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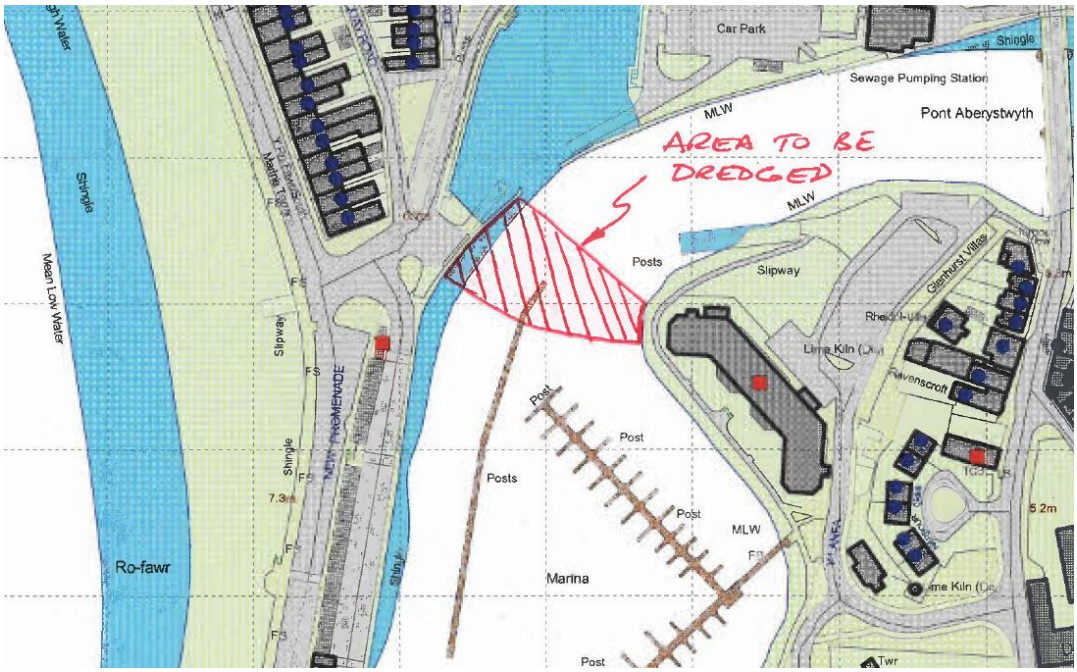

ED3390 Aberystwyth Harbour Dredging

Water Framework Directive Assessment & Test of Likely Significant Effects

04/11/2021

Report Prepared for:-

Owen Morgan – Harbour Manager Highways & Environmental Services, Ceredigion County Council

Report No. ED3390_ECO_1

Prepared By Julia Pschera BSc, MSc

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Water Framework Directive Assessment & Test of Likely Significant Effects

	Name	Signature	Position	Date of Issue	Version
Prepared	Julia Pschera		Highways Ecologist	04/11/2021	
Approved					

Record of Previous Issue and Amendments

Version	Revision date	Summary of Changes

Ceredigion County Council (CCC) is responsible for the maintenance of Aberystwyth Harbour. As part of this, the harbour basin is dredged regularly to maintain access for boats. The dredged material is used locally to replenish the beach along the seaward side of the harbour breakwater.

The Marine Licence renewal for the maintenance dredging requires CCC to demonstrate that the proposed dredging is compatible with legal requirements to safeguard water bodies (Water Framework Directive 2000/60/EC) and sites which are designated under the Conservation of Habitat and Species Regulations (2010) such as West Wales Marine Special Area of Conservation (SAC) and Northern Cardigan Bay Special Protection Area (SPA). The required assessments are the Water Framework Directive Assessment (Appendix 1 of this report) and a Test of Likely Significant Effects on a European Protected Site (TLSE; Appendix 2 of this report) to determine whether a full Habitats Regulations Assessment (HRA) is required.

