

Key issue 8 - Direct loss of habitat used by seals and otters due to the installation of shoreline wave energy converters

What are the relevant technologies and support structures?

The following technologies were identified during the assessment process to have the potential to significantly affect marine mammals through loss of habitat and should therefore, be subject to further investigation on a project specific basis.

Relevant technologies and support structures	Relevant features, components or activities	Phase
Wave technologies		
Oscillating water column (shoreline) Overtopping device (shoreline)	<i>Shoreline structures could potentially lead to loss of habitat.</i>	Operation

What species / groups may be vulnerable?

The following species were identified during the assessment process as being at risk for loss of habitat particularly sensitive to underwater noise and should therefore, be considered further on a project specific basis.

Relevant species / groups	Possible consequences
Seals Otter	<i>The significance of any loss of habitat is unknown and will depend on which habitats are lost, which activities took place in the habitat which has been lost and whether there are suitable alternative habitats available locally.</i>

What species / groups are affected by which technologies and support structures

The following table provides a summary of the assessment results for each species or habitats in combination with each technology & Moorings/Support structures listed above.

Potentially significant at a 10MW scale	Unknown whether this will be significant at a 10 MW scale	Not Applicable	Assessed as not significant at a 10MW scale
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	Technology & Moorings and Support structures	
Common name	Oscillating water column (shoreline)	Overtopping device (shoreline)
Common seal		
Grey Seal		
Otter		

How could the issue be addressed on a project and site specific basis?

The following tables provide a series of suggested activities and recommendations that may be taken forward to address the effects of loss of habitat marine mammals for those technologies and/or support structure, and species / habitats, assessed as significant in the assessment. This information is not prescriptive and should be used as a platform for discussion on a project and site specific basis in order to develop an appropriate impact assessment strategy and monitoring programme for the project.

Single test deployments

Preliminary desk based studies

Activity	Objective	Recommendation / comment
Desk based review of existing information regarding species distribution / behaviour at and adjacent to the site	To determine the importance of the proposed development area for seals and otters	This should be undertaken for all projects.
Undertake impact assessment	To identify any particular areas of concern regarding the proposed development and to determine the suitability of the site for development. To determine what/if further baseline characterisation is required (see below).	This should be undertaken for all projects.

Baseline characterisation surveys

Activity	Objective	Recommendation / comment
Undertake baseline seal and otter surveys	To determine the importance of the proposed development area for seals and otters	This should only be undertaken where it is known that seals and otters use the area but insufficient data is available to determine the relative sensitivity of the site.

Further desk based studies

Activity	Objective	Recommendation / comment
Undertake impact assessment	To identify any particular areas of concern, using the baseline survey results, regarding the proposed development and to determine the suitability of the site for development	This should follow the normal project specific EIA procedures.

Monitoring during and post installation

Activity	Objective	Recommendation / comment
Monitor seal / otter behaviour at adjacent important sites	To validate predictions made during the EIA process and to inform future site selection, environmental monitoring and EIA work	This should only be undertaken under circumstances in which the development site lies close to important sites for seals / otters.

Demonstration arrays

Preliminary desk based studies

Activity	Objective	Recommendation / comment
Desk based review of existing information regarding species distribution / behaviour at and adjacent to the site	To determine the importance of the proposed development area for seals and otters	This should be undertaken for all projects.
Undertake impact assessment	To identify any particular areas of concern regarding the proposed development and to determine the suitability of the site for development To determine what/if further baseline characterisation is required (see below).	This should be undertaken for all projects.

Baseline characterisation surveys

Activity	Objective	Recommendation / comment
Undertake baseline seal and otter surveys	To determine the importance of the proposed development area for seals and otters	This should only be undertaken where it is known that seals and otters use the area but insufficient data is available to determine the suitability of the site for development.

Further desk based studies

Activity	Objective	Recommendation / comment
Undertake impact assessment	To identify any particular areas of concern, using the baseline survey results, regarding the proposed development and to determine the suitability of the site for development To determine, based on baseline characterisation surveys, whether or not there are likely to be any potentially significant effects on the species identified	This should follow the normal project specific EIA procedures.

Monitoring during and post installation

Activity	Objective	Recommendation / comment
Monitor seal / otter behaviour at adjacent important sites	To validate predictions made during the EIA process and to inform future site selection, environmental monitoring and EIA work	This should only be undertaken under circumstances in which the development site lies close to important sites for seals / otters.