Cyfoeth Naturiol Cymru
Natural Resources Wales

Glannau Môn: Cors heli / Anglesey Coast: Saltmarsh Special Area of Conservation

Indicative site level feature condition assessments 2018

NRW Evidence Report No: 225

About Natural Resources Wales

Natural Resources Wales' purpose is to pursue sustainable management of natural resources. This means looking after air, land, water, wildlife, plants and soil to improve Wales' well-being, and provide a better future for everyone.

Evidence at Natural Resources Wales

Natural Resources Wales is an evidence based organisation. We seek to ensure that our strategy, decisions, operations and advice to Welsh Government and others are underpinned by sound and quality-assured evidence. We recognise that it is critically important to have a good understanding of our changing environment.

We will realise this vision by:

- Maintaining and developing the technical specialist skills of our staff;
- Securing our data and information;
- Having a well resourced proactive programme of evidence work;
- Continuing to review and add to our evidence to ensure it is fit for the challenges facing us; and
- Communicating our evidence in an open and transparent way.

This Evidence Report series serves as a record of work carried out or commissioned by Natural Resources Wales. It also helps us to share and promote use of our evidence by others and develop future collaborations. However, the views and recommendations presented in this report are not necessarily those of NRW and should, therefore, not be attributed to NRW.

Report series:	NRW Evidence Report
Report number:	225
Publication date:	January 2018
Title:	Glannau Môn: Cors heli / Anglesey Coast: Saltmarsh Special Area of Conservation: Indicative site level feature condition assessments 2018
Author(s):	NRW
Restrictions:	None

Distribution List (core)

NRW Library, Bangor	2
National Library of Wales	1
British Library	1
Welsh Government Library	1
Scottish Natural Heritage Library	1
Natural England Library (Electronic Only)	1

Recommended citation for this volume:

NRW, 2018. Glannau Môn: Cors heli / Anglesey Coast: Saltmarsh Special Area of Conservation: Indicative site level feature condition assessments 2018. NRW Evidence Report Series, Report No: 225, 29pp, NRW, Bangor.

Contents

Summary

This document presents NRW's indicative assessment of the condition of marine features in Glannau Môn: Cors heli / Anglesey Coast: Saltmarsh Special Area of Conservation (SAC).

Table 1 contains a summary of the indicative condition assessments.

This report is divided into sections as follows:

Section 1: a brief introduction to the importance and need for site level feature condition assessments,

Section 2: a brief description of Anglesey Coast: Saltmarsh SAC,

Section 3: NRW's indicative condition assessments for the features of Anglesey Coast: Saltmarsh SAC, including a comparison with previous assessments for the site,

Section 4: NRW's plans for the future development of site level condition assessments,

Annexes explain in detail the process of producing indicative condition assessments.

Table 1: Summary of indicative condition assessments for Anglesey Coast: Saltmarsh SAC.

Designated Features	Indicative condition assessment	Confidence in assessment
• *Salicornia* and other annuals colonising mud and sand	Favourable	Medium
• Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	Unfavourable	Medium
• Estuaries	Favourable	Low
• Mudflats and sandflats not covered by seawater at low tide	Favourable	Low

More detailed explanations of the rationale behind these conclusions can be found in the full indicative condition assessment report in section 3.

Crynodeb

Mae'r ddogfen hon yn cyflwyno asesiad dangosol CNC o gyflwr nodweddion Ardal Gadwraeth Arbennig Glannau Môn: Cors heli (AGA).

Mae Tabl 1 yn cynnwys crynodeb o'r asesiadau dangosol o gyflwr nodweddion.

Rhennir yr adroddiad hwn yn adrannau fel a ganlyn:

Adran 1: cyflwyniad byr i'r pwysigrwydd a'r angen am asesiadau cyflwr ar lefel safle

Adran 2: disgrifiad byr o AGA Glannau Môn: Cors heli

Adran 3: Asesiadau cyflwr dangosol CNC ar gyfer nodweddion AGA Glannau Môn: Cors heli, gan gynnwys cymhariaeth gydag asesiadau blaenorol ar gyfer y safle

Adran 4: Cynlluniau CNC ar gyfer datblygu asesiadau cyflwr ar lefel safle yn y dyfodol

Mae **atodiadau'n** egluro'n fanwl y broses o gynhyrchu asesiadau dangosol o gyflwr nodweddion.

Tabl 1: Crynodeb o asesiadau dangosol o gyflwr nodweddion ar gyfer AGA Glannau Môn: Cors heli.

