

## Supplementary Advice Note:

### **Amended estimates for the proportion of UK harbour porpoise populations occurring in the proposed Special Areas of Conservation.**

This supplementary advice note describes a revision to the sufficiency of the proposed suite of harbour porpoise Special Areas of Conservation for each Management Unit. The revision was necessary due to an error in the abundance calculations within relevant portions of the Management Units. The new values are shown in the table below:

<b>Management Unit*</b>	<b>Habitat area within pSACs as % of the UK MU<sub>200m</sub> area</b>	<b>Abundance of harbour porpoises within the pSACs as % of the UK MU<sub>200m</sub> population</b>
North Sea (NS)	12	18
Celtic and Irish Seas (CIS)	13	14
<b>Total for the CIS &amp; NS combined</b>	13	16
<b>UK total (CIS, NS and WS MU)</b>	10	15

\* Three Management Units have been identified for the UK: Celtic and Irish Seas (CIS); North Sea (NS); West Scotland (WS)

For further detail on the revision, see Appendix. This revision does NOT affect the evidence or the methodology used to identify the proposed SACs (pSACs) or their boundaries. It concerns only the way in which the proportions of the UK harbour porpoise populations occurring within the proposed SACs have been estimated in relation to the relevant Management Unit population.

To allow stakeholders time to fully consider the implications of this revision, the consultation period has been extended by 2 weeks and will now close at midnight 3<sup>rd</sup> May 2016.

## Nodyn Cyngor Ategol:

### **Amcangyfrifon diwygiedig o gyfran poblogaethau llamhidyddion y DU a geir yn yr Ardaloedd Cadwraeth Arbennig arfaethedig.**

Mae'r nodyn cyngor ategol hwn yn disgrifio adolygiad o ba mor ddigonol yw'r gyfres arfaethedig o Ardaloedd Cadwraeth Arbennig llamhidyddion ar gyfer pob Uned Reoli. Roedd yr adolygiad yn angenrheidiol oherwydd gwall yn y cyfrifiadau digonedd o fewn rhannau perthnasol o'r Unedau Rheoli. Dangosir y gwerthoedd newydd yn y tabl isod:

<b>Uned Reoli (UR)*</b>	<b>Ardal gynefin o fewn ACA arfaethedig fel % o ardal UR<sub>200m</sub> y DU.</b>	<b>Digonedd o lamhidyddion o fewn yr ACA arfaethedig fel % o boblogaeth UR<sub>200m</sub> y DU</b>
Môr y Gogledd (NS)	12	18
Y Môr Celtaidd a Môr Iwerddon (CIS)	13	14
<b>Cyfanswm ar gyfer CIS a NS gyda'i gilydd</b>	13	16
<b>Cyfanswm y DU (UR CIS, NS ac WS)</b>	10	15

\* Mae tair Uned Reoli wedi eu clustnodi ar gyfer y DU: Y Môr Celtaidd a Môr Iwerddon (CIS); Môr y Gogledd (NS); Gorllewin yr Alban (WS)

Er mwyn cael rhagor o fanylion am yr adolygiad, gweler yr Atodiad (Saesneg yn unig). NID YW'R adolygiad hwn yn effeithio ar y dystiolaeth na'r fethodoleg a ddefnyddir i glustnodi'r ACA arfaethedig (ACAa) na'u ffiniau. Mae'n ymwneud yn unig â'r ffordd y mae cyfrannau poblogaethau llamhidyddion y DU o fewn yr ACA arfaethedig wedi eu hamcangyfrif mewn perthynas â phoblogaeth yr Uned Reoli berthnasol.

Er mwyn caniatáu amser i randdeiliaid roi ystyriaeth lawn i oblygiadau'r adolygiad hwn, mae'r cyfnod ymgynghori wedi ei ymestyn 2 wythnos a nawr bydd yn cau am hanner nos ar 3 Mai 2016.

