their impact assessment and assessment conclusions.

4.8 Archaeology / Cultural Heritage

4.8.1 In line with the advice in the National Planning Policy Framework (NPPF, July 2021), the Environmental Statement must contain a thorough assessment of the likely effects which the proposed development might have upon both designated and non-designated heritage assets of all types. In this way it should be possible to identify (and where possible avoid, minimise or if appropriate mitigate) what may be substantial direct and indirect impacts on assets of local, regional and national importance.

4.8.2 In your assessment of impacts to heritage assets it is recommended that an approach to the significance of designated heritage assets is reflective of the assessment criteria for the designation process, can be easily understood within the language of the NPPF regarding the significance of heritage assets and the impact of proposals on that significance, and takes full account of the most recent published advice including:

- Historic Environment Good Practice Advice in Planning Notes (GPA1-3): https://historicengland.org.uk/advice/planning/planning-system/ in particular GPA 3 on The Setting of Heritage Assets

- Conservation Principles, Policies and Guidance: Sustainable Management of the Historic Environment (English Heritage, 2008) https://historicengland.org.uk/advice/constructive-conservation/conservation-principles/

4.8.3 There must be a close relationship between the Landscape and Visual Impact Assessment and the Cultural Heritage Assessments. In doing so the ES must

provide a robust assessment of the impact of development on the significance designated heritage assets derive from their settings including, but not limited to visual impacts. Heritage Assets are key visual receptors and any impact upon them would need to be considered in depth with appropriate selection of viewpoints relevant to the significance of the assets in question and the likely impacts. We would recommend the inclusion of long views and any specific designed or historically relevant views and vistas within this historic landscape.

4.8.4 The ES must also consider the potential impacts on non-designated features of historic, architectural, archaeological or artistic interest, since these can also be of national importance and make an important contribution to the character and local distinctiveness of an area and its sense of place. Contact information is available via the local authority Historic Environment Record (www.heritagegateway.org.uk) and relevant local authority staff.

4.8.5 You are advised to seek engagement from Cornwall Council's conservation officers and local archaeologists in the development of any assessment as they will be best placed to advise on: local historic environment issues and priorities; how the proposal can be tailored to avoid and minimise potential adverse impacts on the historic environment; the nature and design of any required mitigation measures; and opportunities for securing wider benefits for the future conservation and management of heritage assets.

4.8.6 This proposal is likely to be visible across a large area and could, as a result, affect the significance of heritage assets at some distance from this site itself. We would expect the assessment to clearly demonstrate that the extent of the proposed study area is of the appropriate size to ensure that all heritage assets likely to be affected by this development have been included and can be properly assessed. As such, a 1km study zone for designated assets, with professional judgement bringing other assets into the study area where appropriate, would be considered a reasonable approach.

4.8.7 It is important that the assessment is designed to ensure that all impacts are fully understood. Section drawings and techniques such as photomontages are a useful part of this, in particular where the transitions between banks and natural coastline will be affected by the proposals.

4.8.8 The ES must also consider paleoenvironmental remains and their potential. Because of historic sea level changes, some archaeology under the sea or beach may have once been terrestrially located - the Intertidal Peat Database refers to submerged forest preservation in this area. If any submerged forest survivedit would be considered to be significant non-designated deposits. The river may also be archaeologically rich in areas not scoured or dredged, and along banks - if any paleoenvironmental prehistoric deposits survive there is the potential to model changes over time in marine/ estuarine/ freshwater conditions and this would be valuable archaeological evidence.

4.8.9 Furthermore the assessment must also consider, where appropriate, the likelihood of alterations to drainage patterns that might lead to in situ decomposition

or destruction of below ground archaeological remains and deposits, and can also lead to subsidence of buildings and monuments.

4.9 Navigation, Traffic, and Access for Other Users of the Sea

Navigation

4.9.1 The screening report document identifies that there will be expected impacts to shipping and navigation, these impacts must be assessed through a Navigation Risk Assessment and must include proposed methods to mitigate impacts. The proposal must adhere to the Port Marine Safety Code (PMSC) which sets out a national standard for every aspect of port marine safety. The Department for Transport also publishes the PMSC Guide to Good Practice which provides useful information and detailed guidance on the safe management of these facilities and is intended to supplement the Code. This can be found here: https://www.gov.uk/government/publications/a-guide-to-good-practice-on-port-marine-operations

4.9.2 Throughout the ES and associated documents co-ordinates must be presented using the World Geodetic System 1984 (WGS 1984), this includes within the draft Harbour Revision Order., if appropriate. You are also advised to engage with Trinity House regarding the need for aids to navigation.