Nodweddion Dynodedig	Asesiad dangosol o gyflwr y nodwedd	Hyder yn yr asesiad
• *Salicornia* a phlanhigion unflwydd eraill sy'n cytrefu llaid a thywod	Ffafriol	Canolig
• Dolydd ar forfeydd arfordir y gorllewin (*Glauco-Puccinellietalia maritimae*)	Anffafriol	Canolig
• Aberoedd	Ffafriol	Isel
• Gwastadeddau llaid neu dywod nas gorchuddir gan y môr ar lanw isel	Ffafriol	Isel

Mae esboniadau manylach o'r rhesymeg y tu ôl i'r casgliadau hyn i'w gweld yn yr adroddiad llawn ar asesu dangosol cyflwr nodweddion.

1. Site level feature condition assessments

Site level feature condition assessments are important for site management. In particular they:

- inform the development of management measures to improve the condition of features
- assist with the prioritisation of resources, and
- help with the assessments of plans and projects.

Marine special areas of conservation (SACs) in Wales cover extensive areas of sea and coast, much of which is challenging and resource intensive to monitor. As a result, assessment of condition can be difficult. It is therefore necessary to use a number of different sources of information and data to inform conclusions. These can vary from, for example, long-term monitoring/surveillance datasets, sampling programs and bathymetric data, to specific data-sets collected primarily for other purposes including Environmental Impact Assessments. For some features, there are very little or no data from which to draw conclusions.

NRW previously undertook preliminary work on full, detailed assessments using all available evidence and assessing all possible attributes. However, this process proved complex and resource intensive. We have therefore concluded that we will not be able to undertake this type of extensive assessment now or in the future, but instead we will develop a new serviceable and streamlined approach that can be embedded in our internal assessment and reporting tools and processes.

As the first stage in developing ongoing streamlined and sustainable site condition assessment and reporting, NRW has undertaken indicative assessments of condition of all marine SAC and Special Protection Area (SPA) sites and features in Wales. During an intensive workshop NRW specialists assessed each feature by using readily available data and information and applying their expert judgement. Further details on the approach taken can be found in Annexes A and B, summary definition in Box 1.

Box 1: Indicative condition assessments - definition and use

The term ‘indicative condition assessment’ describes the use of readily available evidence and expert judgement in an intensive, collective workshop process to provide an indication of feature condition at the site level.

The confidence rating associated with the assessments is an **integral** part of the indicative assessment. Confidence levels for feature assessments should therefore **always** be quoted alongside the indicative condition result, together with NRW’s definition of ‘indicative condition assessment’.

2. Site Description

This site, which includes both the Braint and Cefni estuaries, forms a complex of saltmarsh and dune habitats lying either side of the dune systems at Newborough Warren. Atlantic salt meadows form the bulk of the saltmarsh vegetation, but much of it is far from typical. In the Braint estuary the vegetation is characterised by unusually large amounts of greater sea-spurrey *Spergularia media*, whilst in the Cefni estuary the more typical Atlantic salt meadow is subordinate to saltmarsh dominated by sea rush *Juncus maritimus*. In fact, this is one of the largest stands of *Juncus maritimus* saltmarsh in Britain.

The most significant stands of *Salicornia* spp. saltmarsh occur on Malltraeth Sands in the Cefni estuary.

For the marine qualifying habitats, the SAC is considered to be one of the best areas in the UK for:

- *Salicornia* and other annuals colonizing mud and sand
- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

and to support a significant presence of:

- Estuaries
- Mudflats and sandflats not covered by seawater at low tide

The features are distributed throughout the SAC, the SAC boundary and conservation advice can be found through the designated sites search on the NRW website[1].

[1] http://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/find-protected-areas-of-land-and-seas/designated-sites/?lang=en

3. Feature level indicative condition assessments

3.1 *Salicornia* and other annuals colonising mud and sand indicative condition assessment

The indicative condition of the feature at this site at the time of assessment

Date	May 2017
Site name	Glannau Môn: Cors heli / Anglesey Coast: Saltmarsh SAC
Site feature assessed	*Salicornia* and other annuals colonizing mud and sand

Component of habitat feature assessed	**Indicative Assessment** (*Favourable, unfavourable, unknown*)	**Key evidence type used** (*monitoring data, reports or expert judgement*)	**Level of agreement**	**Confidence in evidence**	**Component confidence level**
Distribution & Extent (within site)	Favourable	Aerial Photographs, expert judgement.	High	Medium	Medium
Structure & function	Favourable	WFD Assessments	High	Medium	Medium
Typical species	Unknown	WFD Assessments	High	N/A	N/A
Relevant activities (*activities directly impacting condition of the feature on this site*)	No activities identified as having a direct impact on site condition.				

Overall Indicative Assessment	**Overall Confidence level**
Favourable	Medium

Notes section: *The rationale for the assessment conclusion and confidence.*

Note: For this assessment, the presence of the cob is accepted as this was a pre-designation addition to the site.