## Appendix

### 1 Introduction

1. Consultations on a network of harbour porpoise pSACs in England, Wales, Northern Ireland and offshore waters were launched by JNCC, NRW, NE and DOE (NI) on 19<sup>th</sup> January 2016. Relevant documentation is available on the consultation pages: <http://jncc.defra.gov.uk/SACconsultation> and [www.naturalresources.wales/mn2k](http://www.naturalresources.wales/mn2k)
2. The site boundaries have been derived from the research (Heinänen and Skov, 2015) which identified areas of persistently higher densities of harbour porpoise in each of the UK's three Management Units (North Sea [NS]; Celtic and Irish Seas [CIS]; West Scotland [WS]<sup>1</sup>; Figure 1).

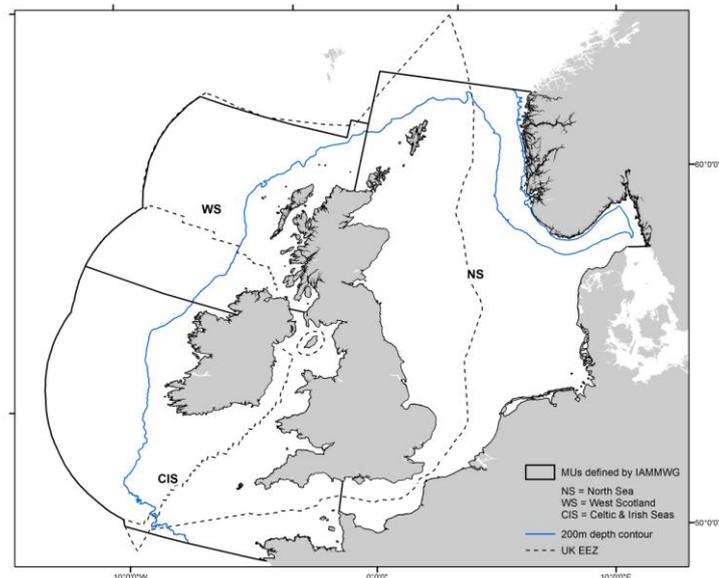


Figure 1: Harbour porpoise Management Units (MUs), noting that this species is largely confined to the continental shelf (i.e. waters <200m depth). In the text that follows, the MUs defined by IAMMWG are referred to as MU<sub>entire</sub> and are defined by the grey lines; the area of the MU within the UK EEZ is referred to as the UK MU and is defined by the dashed line; and a third area, referred to below, represents the part of the UK MU which contains water depths of 200m or less only (UK MU<sub>200m</sub>) with the blue line marking the 200m depth contour.

3. Since launching the consultation an error has been identified in how the proportion of harbour porpoise population within the pSACs was calculated in comparison to the relevant Management Unit population with water depths of 200m or less (UK MU<sub>200m</sub>). This error has no bearing on the scientific process undertaken to identify sites or determine the site boundaries. It only affects the estimated proportion of the population thought to utilise the pSACs.
4. To assess the options for the network of pSACs, the amount of habitat and number of harbour porpoise found within the pSACs were considered in the context of the Management Unit (termed the 'sufficiency' of the network). These measures of the 'sufficiency' of the site network were also considered for UK waters as a whole.

<sup>1</sup> [http://jncc.defra.gov.uk/pdf/Report\\_547\\_webv2.pdf](http://jncc.defra.gov.uk/pdf/Report_547_webv2.pdf)

5. In the absence of a legal definition or clear EU guidance defining the characteristics of a 'sufficient' SAC network, the Chief Scientist Group (CSG) of the UK's Statutory Nature Conservation Bodies recommended that a network of SACs for harbour porpoise should aim to cover approximately 10-14% of their habitat and 20% of their abundance, in the portions of each Management Unit lying within UK jurisdiction and with water depths of 200m or less (UK MU<sub>200m</sub>).
6. IAMMWG (2015), published as one of the supporting documents for the consultation for sites in England, Wales, Northern Ireland and offshore waters, outlined the contribution of the proposed sites by Management Unit and for UK waters. These can be summarised as:

Management Unit	Habitat area within proposed sites as % of the UK MU <sub>200m</sub> area	Abundance of harbour porpoises within the proposed sites as % of the UK MU <sub>200m</sub> population
North Sea	12	18
Celtic and Irish Seas	13	23
<b>UK total</b> (All MUs at consultation launch)	<b>10</b>	<b>18</b>

7. Attainment of the 20% population target recommended by the conservation agencies Chief Scientists Group at the UK scale was not achievable.