The waterbody name for WFD purposes is ‘Ystwyth/ Rheidol’ transitional (i.e. estuarine) waterbody. The waterbody is heavily modified and its current ecological status is moderate potential, with an objective of reaching good ecological potential by 2027. The risk of undermining achievement of this target from the proposed dredging and disposal operation is negligible. The risk of undermining the conservation objectives for West Wales Marine Special Area of Conservation (SAC) and Northern Cardigan Bay Special Protection Area (SPA) is negligible. Best practice regarding pollution prevention must be adhered to at all times.

Appendix 1: Water Framework Directive Assessment

Water Framework Directive assessment: scoping for activities in estuarine and coastal waters

Your activity	Description, notes or more information
Applicant name	Ceredigion County Council
Application reference number (where applicable)	
Name of activity	Aberystwyth Harbour dredging and associated beach replenishment
Brief description of activity	*It is proposed to dredge gravelly material from the harbour basin at low tide around the time of Spring tides in winter/ early spring. The material will be dredged using water injection dredging, excavators, or a combination of the two and will be used subsequently to replenish the beach on the seaward side of the harbour breakwater. Annual volume of material to be dredged: 2000 m^3.*
Location of activity (central point XY coordinates or national grid reference)	*Dredging* *SN 58093 81289* *SN 58063 81258* *SN 58105 81232* *SN 58144 81254* *Disposal Area* *SN 57968 81071* *SN 57933 80968* *SN 57950 80959* *SN 57990 81067*

Footprint of activity (ha)	<1 ha
Timings of activity (including start and finish dates)	Low tide during late winter/ early spring spring tides each year.
Extent of activity (for example size, scale frequency, expected volumes of output or discharge)	2000 tonnes pa
Use or release of chemicals (state which ones)	n/a

Water body[1]	**Description, notes or more information**
WFD water body name	*Ystwyth/ Rheidol*
Water body ID	*GB511006315000*
River basin district name	*Western Wales River Basin District*
Water body type (estuarine or coastal)	*Estuarine*
Water body total area (ha)	*unknown*
Overall water body status (2015)	*Moderate potential*
Ecological status	*Moderate potential*
Chemical status	*Does not require assessment*
Target water body status and deadline	*Good potential 2027*
Hydromorphology status of water body	*Heavily modified*
Heavily modified water body and for what use	*Heavily modified for coastal protection*
Higher sensitivity habitats present	*None*
Lower sensitivity habitats present	*Mud/shingle; Sand/shingle; Rock*
Phytoplankton status	
History of harmful algae	

WFD protected areas within 2km	*West Wales Marine SAC,* *Northern Cardigan Bay SPA*

[1] *Water body information can be found in the Environment Agency's catchment data explorer and the water body summary table. Magic maps provide additional information on habitats and protected areas. Links to these information sources can be found in the WFD assessment guidance for estuarine and coastal waters.*

Specific risk information

Consider the potential risks of your activity to each of these receptors: hydromorphology, biology (habitats and fish), water quality and protected areas. Also consider invasive non-native species (INNS).

Section 1: Hydromorphology

Consider if hydromorphology is at risk from your activity.

Use the water body summary table to find out the hydromorphology status of the water body, if it is classed as heavily modified and for what use.

Consider if your activity:	Yes	No	Hydromorphology risk issue(s)
Could impact on the hydromorphology (for example morphology or tidal patterns) of a water body at high status		Impact assessment not required	
Could significantly impact the hydromorphology of any water body		Impact assessment not required	
Is in a water body that is heavily modified for the same use as your activity		Impact assessment not required	*The waterbody is heavily modified, but for a different use.*

Record the findings for hydromorphology and go to section 2: biology.

Section 2: Biology

Habitats

Consider if habitats are at risk from your activity.

Use the water body summary table and Magic maps, or other sources of information if available, to find the location and size of these habitats.