Distribution & extent: Minor losses and minor increases have been noted through comparison between original National Vegetation Classification (NVC) maps (1989) and aerial photos taken in 2013/14. Losses were due to channel movement and therefore accepted as natural change. The Cefni is still infilling therefore the saltmarsh within this estuary is increasing. SMP2 predicts no loss in 1st Epoch (2005 - 2025) (Royal Haskoning, 2012). This site is made up of three small estuaries. The Ffraw and the Briant are relatively unconstrained however, the Cefni is modified by the presence of the cob which truncates the estuary and the canalisation of the river upstream of the cob. As we are accepting the presence of this pre-designation structure this component has been assessed as **favourable**.

Structure and function: Anglesey Coast: Saltmarsh SAC overlaps with a number of WFD waterbodies however this feature only overlaps with three waterbodies (Braint, Ffraw & Cefni). All three waterbodies had a good assessment for water chemistry while one had a high overall assessment (Ffraw), one a good overall assessment (Braint) and one a moderate overall assessment (Cefni). The moderate assessment for the Cefni waterbody is driven by a failure for dissolved inorganic nitrogen (DIN). The Cefni and Braint were assessed as high for opportunistic macroalgae and the Ffraw as good. None of the three waterbodies were assessed for Phytoplankton. As the feature is relatively tolerant to nitrates and there were no other issues highlighted this component has been assessed as **favourable**

Typical Species: WFD Saltmarsh monitoring was only carried out in one of the waterbodies – Cefni. This waterbody was moderate for saltmarsh, however when the raw data was looked at in more detail there was only one quadrat attributable to *Salicornia* habitat, this was not enough information to give the assessors any confidence that they could make an assessment on condition particularly in the absence of any SAC monitoring data for this feature on this site.
This component has been assessed as **unknown**.

Evidence used: *The evidence used to support the assessment conclusion.*

- Burd, F., (1989). *The saltmarsh survey of Great Britain: an inventory of British saltmarshes*. Nature Conservatory Council, Research and Survey in Nature Conservation no. 42. Peterborough: Nature Conservancy Council.
- Royal Haskoning (2012). *West of Wales Shoreline Management Plan 2. Cardigan Bay and Ynys Enlli to the Great Orme Coastal Groups*. June 2012.
- WFD waterbody classifications (2015). 2009-2015 Classification Data: http://waterwatchwales.naturalresourceswales.gov.uk/en/

3.2 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae)* indicative condition assessment

The indicative condition of the feature at this site at the time of assessment

Date	May 2017
Site name	Glannau Môn: Cors Heli / Anglesey Coast: Saltmarsh
Site feature assessed	Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

Component of habitat feature assessed	**Indicative Assessment** (*Favourable, unfavourable, unknown*)	**Key evidence type used** (*monitoring data, reports or expert judgement*)	**Level of agreement**	**Confidence in evidence**	**Component confidence level**
Distribution & Extent (within site)	Unfavourable	Monitoring (Aerial photos), National Vegetation Classification (NVC) & expert judgement	High	Medium	Medium
Structure & function	Unfavourable	WFD assessments & expert judgement	High	Low	Low
Typical species	Unfavourable	WFD assessments & expert judgement	High	Medium	Medium
Relevant activities (*activities directly impacting condition of the feature on this site*)	Presence of forestry in transition zone.				

Overall Indicative Assessment	**Overall Confidence Level**
Unfavourable	Medium

Notes section: *The rationale for the assessment conclusion and confidence.*

Note: For this assessment, the presence of the cob is accepted as this was pre-designation.

Distribution & extent: Minor losses and minor increases noted from comparison of original National Vegetation Classification (NVC) maps (1989) and aerial photos (2013/14). Losses were due to channel movement and therefore accepted as natural change. The Cefni is still infilling therefore the saltmarsh within this estuary is increasing. SMP2 predicts no loss in 1st Epoch. However, there is no natural transitional zone to dunes on the Cefni estuary. The presence of forestry on the saltmarsh edge - deep ploughed to the edge is affecting the transition zone with the dune boundary leading to an assessment of **unfavourable**.

Structure & function: Anglesey Coast: Saltmarsh SAC overlaps with a number of WFD waterbodies however this feature only overlaps with three waterbodies (Braint, Ffraw & Cefni). All three waterbodies had a good assessment for water chemistry while one had a high overall assessment (Ffraw), one a good overall assessment (Braint) and one a moderate overall assessment (Cefni). The moderate assessment for the Cefni waterbody is driven by a failure for dissolved inorganic nitrogen (DIN). The Cefni and Braint were assessed as high for opportunistic macroalgae and the Ffraw as good. None of the three waterbodies were assessed for Phytoplankton. Given the sensitivity of the feature to nitrates this component has been assessed as **unfavourable**.