## 2 Revision of the calculations relating to abundance

1. Harbour porpoise are a continental shelf species, largely occurring in water depths <200m. The original abundance estimates assumed harbour porpoises were evenly distributed across the entire Management Unit, i.e. including waters deeper than 200m. This was an erroneous approach which had a greater impact in the Celtic and Irish Sea Management Unit because approximately one third of this MU incorporates water depths greater than 200m depth. The proportion of such waters in the North Sea MU was considerably smaller (see Figure 1).
2. In the consultation documentation, the percentage coverage of the pSACs in the MU in terms of harbour porpoise abundance was calculated as the sum of the abundance in the pSACs divided by the abundance in the *relevant portion* of the MU (i.e. that part of the UK continental shelf with waters <200m depth; termed UK MU<sub>200m</sub>) and expressed as a percentage. A similar calculation of percentage coverage was done for individual pSACs and is considered when grading the SACs.
3. The abundance of animals within the UK MU<sub>200m</sub> was originally calculated as follows:

$$\text{Total MU}_{\text{entire}} \text{ abundance} \times (\text{area of UK MU}_{200\text{m}} / \text{area of MU}_{\text{entire}})$$

This approach is appropriate if the porpoises are evenly distributed throughout the entire Management Unit (i.e. including non-UK waters, termed MU<sub>entire</sub>). However, the density of harbour porpoise in waters off the continental shelf (water depths greater than 200m depth) is effectively zero (CODA, 2009; Hammond et al. 2013).

4. Conducting the calculation in this way meant that the UK MU<sub>200m</sub> abundance was underestimated. The abundance estimate for the UK MU<sub>200m</sub> should have been calculated using the UK portion of the Management Unit (termed MU UK) rather than the entire Management Unit:

$$\text{Total UK MU abundance} \times (\text{area of UK MU}_{200\text{m}} / \text{area of UK MU})$$

5. The recalculation has little impact on the North Sea MU calculation because the majority of the Management Unit is within 200m or less. In contrast, for the Celtic and Irish Sea Management Unit the proportion of the Management Unit >200m depth is much larger, i.e. approximately one third of MU<sub>entire</sub> (see figure 1). For consistency in approach, however, the revised formula for the calculation of MU<sub>200M</sub> has been applied to both Management Units.
6. The revised sufficiency figures for the network of pSACs in consultation are:

Management Unit	Habitat area within pSACs as % of the UK MU <sub>200m</sub> area	Abundance of harbour porpoises within the pSACs as % of the UK MU <sub>200m</sub> population
North Sea (NS)	12	18
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7. As a result of these revised estimates of the proportion of the population utilising the suite of proposed sites, the contribution of the pSACs to the recommended sufficiency target has reduced by 3%. However, in isolation the CIS MU<sub>200m</sub>, estimated proportion of the population encompassed has reduced by 9%.
8. The contribution of the pSACs to the recommended sufficiency target for the habitat area as a percentage of the MU<sub>200m</sub> areas remains unchanged.

### 3 Implications for the sufficiency within the Celtic and Irish Seas Management Unit

1. The revised proportion of the harbour porpoise population utilising the suite of pSACs as a proportion of the national Management Unit population with water depths of 200m or less in the Celtic and Irish Seas Management Unit is lower than the CSG recommended sufficiency target for the population. The UK total sufficiency fell short at the point of consultation launch and has reduced by a further 3% as a result of the new calculation. However, it should be noted that:
  - a. The abundance estimates within the MU<sub>entire</sub> are generated from the SCANS-II (Hammond et al. 2013) and CODA surveys (CODA, 2009). These represent the most robust estimates for harbour porpoise population currently available. However, SCANS-II is a snap-shot survey during one month (July 2005) and cannot represent changes to abundance and distribution over time. The pSACs have been identified based upon analysis of densities of harbour porpoise over time in relation to the rest of the MU (Heinänen and Skov, 2015). Therefore, we can assume that the pSAC abundance estimates based on SCANS-II are likely to be underestimated. SCANS-III will occur in July 2016 which may lead to a revision of the proportion of the population within the suite of sites, although this will not affect the site proposals.
  - b. Other areas that contained the top 10% of persistent harbour porpoise density, as identified by Heinänen and Skov (2015) were rejected from further analyses because there was high uncertainty in the modelled outputs and data underpinning these areas. Therefore, there are currently no further sites

with the required standard of evidence to support inclusion in the network of pSACs within the CIS Management Unit.