Higher sensitivity habitats [2]	Lower sensitivity habitats [3]
chalk reef	cobbles, gravel and shingle
clam, cockle and oyster beds	intertidal soft sediments like sand and mud
intertidal seagrass	rocky shore
maerl	subtidal boulder fields
mussel beds, including blue and horse mussel	subtidal rocky reef
polychaete reef	subtidal soft sediments like sand and mud
saltmarsh	
subtidal kelp beds	
subtidal seagrass	

[2] *Higher sensitivity habitats have a low resistance to, and recovery rate, from human pressures.*

[3] *Lower sensitivity habitats have a medium to high resistance to, and recovery rate from, human pressures.*

Consider if the footprint[4] of your activity is:	Yes	No	Biology habitats risk issue(s)
0.5km^2 or larger			
1% or more of the water body's area		No	
Within 500m of any higher sensitivity habitat		No	
1% or more of any lower sensitivity habitat		No	
		No	

[4] *Note that a footprint may also be a temperature or sediment plume. For dredging activity, a footprint is 1.5 times the dredge area.*

Fish

Consider if fish are at risk from your activity, but only if your activity is in an estuary or could affect fish in or entering an estuary.

Consider if your activity:	Yes	No	Biology fish risk issue(s)
Is in an estuary and could affect fish in the estuary, outside the estuary but could delay or prevent fish entering it or could affect fish migrating through the estuary	Continue with questions		
Could impact on normal fish behaviour like movement, migration or spawning (for example creating a physical barrier, noise, chemical change or a change in depth or flow)		Impact assessment not required- an open river channel will be maintained at all times; no potential impact on migration	
Could cause entrainment or impingement of fish		Impact assessment not required	

Record the findings for biology habitats and fish and go to section 3: water quality.

Section 3: Water quality

Consider if water quality is at risk from your activity.

Use the water body summary table to find information on phytoplankton status and harmful algae.

Consider if your activity:	Yes	No	Water quality risk issue(s)
Could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)		Impact assessment not required- due to the gravelly particle size, it is expected that sediment will re-settle quickly after works	
Is in a water body with a phytoplankton status of moderate, poor or bad		Impact assessment not required	
Is in a water body with a history of harmful algae		Impact assessment not required	

Consider if water quality is at risk from your activity through the use, release or disturbance of chemicals.

If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Yes	No	Water quality risk issue(s)
The chemicals are on the Environmental Quality Standards Directive (EQSD) list		Impact assessment not required	
It disturbs sediment with contaminants above Cefas Action Level 1		Impact assessment not required	

If your activity has a mixing zone (like a discharge pipeline or outfall) consider if:	Yes	No	Water quality risk issue(s)
The chemicals released are on the Environmental Quality Standards Directive (EQSD) list	N/A		

[5] *Carry out your impact assessment using the Environment Agency's surface water pollution risk assessment guidance, part of Environmental Permitting Regulations guidance.*

Record the findings for water quality go on to section 4: WFD protected areas.

Section 4: WFD protected areas

Consider if WFD protected areas are at risk from your activity. These include:

- special areas of conservation (SAC)
- special protection areas (SPA)
- shellfish waters
- bathing waters
- nutrient sensitive areas

Use Magic maps to find information on the location of protected areas in your water body (and adjacent water bodies) within 2km of your activity.

Consider if your activity is:	Yes	No	Protected areas risk issue(s)
Within 2km of any WFD protected area[6]	Requires impact assessment		

[6] *Note that a regulator can extend the 2km boundary if your activity has an especially high environmental risk.*

Record the findings for WFD protected areas and go to section 5: invasive non-native species.

Section 5: Invasive non-native species (INNS)

Consider if there is a risk your activity could introduce or spread INNS.

Risks of introducing or spreading INNS include:

- materials or equipment that have come from, had use in or travelled through other water bodies
- activities that help spread existing INNS, either within the immediate water body or other water bodies

Consider if your activity could:	Yes	No	INNS risk issue(s)
Introduce or spread INNS		Impact assessment not required	

Record the findings for INNS and go to the summary section.

Summary

Summarise the results of scoping here.

Receptor	Potential risk to receptor?	Note the risk issue(s) for impact assessment
Hydromorphology	No	
Biology: habitats	No	
Biology: fish	No	
Water quality	No	
Protected areas	Yes	Impact assessment: TLSE (see Appendix 2)
Invasive non-native species	No	

If you haven't identified any receptors at risk during scoping, you don't need to continue to the impact assessment stage and your WFD assessment is complete.