Typical species: WFD Saltmarsh monitoring was only carried out in one of the waterbodies – Cefni. This waterbody was only moderate for saltmarsh. Saltmarsh monitoring for WFD covers zonation and species. In the absence of other specific SAC monitoring data this component was assessed as **unfavourable**.

Evidence used: *The evidence used to support the assessment conclusion.*

- Burd, F., (1989). *The saltmarsh survey of Great Britain: an inventory of British saltmarshes*. Nature Conservatory Council, Research and Survey in Nature Conservation no. 42. Peterborough: Nature Conservancy Council.
- Royal Haskoning (2012). *West of Wales Shoreline Management Plan 2. Cardigan Bay and Ynys Enlli to the Great Orme Coastal Groups*. June 2012.
- National Vegetation Classification (NVC) maps (1989) and aerial photos (2013/14)
- WFD waterbody classifications (2015). 2009-2015 Classification Data: http://waterwatchwales.naturalresourceswales.gov.uk/en/

3.3 Estuaries indicative condition assessment

The indicative condition of the feature at this site at the time of assessment

Date	May 2017
Site name	Glannau Môn: Cors heli / Anglesey Coast: Saltmarsh
Site feature assessed	Estuaries

Component of habitat feature assessed	**Indicative Assessment** (*Favourable, unfavourable, unknown*)	**Key evidence type used** (*Monitoring data, reports or expert judgement*)	**Level of agreement**	**Confidence in evidence**	**Component confidence level**
Distribution & Extent (within site)	Favourable	No known loss of extent. No empirical data. Expert judgement and *Zostera* extent (WFD)	High	Low	Low
Structure & function	Favourable	No empirical data. Expert judgement & WFD waterbody assessments.	High	Low	Low
Typical species	Favourable	No empirical data. Expert judgement and *Zostera* extent (WFD) and information from cockle fishery.	High	Low	Low
Relevant activities (*activities directly impacting condition of the feature on this site*)	No activities identified as having a direct impact on site condition.				

Overall Indicative Assessment	**Overall Confidence Level**
Favourable	Low

Notes section: *The rationale for the assessment conclusion and confidence.*

This assessment is closely linked to the assessment for mudflats and sandflats, Atlantic Saltmeadow and *Salicornia* features of the site. Therefore, the indicative condition assessments for these features should be read in conjunction with this assessment. The state of these sub-features is intrinsically linked to the condition of this feature as they are nested within the feature.

Anglesey coast: Saltmarsh Indicative Mudflats and Sandflats feature assessment 2017: Favourable
Anglesey coast: Saltmarsh Atlantic Saltmarsh feature assessment 2017: Unfavourable
Anglesey coast: Saltmarsh *Salicornia* feature assessment 2017: Favourable

The low confidence level for this assessment is due to the lack of direct data on the site. The assessment was based on expert judgement and informed by the assessment of nested features, surveys of *Ruppia* and other seagrasses on Malltraeth and Traeth Melynog (2013, 2014) in relation to access to cockle fishery, and by knowledge of the cockle fishery and its management.

Distribution & Extent: The mudflats and sandflats feature was assessed as favourable with an assessment of loss due to coastal squeeze of 0.17 ha loss in the 1st epoch (2005 - 2025). There has been no change in the Estuaries feature distribution and extent since designation. Therefore, the assessment for this component is **favourable**.

Structure & function: WFD data was used from the relevant waterbodies (Menai Strait, Caernarfon Bay North, Braint, Ffraw and Cefni). Three of these waterbodies (Menai Strait, Caernarfon Bay North & Braint) have a good overall status and good chemical status, Ffraw has a high overall status and good chemical status, and Cefni has a moderate overall status with a good chemical status. The moderate assessment for the Cefni waterbody is driven by a moderate for dissolved inorganic nitrogen (DIN). The Cefni and Braint were assessed as high for opportunistic macroalgae and the Ffraw as good. None of the three waterbodies were assessed for Phytoplankton. Although there was a failure for DIN in the Cefni with the high assessment for opportunistic macroalgae and the results from the other waterbodies it was decided, using expert judgement, that the one failure for DIN on one waterbody would not be enough to fail this feature on this site.
This component was assessed as **favourable**.

Typical species: The increased management of the cockle fishery has removed one of the main pressures on the feature. The Maltraeth cockle bed was closed due to the *Zostera* bed and the Traeth Melynog cockle fishery has remained open and there are sufficient numbers of cockles to maintain a sustainable fishery (Information from Welsh Government cockle surveys) and a Habitats Regulation Assessment (HRA) is carried out each year before opening (Welsh Government, 2017). There have been some small amounts of damage to the *Zostera* (sea grass) bed but this is very localised and is being managed. Typical species for mudflats and sandflats was favourable. Therefore, the assessment for this component is **favourable**.