Traffic

4.9.3 The proposed development has the potential to cause road traffic impacts in the nearby area during the construction phase. As such the ES must include an assessment of transport related impacts and should be carried out and reported as described in the current Ministry of Housing, Communities and Local Government guidance. The environmental impacts arising from any disruption during construction, traffic volume, composition or routing change and transport infrastructure modification must also be fully assessed and reported, along with the environmental impact of the road network upon the development itself.

4.9.4 The transport assessment should consider the operation of the Strategic Road Network during the construction phase of the development, in line with national planning practice guidance and DfT Circular 02/2013 The Strategic Road Network and the Delivery of Sustainable Development: The strategic road network and the delivery of sustainable development (publishing.service.gov.uk)

4.9.5 The ES must detail measures envisaged to mitigate transport impacts through the inclusion of a construction traffic management plan. Comments with regards to impacts on the local highways network must be sought from Cornwall Council as the local highways authority.

Access for Other Users of the Sea

4.9.6 The ES must consider potential impacts on access land, public open land, rights of way and coastal access routes in the vicinity of the development. Consideration must also be given to the potential impacts on the adjacent and nearby public rights of way. Appropriate mitigation measures must be incorporated for any adverse impacts. We also recommend reference to the relevant Right of Way Improvement Plans (ROWIP) to identify public rights of way within or adjacent to the proposed site that should be maintained or enhanced. Where possible links to other

green networks and, where appropriate, urban fringe areas should also be explored to help promote the creation of wider green infrastructure. Relevant aspects of local authority green infrastructure strategies must be incorporated where appropriate.

4.10 Air Quality & Climate

4.10.1 The England Biodiversity Strategy published by Defra establishes principles for the consideration of biodiversity and the effects of climate change. The ES must reflect these principles and identify how the development's effects on the natural environment will be influenced by climate change, and how ecological networks will be maintained. The NPPF requires that the planning system should contribute to the enhancement of the natural environment 'by establishing coherent ecological networks that are more resilient to current and future pressures' (NPPF Para 174), which should be demonstrated through the ES.

4.10.2 Additionally, as detailed in section 4.4 the effects on the proposed development of the predicted increase in frequency and severity of climate change driven flood events must be considered.

4.11 Water Quality

4.11.1 Throughout the lifespan of the project there is the potential for increases in suspended sediment concentrations (SSC), through construction activities to dredging for maintenance and operation. As a result there is the potential for habitats to be smothered and a deterioration in water quality. The ES must include information on the sediment quality and potential for any effects on water quality through suspension of contaminated sediments. The EIA should also consider whether increased suspended sediment concentrations resulting are likely to impact upon the interest features and supporting habitats of designated sites and priority habitats.

4.11.2 The ES must consider whether there will be an increase in the pollution risk as a result of the construction or operation of the development. For activities in the marine environment up to 1 nautical mile out at sea, a Water Framework Directive Regulations (WFD) assessment is required as part of any application. The impact to Water quality and bathing waters needs to be considered across the entire estuarine system including future extent as well as any reach upstream into freshwater impacts.The ES should draw upon and report on the WFD Regulations assessment considering the impact the proposed activity may have on the immediate water body and any linked water bodies. Further guidance on WFD Regulations assessments is available here: https://www.gov.uk/guidance/water-framework-directive-assessment-estuarine-and-coastal-waters.

4.11.3 The East and West looe Rivers have also suffered fish mortality events in the past associated with the Sewage Treatment Plant and its storm overflow and treatment systems. The ES must consider how these problems may be exacerbated if water is held impounded in the harbour during gate closures in the operational stage of the project. Such a scenario would impact upon the water quality and, in turn, fish within the harbour and, potentially the residents of the town.

4.11.4 Similarly, it is understood that there is an issue with macro algal build up in the tidal sections of the East Looe River. This may prove problematic if water is impounded, particularly during summer months as the matter begins to decay as it will impact dissolved oxygen levels, negatively affecting the migrating and resident fish species.

4.11.5 The ES must also include consideration of the potential release of contaminants from sediments during any dragging activity or ground preparation works and how this may impact water quality.

4.12 Seabed / Land / Soil Quality

4.12.1 Section 4.5 of the submitted screening report notes potential significant effects pertaining to contaminants in soils. However, it is unclear whether this extends to marine sediments. The dredging of marine sediments can lead to the remobilisation of contaminants within the marine environment and therefore must be identified as a relevant pressure and assessed within the ES.