If you've identified one or more receptors at risk during scoping, you should continue to the impact assessment stage.

Include your scoping results in the WFD assessment document you send to your activity's regulator as part of your application for permission to carry out the activity.

Appendix 2: Test of Likely Significant Effects on a European Protected Site (TLSE) for West Wales Marine Special Area of Conservation (SAC) and Northern Cardigan Bay Special Protection Area (SPA)

Record of Assessment of Likely Significant Effect on a European Site	**Cyngor Sir CEREDIGION**

PART A *To be completed by relevant technical/project officer in consultation with Conservation/Ecology section and NRW. Please refer to English Nature Habitat Regulations Guidance Note 3 when completing this form.*	
1. Type of permission/activity:	Marine Licence to dredge and / or dispose of dredge material
2. Planning application number	n/a
3. National Grid reference:	SN58118127
4. Site reference:	Aberystwyth Harbour
5. Brief description of proposal	Localised dredging within Aberystwyth Harbour and associated beach nourishment works by means of land-based mechanical excavator at low tide. Renewal of licence for regular harbour maintenance dredging works. The proposed dredging will involve removal of gravel-dominated sediment from the main harbour basin and the disposal of the dredged material for use as beach nourishment on the seaward side of the harbour breakwater. The works are carried out at the time of the spring tides in March, while the tide is out. Adverse effects may include: • impacts on shoreline and intertidal habitats and species from release and suspension of sediment into the water column, • general construction activities, • noise during construction, • fuel or lubricant spillage.
6. European site name(s) and status:	West Wales Marine Special Area of Conservation (SAC)
7. List of features of interest <u>relevant</u> to application site: **Sole West Wales Marine SAC feature:** **Habitats Directive Annex II (& IV) Species** <u>*Phocoena phocoena* – harbour porpoise</u>	Phocoena phocoena – Harbour porpoise

8. Conservation objectives: will the proposal undermine the conservation objectives? If no then plan may be granted.	No

9. Risk assessment - Where there is not a clear cut case for there being no likely significant effect on the interest features or conservation objectives, you should carry out and record a brief risk assessment. ARE FULLER CONSIDERATIONS REQUIRED? [If YES go to 9(a)]

9(a)What potential hazards are likely to affect the interest features? (Refer to relevant sensitivity matrix and only include those to which the interest features are sensitive). **Are the interest features potentially exposed to the hazard?**

Sensitive Interest Feature:	**Potential hazard:**	**Probability of effect on SAC**	**Magnitude of effect**
Harbour porpoise	Disturbance from dredging/ disposal activity	Low.	Negligible.

10. Is the proposal directly connected with or necessary to the management of the site for nature conservation?	No

11.Case History/ additional information	This is a regular maintenance activity.

12. Is the potential scale or magnitude of any effect likely to be significant?

a) Alone? (explain conclusion)	No. Considering the high level of human activity in and around the town harbour, it is considered that any potential effect on harbour porpoise is going to be negligible.
b) In combination with other plans or projects? (Explain conclusion and which plans/projects have been included, including those associated with other functions).	No other plans or projects considered.

13. Conclusion: Is the proposal likely to have a significant effect 'alone or in combination' on a European site? (justification – attach any relevant supporting information)	No.	
14. Name of CCC officer and Date	Julia Pschera, 04/11/2021	
15. NRW comment on assessment:		
16. NRW Officer:		**Date:**
IF THE PROPOSAL IS LIKELY TO HAVE A SIGNIFICANT EFFECT AN APPROPRIATE ASSESSMENT WILL BE REQUIRED (see part B for suggested scope).		

CONSERVATION OBJECTIVES FOR RELEVANT FEATURES (taken from the West Wales Marine SAC Conservation Objectives and Advice on Operations).

Conservation Objective for the harbour porpoise *Phocoena phocoena*.

The feature will be considered to be in a favourable conservation status when each of the following conditions are met*:*	**Will the proposal undermine the conservation objective? If 'yes', give brief details.**
(1) Harbour porpoise is a viable component of the site.	No.
(2) There is no significant disturbance of the species.	No.
(3) The condition of supporting habitats and processes, and the availability of prey is maintained.	No.