Nested features:

- The Atlantic Saltmeadow feature was assessed as unfavourable but the reasons for failure were felt to be very related to forestry at the landward extent of the saltmarsh feature and would not be significant enough to fail the estuary feature as well.

Noted activities:

- Management of cockle fishery should be limiting damage and no long term detrimental impacts have been recorded. No other medium or high pressures for the feature of the site were highlighted.

Evidence used: *The evidence used to support the assessment conclusion.*

- Welsh Government (2017). *HRA – Traeth Melynog cockle fishery 2017-18* V3.0 16-08-2017, Unpublished document.
- Surveys of *Ruppia* and other seagrasses on Maltraeth and Traeth Melynog in relation to access to cockle fishery.
- WFD waterbody classifications (2015). 2009-2015 Classification Data: http://waterwatchwales.naturalresourceswales.gov.uk/en/

3.4 Mudflats and sandflats not covered by seawater at low tide indicative condition assessment

The indicative condition of the feature at this site at the time of assessment

Date	May 2017
Site name	Glannau Môn: Cors heli / Anglesey Coast: Saltmarsh SAC
Site feature assessed	Mudflats & sandflats not covered by seawater at low tide

Component of habitat feature assessed	**Indicative Assessment** (*Favourable, unfavourable, unknown*)	**Key evidence type used** (*monitoring data, reports or expert judgement*)	**Degree of consensus**	**Confidence in evidence**	**Component confidence level**
Distribution & Extent (within site)	Favourable	No known loss of extent. No empirical data. Expert judgement and *Zostera* extent (WFD)	High	Low	Low
Structure & function	Favourable	No known loss of extent. No empirical data. Expert judgement and Zostera extent (WFD)	High	Low	Low
Typical species	Favourable	No empirical data. Expert judgement and Zostera extent (WFD) and information from cockle fishery.	High	Low	Low
Relevant activities (*activities directly impacting condition of the feature on this site*)	No activities identified as having a direct impact on feature condition				

Overall Indicative Assessment	**Overall Confidence Level**
Favourable	Low

Notes section: *The rationale for the assessment conclusion and confidence.*

Distribution & extent: No known change to extent or distribution through normal monitoring and casework. The West of Wales SMP HRA predicted a loss due to coastal squeeze was only 0.17 ha loss in 1st epoch (2005 – 2025) (Royal Haskoning, 2010). The increased management of the cockle fishery has removed one of the main pressures on the feature. Therefore, this component has been assessed as **favourable**.

Structure & function: Anglesey Coast: Saltmarsh SAC overlaps with six WFD waterbodies however only one overlaps with the mudflats and sandflats feature (Cefni waterbody). The Cefni waterbody has a moderate overall status and a good chemical status, the moderate status is driven by a moderate DIN (dissolved inorganic nitrogen) element and a moderate saltmarsh element. As there was high assessment for macroalgae and a high of the opportunistic macroalgae sub-element, the moderate DIN was not viewed with concern for this feature. A low confidence was given due to the lack of WFD infaunal quality index (IQI) for this waterbody. This component was assessed as **favourable**.

Typical species: The Malltraeth cockle bed has closed to protect the *Zostera* (sea grass) bed, and the Traeth Melynog cockle fishery shows as increasing number of cockles (a typical species of the feature). There have been some small amounts of damage to the *Zostera* bed but this is very localised and is being managed.

The confidence level is low due to the lack of direct data on the site (no IQI for the Cefni waterbody). The assessment was based on expert judgement, informed by surveys of *Ruppia* and other seagrasses on Malltraeth and Traeth Melynog (2013, 2104) in relation to access to cockle fishery, and on knowledge of the cockle fishery and its management. This component has been assed as **favourable**.

Noted activities:
Management of cockle fishery should be limiting damage and no long term detrimental impacts have been recorded.

Evidence used: *The evidence used to support the assessment conclusion.*

- Non-WFD surveys of *Ruppia* and other seagrasses on Malltraeth and Traeth Melynog in relation to access to cockle fishery.
- Royal Haskoning (2010). West of Wales Shoreline Management Plan 2: Appendix I: Habitats Regulations Assessment. Report to Pembrokeshire County Council, October 2010.
- WFD waterbody classifications (2015). 2009-2015 Classification Data: http://waterwatchwales.naturalresourceswales.gov.uk/en/

3.8 Comparison with previous assessments

The indicative condition assessments were compared to previous assessments for these features at the site level carried out between 2005 – 2007. The earlier assessments were carried out in more detail and different data and evidence sources were sometimes used; as a result, current and previous assessments are not directly comparable, although they do both give an indication of the condition of the feature at the time of assessment.