4.12.2 The ES must include specific details regarding the dredging proposed including predicted dredge volumes and methods. As the dreding will be of a capital nature sediment sampling will be required. As such the ES must include details of sediment sampling and subsequent analysis to assess for potentially contaminated sediments. This should also include an assessment of how waste sediments will be managed in line with the Waste Regulations.

4.13 Population and Human Health

4.13.1 The screening report adequately identifies the majority of pressures and receptors. As such the ES must include consideration of all of the identified potential significant effects, including potential impacts to tourism due to potential reductions in marine access and loss of visual amenity.

4.13.2 There is an active sea trout angling interest on both reaches of the river. The socio-economic valuation of such activity should be considered as the scheme's impact to migratory fish species will be significantly negative. We recommend that consultation with relevant angling clubs is undertaken. The scheme may also result in a negative impact to the fish assemblages in the area between the harbour and breakwater, which could have a resultant detrimental impact to the value of sea fishing.

4.13.3 There is an intrinsic value of an intact, functional ecosystem to which migratory fish contribute. Removal or drastic decline of species will have unknown effects of the functioning of the catchment ecosystem and the ecosystem services that they provide.

4.13.4 The scheme's impact on the quality of bathing waters also needs to be considered in terms of the socio-economic effect to the town. The site is closely linked to tourism in the area, and any deterioration in bathing water quality could have a negative effect on the local economy.

4.14 Cumulative Impacts & In-Combination Impacts

4.14.1 A full consideration of the implications of the whole scheme must be included in the ES. All supporting infrastructure should be included within the assessment. The ES should include an impact assessment to identify, describe and evaluate the effects that are likely to result from the project in combination with other projects and activities that are being, have been or will be carried out. The following types of projects should be included in such an assessment, (subject to available information):

a. existing completed projects;
b. approved but uncompleted projects;
c. ongoing activities;
d. plans or projects for which an application has been made and which are under consideration by the consenting authorities; and
e. plans and projects which are reasonably foreseeable, i.e. projects for which an application has not yet been submitted, but which are likely to progress before completion of the development and for which sufficient information is available to assess the likelihood of cumulative and in-combination effects.

4.15 Risk of Major Accidents and Disasters Relevant to the Project (including those caused by Climate Change)

4.15.1 The England Biodiversity Strategy published by Defra establishes principles for the consideration of biodiversity and the effects of climate change. The ES must reflect these principles and identify how the development's effects on the natural environment will be influenced by climate change, and how ecological networks will be maintained.

4.16 Mitigation and Monitoring

4.16.1 If the ES concludes that there is a likely significant effect on any matters, sufficient mitigation will need to be proposed. If the ES concludes that there is a likely significant effect on any matters, a robust monitoring plan of any significant impacts may also need to be proposed.

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4.17 Additional Information

England Coast Path

4.17.1 The England Coast Path (ECP) is a new National Trail that will extend around all of England's coast with an associated margin of land predominantly seawards of this, for the public to access and enjoy. Great care goes in to considering the interests of both land owners/occupiers and users of the England Coast Path, aiming to strike a fair balance when working to open a new stretch. An approach set out in the approved Coastal Access Scheme is followed and all proposals have to be approved by the Secretary of State. The MMO would encourage any proposed development to include appropriate provision for the ECP to maximise the benefits this can bring to the area. We suggest that the development includes provision for a walking or multi-user route, where practicable and safe. This should not be to the detriment of nature conservation, historic environment, landscape character or affect natural coastal change. Consideration for how best this could be achieved should be made within the Environmental Statement.

4.17.2 As part of the development of the ECP a ‘coastal margin’ is being identified. The margin includes all land between the trail and the sea. It may also extend inland from the trail if:

- it’s a type of coastal land identified in the Countryside and Rights of Way Act 2000 (CROW Act), such as beach, dune or cliff
- there are existing access rights under section 15 of the CROW Act
- Natural England and the landowner agree to follow a clear physical feature landward of the trail.

4.17.3 Maps for sections of the ECP and further proposals for adoption are available here: https://www.gov.uk/government/collections/england-coast-path-improving-public-access-to-the-coast

5 Conclusion

5.1 The topics highlighted in this scoping opinion must be assessed during the EIA process and the outcome of these assessments **must** be documented in the ES in support of the harbour revision order application and any associated marine licence application and planning applications. This statement, however, should not necessarily be seen as a definitive list of all EIA requirements. Given the scale and programme of these planned works other work may prove necessary.

5.2 It must also be noted that works required under the proposed development would also require a marine licence under Part 4 of The Marine and Coastal Access Act 2009. Any such application for marine licence must be submitted at the same time as any application for a Harbour Order under the Harbours Act 1964.

Daniel Jose
Marine Case Officer

12 October 2021