Record of Assessment of Likely Significant Effect on a European Site	**Cyngor Sir CEREDIGION**

PART A *To be completed by relevant technical/project officer in consultation with Conservation/Ecology section and NRW. Please refer to English Nature Habitat Regulations Guidance Note 3 when completing this form.*	
1. Type of permission/activity:	Marine Licence to dredge and / or dispose of dredge material
2. Planning application number	n/a
3. National Grid reference:	SN58118127
4. Site reference:	Aberystwyth Harbour
5. Brief description of proposal	Localised dredging within Aberystwyth Harbour and associated beach nourishment works by means of land-based mechanical excavator at low tide. Renewal of licence for regular harbour maintenance dredging works. The proposed dredging will involve removal of gravel-dominated sediment from the main harbour basin and the disposal of the dredged material for use as beach nourishment on the seaward side of the harbour breakwater. The works are carried out at the time of the spring tides in March, while the tide is out. Adverse effects may include: • impacts on shoreline and intertidal habitats and species from release and suspension of sediment into the water column, • general construction activities, • noise during construction, • fuel or lubricant spillage.
6. European site name(s) and status:	Northern Cardigan Bay Special Protection Area (SPA)
7. List of features of interest <u>relevant</u> to application site: **Sole Northern Cardigan Bay SPA feature: Birds Directive Annex I Species** <u>*Gavia stellata* – Red-throated diver</u>	Gavia stellata – Red-throated diver
8. Conservation objectives: will the proposal undermine the conservation objectives? If no then plan may be granted.	No.

9. Risk assessment - Where there is not a clear cut case for there being no likely significant effect on the interest features or conservation objectives, you should carry out and record a brief risk assessment. ARE FULLER CONSIDERATIONS REQUIRED? [If YES go to 9(a)]

9(a)What potential hazards are likely to affect the interest features? (Refer to relevant sensitivity matrix and only include those to which the interest features are sensitive). **Are the interest features potentially exposed to the hazard?**

Sensitive Interest Feature:	**Potential hazard:**	**Probability of effect on SPA**	**Magnitude of effect**
Red-throated diver	Disturbance from dredging/ disposal activity	Low.	Negligible.

10. Is the proposal directly connected with or necessary to the management of the site for nature conservation?	No.
11.Case History/ additional information	This is a regular maintenance activity.

12. Is the potential scale or magnitude of any effect likely to be significant?

a) Alone? (explain conclusion)	No. Considering the high level of human activity in and around the town harbour, it is considered that any potential effect on harbour porpoise is going to be negligible.
b) In combination with other plans or projects? (Explain conclusion and which plans/projects have been included, including those associated with other functions).	No other plans or projects considered.

13. Conclusion: Is the proposal likely to have a significant effect 'alone or in combination' on a European site? (justification – attach any relevant supporting information)	No.	
14. Name of CCC officer and Date	Julia Pschera, 04/11/2021	
15. NRW comment on assessment:		
16. NRW Officer:		**Date:**
IF THE PROPOSAL IS LIKELY TO HAVE A SIGNIFICANT EFFECT AN APPROPRIATE ASSESSMENT WILL BE REQUIRED (see part B for suggested scope).		

CONSERVATION OBJECTIVES FOR RELEVANT FEATURES (taken from Northern Cardigan Bay SPA DRAFT Advice in fulfilment of Regulation 37; January 2019).

Conservation Objective for the Red-throated diver *Gavia stellata*.

To achieve favourable conservation status all the following, subject to natural processes, need to be fulfilled and maintained in the long term.	**Will the proposal undermine the conservation objective? If 'yes', give brief details.**
The size of the population should be stable or increasing, allowing for natural variability, and sustainable in the long term. The wintering population of Red-throated diver should be stable or increasing, for a peak mean of 1,186 individuals (2000/01- 2003/04).	No.
There should be sufficient habitat, of sufficient quality, to support the population in the long term. The foraging habitat of this species should not decrease significantly, and its quality should remain unaffected by anthropogenic factors.	No.