Feature	2005 - 07 assessments	2017 indicative assessments
• *Salicornia* and other annuals colonising mud and sand	Favourable	Favourable
• Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	Unfavourable (2010)	Unfavourable
• Estuaries	Favourable	Favourable
• Mudflats and sandflats not covered by seawater at low tide	Unfavourable	Favourable

4. Future development of site level assessments

Following this full round of indicative site condition assessments, we are now developing a permanent, sustainable, site level feature condition reporting process that can be delivered on a regular basis. We are planning a series of projects to work towards this goal. It is unlikely that resources and suitable evidence sources will all be available at any given time to monitor and report on all features, or to report to the same level of confidence. Our aim, however, is to develop, over the coming few years, an assessment and reporting process that is of practical use in informing effective site management for the maintenance or improvement of feature and site condition.

Annex A: Process used to produce indicative condition assessments

The process to produce indicative feature condition assessments at the site level centred around a workshop approach that applied readily available evidence and expert judgement to provide an *indication* of features condition. Figure A1 summarises the process of producing indicative condition assessments, and Figure A2 provides a summary definition of NRW's meaning of indicative site level feature condition assessments and advice on how they should be used.

Figure A1: Summary of the procedure undertaken

Stages undertaken to produce indicative site level condition assessment reports for Welsh European marine sites (EMS)

1. Indicative condition assessment workshop
2. Standardisation of indicative feature assessments across different sites
3. Standardised feature assessments sent out internally for comment
4. Issues with individual assessments resolved
5. Features assessments re-issued to internal staff for final comments.
6. Final draft indicative feature-level condition assessments produced
7. Internal sign-off * - draft indicative feature-level condition assessments
8. External quality assurance of draft indicative feature-level condition assessments
9. Changes made to assessments arising from quality assurance stage
10. Production of site-level reports containing indicative assessments and guidance for interpretation and use of indicative assessments
11. Final Internal sign-off ** - final site-level reports

* 1st internal sign-off by a dedicated task & finish group for the work
** Final internal sign-off by the task & finish group and then the Marine Programme Board

Figure A2: Summary definition of indicative site condition assessment.

Indicative condition assessments: Definition and use

The term 'indicative condition assessment' describes the use of readily available evidence and expert judgement in an intensive, collective workshop process to provide an indication of feature condition at the site level.

The confidence rating associated with the assessments is an **integral** part of the indicative assessment. Confidence levels for feature assessments should therefore **always** be quoted alongside the indicative condition result, together with NRW's definition of 'indicative condition assessment'.

A.1 Indicative condition assessment workshop

Existing readily available data and information was collated and an organisation-wide workshop held with NRW's specialists. By using the evidence available at the workshop and applying expert judgement, staff examined each feature for each site and drew indicative conclusions on condition. A total of 69 assessments were carried out; 66 within the workshop and a further three, for otter, following the workshop, to accommodate staff availability.

A.1.1 Assessment templates

Assessment templates were produced in advance of the workshop. These templates differed slightly depending on the feature type. In all cases the assessments were broken down into different components that were assessed separately. To assist with the workshop assessment process, staff populated the templates with relevant information before the workshop.

The templates included a notes section for providing more information on the component assessments, and an evidence section for listing the information used to inform the assessments – this was not, however, a full reference list.

A.1.2 Confidence levels

Guidance on the confidence levels to use for the assessments was produced before the workshop (Annex B).

A.1.3 Guidelines agreed at the workshop

At the beginning of the workshop the assessment approach was discussed and the following guidelines were agreed:

- 'Baseline' is considered to be the state at the time of designation – unless there is a recovery target in the conservation objectives. This means that significant modifications at the site before designation should not be taken into consideration unless there was a recovery target in the conservation objective for that feature at that site.
- The indicative condition is based on current knowledge and is based on the present i.e. the date of the assessment - but significant future concerns should be noted.
- If one attribute of the condition assessment is unfavourable, then the whole assessment is judged to be unfavourable ('one out, all out') unless there is a good reason to diverge from this. This is standard practice for NRW's Water Framework Directive (WFD) assessment processes as well as for terrestrial sites.
- Small-scale local known impacts should not necessarily result in a conclusion of unfavourable condition, but impacts should be noted.
- Assessments where there are 'unknowns' do not necessarily lead to a conclusion of unfavourable condition.
- There can be an overall 'unknown' conclusion where there is no information available to make the assessment.
- Nested features should be related to each other in the assessments. For example, an estuary feature in a site might encompass other named features. For example, in Pembrokeshire Marine SAC, the estuary feature also encompasses the mudflats and sandflats feature and the Atlantic saltmeadows feature.