- c. The new sufficiency values by MU are comparable to those that the European Commission has considered appropriate for other Member States. In April 2014, the European Commission published its considerations of sufficiency for each Member State<sup>2</sup>.
2. North Channel SAC grade: As a result of the changes in the proportion of the population that is encompassed within the site boundaries relative to the MU, the North Channel pSAC covers 1.2% of the CIS MU population. This means that one of the criteria used in grading the site, the size and density criterion, is reduced from grade B to C. It should be noted that because the abundance estimate is derived from the July 2005 SCANS-II survey, it is unlikely to be reflective of abundances in other months, especially during winter, which may be higher or lower than that observed in summer and the North Channel pSAC was identified as a winter site. The global assessment for other harbour porpoise sites being considered in UK waters is weighted towards the grade awarded to the site for its size and density, given that the 'conservation of features' criterion is not clearly understood and the sites are all equal in quality with regard their 'degree of isolation'. However, the global assessment, in addition to summing up the previous criteria, can also be used to assess other features of the site thought to be relevant for a given species and a 'best expert judgment' may be used (EC, 2011) . The EC recognise that for mobile species sites may include relatively smaller proportion of population and the global assessment allows for the inclusion of other considerations e.g. geographic range. This approach has been used previously, for example when considering grading for seal SACs in the UK. The North Channel pSAC increases the geographic coverage of SACs for harbour porpoise further north in the CIS MU and therefore has value in representing the biogeographic range of the species in the UK and also as a preferred winter site.

#### **4 Next steps**

1. The relevant documentation will be updated following the consultation, together with edits arising from other relevant comments received during the consultation.
2. To allow time for stakeholders to consider these changes, the length of the consultation period will be extended. Consultation will now close at midnight 3<sup>rd</sup> May, 2016.
3. All those who have submitted a response to the consultation will be informed of this amendment and given the opportunity to re-submit their response.

#### **5 REFERENCES**

CODA, 2009. Cetacean Offshore Distribution and Abundance. Final Report, St Andrews University. 43pp.

EC. 2011. Natura 2000 Standard data form explanatory notes. [Available from <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011D0484&from=EN>]

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<sup>2</sup> For the considerations see <https://circabc.europa.eu/faces/jsp/extension/wai/navigation/container.jsp> Navigate through 'Browse categories'; 'Environment'; 'Natura 2000 sites'; 'Library'; and then 'IV.Conclusions on representativity of habitats and species in Natura 2000' where there is a list by country code. The 'final reserve list 2015' is the relevant document.

HAMMOND, P.S., MACLEOD, K., BERGGREN, P., BORCHERS, D.L., BURT, M.L., CAÑADAS, A., DESPORTES, G., DONOVAN, G.P., GILLES, A., GILLESPIE, D., GORDON, J., HIBY, L., KUKLIK, I., LEAPER, R., LEHNERT, K., LEOPOLD, M., LOVELL, P., ØIEN, N., PAXTON, C.G.M., RIDOUX, V., ROGAN, E., SAMARRA, F., SCHEIDAT, M., SEQUEIRA, M., SIEBERT, U., SKOV, H., SWIFT, R., TASKER, M.L., TEILMANN, J., VAN CANNEYT, O. & VÁZQUEZ, J.A. 2013. Cetacean abundance and distribution in European Atlantic shelf waters to inform conservation and management. *Biological Conservation*, 164, 107-122

HEINÄNEN, S and SKOV, H. 2015. The identification of discrete and persistent areas of relatively high harbour porpoise density in the wider UK marine area, JNCC Report No. 544, JNCC, Peterborough.

IAMMWG. 2015. The use of harbour porpoise sightings data to inform the development of Special Areas of Conservation in UK waters. JNCC Report No. 565, JNCC Peterborough.