- Where there is limited data an assessment should be made but the lack of data should be reflected in the confidence score.
- Any activities, developments or management measures that are having either positive or negative impacts should be noted in the assessments.
- Context on the indicative assessments and confidence ratings should always accompany the release of the conclusions on site level feature condition.

A.1.4 Post workshop processing of indicative assessments.

All 69 assessments were then taken through a process of developing them from the draft assessments agreed at the workshop to finalised indicative assessments contained within site level reports (Figure A1).

A.2 Use of best, readily available evidence

During the collation exercise and the workshop the best readily available evidence was used. Confidence ratings were applied to the evidence used for each component of the assessment (the guidance on these confidence levels can be found in Annex B). Three main sources of evidence were available before and during the workshop:

- Site-level monitoring data
- WFD Waterbody Assessments
- Activities information

In addition, expert judgement was a key part of the assessment process, drawing on the knowledge, expertise and experience that staff have amassed over many years collectively, from: training and research; visiting the sites; monitoring and survey work; and the provision of advice on development planning and activities regulation at the site level.

A.2.1 Site level monitoring data and reports

Monitoring is carried out on features or sub-features of our European marine sites following the UK common standards monitoring guidance. The amount of monitoring NRW carries out is, however, limited to the resources available, and hence the resultant prioritised monitoring programme does not provide monitoring data for all features.

Limitations:

Although the relevant specialists were present, the intensive workshop format did not always allow for full, detailed scrutiny of individual SAC monitoring reports for some features. Some monitoring information was therefore checked or added to after the workshop. A lack of resources to produce analysed reports on all existing monitoring data was highlighted as an issue during the workshop.

A.2.2 Water Framework Directive (WFD) Waterbody Assessments

The latest relevant WFD waterbody assessments (2015[2]) were used during the workshop. Both Transitional and Coastal Water bodies overlap with the SAC boundaries but, in most cases, the boundaries do not match with SAC boundaries. Maps showing the water bodies can be found at the Water Watch Wales web site[3].

[2] Environment Agency. 2015. Classification of Surface Water Bodies for the Water Framework Directive – Method Statement. Version 3.0 updated August 2014.

[3] http://waterwatchwales.naturalresourceswales.gov.uk/en/

Limitations:
Although good use was made of the summary data for the waterbody assessments, and tables had been created linking the relevant waterbodies to the relevant European marine sites, complete datasets were not available for the workshop. In addition, although some mapping data was available, the data points for each monitoring element and how they related to the feature being assessed were not available for all assessments. This was due to time constraints and the number of assessments being carried out. WFD specialists were, however, available to provide expert advice during and after the workshop.

There was some discussion among assessors on the use of some WFD elements and their relevance to individual features. The mercury and brominated diphenylether (BDPE) standard used in the 2015 WFD assessments are new more stringent standards which did not need to be implemented until 2018 but nonetheless were used in the knowledge that new standards will be coming in and to be consistent between England and Wales. These new standards have not been used in the Marine Strategy Framework Directive (MSFD) habitat assessments, which instead used the OSPAR[4] (Oslo and Paris conventions) standards for these elements.

Since the WFD assessments had been used extensively in the NRW indicative condition assessments, the decision was made, for reasons of consistency, to use the new WFD standard. It should be noted that if NRW had used the OSPAR standard some of the component elements of the indicative condition assessments would have been favourable. As part of the next stage of further developing NRW's approach to MPA site level feature condition assessment, further work is planned to assess which standards are the most relevant to apply to the Welsh MPA network.

A.2.3 Activities information

The NRW LIFE Natura 2000 (N2K) Programme[5] focussed on producing Prioritised Improvement Plans (PIPs) for each European site in Wales. These provided information on the pressure and threats for each feature of each site for assessors at the workshop. Staff were also available to discuss any ongoing casework[6] at the site level that may have impacted site condition.

Limitations:
The summary data provided was useful but, due to the number of features, information on the pressures and threats was only provided in a summary form so that detailed site level information for each issue against each feature could not be explored.

However, staff with expert local knowledge were also available to discuss pressures and threats at the site, and hence available activity information and knowledge was sufficient to support the indicative assessment process.

Two types of activity information were reported by assessors in the indicative condition assessments:

[4] Oslo and Paris conventions managed by the OSPAR Commission: https://www.ospar.org/
[5] https://naturalresources.wales/about-us/our-projects/life-n2k-wales/?lang=en
[6] Casework is a term used to encompass the assessments of plans and projects on protected sites

Relevant activities: These were activities agreed during the indicative assessment process as having an impact on the condition of the feature, underpinned by evidence. There was no confidence rating associated with these activities or their associated impacts.

Noted activities: These were activities agreed during the indicative assessment process as occurring in the site, but where there is no evidence that the activity is having a direct impact on condition of the feature at that site. Noted activities may be having, or have the potential to have, an impact on feature condition, and were listed to be kept under review.

Not all activities for a site from the LIFE N2K Programme were listed in the assessments as relevant or noted activities by the assessors. The activities listed are not meant to replace the pressures and threats in the Prioritised Improvement Plans.

Annex B: Confidence level guidance used in the site level indicative condition assessments.

B.1 Assigning confidence to component parts of the feature assessments

An indicative assessment was made for each component part of the assessment (e.g. structure and function, or typical species). These components varied depending on which feature was being assessed.

There were three potential outcomes for the assessment for each component of condition:

- favourable,
- unfavourable or
- unknown

Each outcome was assigned a confidence level.

Use of 'Unknown': The *unknown* category was only used for the condition assessment where the evidence base was extremely low or absent, and as a result it was not possible to reach any conclusion on condition. In this case the confidence level for the evidence part of that assessment was recorded as not applicable (N/A).

Even where a value was given for 'level of agreement', if the overall assessment of the component was unknown, the overall component confidence level was also recorded as not applicable (N/A).

Use of 'Unfavourable': Where any one component was unfavourable, the overall conclusion was unfavourable, (the 'one out, all out' rule), unless there was a good reason to deviate from this. See, for example, the otter assessments.

There were two types of confidence considered during the indicative condition assessment process.

1. The level of consensus between assessors and
2. The confidence in the evidence that the assessment was based on.

A matrix approach was used for this first stage of assigning confidence levels for each component of the indicative assessment.

Figure B1: Matrix used to assign the confidence level for each component of the indicative condition assessment.

Level of agreement ↑				
	High	***Low***	***Medium***	***High***
	Medium	***Low***	***Medium***	***Medium***
	Low	***Low***	***Low***	***Low***
		Low	Medium	High
		Confidence in evidence →		

B.1.1 Level of agreement between assessors

Assessors were required to draw conclusions based on the available evidence in the context of their knowledge of the relevant feature at that site. Where available evidence was contradictory or of only partial benefit in arriving at a condition assessment, this was resolved as far as possible, taking into account the amount, quality and relevance of the data. The resultant conclusion was given a confidence rating for the degree of consensus amongst the assessors, as follows:

- **High:** All assessors agreed with the assessment of the feature condition component;
- **Medium:** The majority of the assessors agreed with the assessment of the feature condition component;
- **Low:** There was no clear consensus on the assessment of the feature condition component.

B.1.2 Level of confidence in the evidence used to make the assessment

The degree of confidence in the assessments of each component was based on the quantity, quality, relevance or consistency of the evidence used. The categories are high, medium and low confidence as described below:

High confidence

- Clear evidence from complete monitoring surveys (high quality data collected to relevant standards with robust analysis of results and appropriate positional data) to support assessment relevant to condition components.

Medium confidence

- Partial survey or one of lower quality (i.e. lacking detail or appropriate positional data);
- Indirectly relevant to condition components but evidence may be from a complete survey, scientifically accurate study, peer-reviewed research or other surveys;
- Site-based, expert knowledge directly relevant to targets, supported by evidence (i.e. records, casework history, photos, positional data).

Low confidence

- Incomplete, old or lower quality survey;
- High quality data but from only a small portion of the component (e.g. data only available for one small area of a habitat on a site where that habitat is extensive and varied);
- Modelled information;
- Site-based, expert knowledge information either indirectly relevant to component condition or lacking sufficient supporting information.

B.2 Assigning confidence levels to the overall indicative condition assessment

The process for assigning the overall confidence level for the indicative assessment of the feature from the component confidence levels used the following rules:

- Where the overall indicative condition assessment was Unknown the confidence level was stated as not applicable.
- Where only one of the assessment components was unfavourable (leading to the overall assessment of unfavourable), the confidence level associated with the unfavourable component was used.
- Where two or more of the assessment components were unfavourable (leading to the overall assessment of unfavourable), the highest confidence level assigned to one of the unfavourable components was used for the overall confidence level.
- In all other circumstances the highest confidence level[7] attained for one of the individual components was used.

B.3 Use of confidence ratings

In all instances, whenever the indicative features and site condition assessments are reproduced or quoted this should be done together with the confidence rating and the definition of indicative assessment provided in this report.

[7] The use of the highest confidence level is one used in WFD assessments – reflecting that the assessment confidence is based on the best evidence available.

Published by:
Natural Resources Wales
Cambria House
29 Newport Road
Cardiff
CF24 0TP

0300 065 3000 (Mon-Fri, 8am - 6pm)

enquiries@naturalresourceswales.gov.uk
www.naturalresourceswales.gov.uk

Further copies of this report are available from:

Email: library@cyfoethnaturiolcymru.gov.uk