

FINAL DRAFT

The Wash and North Norfolk Coast (WNNC) SAC – updates to supplementary advice on conservation objectives for Harbour (common) seal (*Phoca vitulina*)

November 2022

The following text presents Natural England's updated supplementary advice on conservation objectives for Harbour seals in the WNNC SAC for the following four attributes, planned to be published to Designated Sites View in March 2023:

1. Disturbance caused by human activity
2. Population: population size
3. Population: recruitment and reproductive capability
4. Presence and spatial distribution of the species

Disturbance caused by human activity

Target:

Restrict the frequency, duration and / or intensity of disturbance affecting seals whilst hauled out to rest, moult, breed, or pup/suckle so that they are not significantly disturbed.

Site-specific supporting notes:

Within the SAC, harbour seal use many sites to haul out throughout the year, including sand spits, open sandbanks, and locations along the tidal creeks in the coastal mudflats and saltmarsh (Thompson et al., 2022).

These haul-out sites can be close to areas of human activity. Potential sources of human disturbance at this site include coastal walkers, fisheries, dogs and vessel disturbance (both commercial and recreational).

Disturbance and displacement from haul-out sites may lead harbour seal to seek alternative haul-out locations within the site. If there are no alternative sites close by that are available, this can increase swimming effort and so energy expenditure. During the pupping season, increased swimming and/or less time hauled out could lead to a reduction in suckling opportunities for mothers and pups (Thompson et al., 2022). Disturbance to harbour seal should be restricted at all times especially during the pupping season which runs from June-July, and during the moult which generally occurs in August. Fisheries management is in place in The Wash during the months of June, July and August to limit disturbance to seals during this sensitive time.

There is currently a lack of site-specific data on the impacts of disturbance caused by human activity at this site and it is not known if disturbance events are increasing within the SAC. Dedicated site-specific studies are needed to fully understand what impacts human disturbance is having on this population.

The population at this site is currently in decline. Any activity within the site must not hinder the recovery of this population. Please see the 'Population' attribute for more information on the current population decline of harbour seal in The Wash and North Norfolk Coast SAC.

The target has been set due to a lack of evidence that the feature is being impacted by any anthropogenic activities.

Population: population size

Target:

Restore the population size within the site

Site-specific supporting notes:

Before the 1988 phocine distemper virus (PDV) outbreak, the population using the site included around 3,800 individuals. This declined by 50% and began gradually increasing until 2001 when the count of individuals in the site was approximately 4,000. Another PDV outbreak occurred in 2002, when the population suffered a 22% loss (Thompson, 2012). After this decrease the moult counts in The Wash stabilised by 2007 and begun increasing after 2008. After this increase, the site population plateaued over the period 2014-2018 (mean number of individuals was 3,658) (SCOS, 2021). The Wash currently supports approximately 9% of the UK harbour seal population (SCOS, 2020).

Harbour seal populations across The Wash and adjacent sites (from Donna Nook to Scroby Sands), have recently undergone a decline. Population trends differ between sites: The Wash showed population increases from 2004 to 2014-18 followed by sharp declines; while at Blakeney there has been a gradual decline between 2002 and 2021 (SCOS, 2021). Additional surveys in 2020 and 2021 have confirmed these decreases (SCOS, 2021).

The count for the Wash and North Norfolk Coast SAC (i.e. The Wash and Blakeney) has decreased by approximately 21% from a mean count of 3,658 (2014-2018) to a mean count of 2,883 (2019-2021) (SCOS, 2021). This decline is of similar magnitude to the decline caused by the 2002 PDV epidemic. It is still uncertain whether this represents the beginning of a sustained decline or a step change (like those seen following the PDV epidemics) (SCOS, 2021).

The cause of this decline, whether it be emigration, mortality or a change in behaviour is currently unknown (SCOS, 2021). This decline does not coincide with any major disease events e.g. PDV. The population will continue to be monitored to assess what is causing these declines within the site.

A restore target has been set for this attribute to reflect the current population decline. Any activity within the site must not hinder the recovery of this population.

There is evidence from monitoring that shows the population of harbour seals within the site to be in decline.

Population: recruitment and reproductive capability

Target:

Maintain the reproductive and recruitment capability of the species.

Site-specific supporting notes:

Aerial surveys of the harbour seal population during the breeding season (June-July) are attempted annually, in addition to the annual moult surveys in August. However, due to a combination of factors, no aerial breeding surveys were conducted in the years 2019, 2020 and 2021. Therefore, the most recent breeding survey data is from 2018 (SCOS, 2021).

In 2018 a total of 1,498 pups and 3,747 older seals (1+ age classes) were counted in The Wash. This pup count was 18% higher than the 2017 peak but similar to the average peak count for the preceding 5 years, demonstrating the high inter-annual variability (SCOS, 2019). Pup production increased on average 5.6% per annum between 2001 and 2018 in The Wash.

The ratio of pup counts to the all-age population index remained high in 2018, at around 0.4. This ratio was 2.7 times higher than in 2001 suggesting that the large increase in apparent fecundity after 2001 was being maintained (SCOS, 2019). Given the recent increase in apparent fecundity in another large population in the Wadden Sea, it is no longer thought that the increase in apparent fecundity in The Wash is simply due to movement between these two areas.

Blakeney is not considered to be a key breeding site for harbour seals and few pups are recorded there during annual breeding surveys (SCOS, 2016). 4 pups were counted in 2015 and 2016, and only 1 pup counted in both 2017 and 2018 (SCOS, 2016, 2017, 2018, 2019).

Recent annual moult surveys have shown that harbour seal populations in The Wash and adjacent sites have been declining since 2018 (SCOS, 2021). Additional surveys in 2020 and 2021 have confirmed this decrease (SCOS, 2021). It is currently unclear what impact this overall population decline is having on population recruitment and reproductive capability in The Wash.

Please see the 'Population' attribute for more information on the current population decline of harbour seal in the Wash and North Norfolk Coast SAC.

The target has been set due to a lack of evidence that the feature is being impacted by any anthropogenic activities.

Presence and spatial distribution of the species

Target:

Maintain the presence and spatial distribution of the species and their ability to undertake key life cycle stages and behaviours.

Site-specific supporting text:

Within the SAC, harbour seal use many sites to haul out throughout the year, including sand spits, open sandbanks, and locations along the tidal creeks in the coastal mudflats and saltmarsh (Thompson et al., 2022).

The most recent moult surveys (2021) show that the distribution of harbour seal haul-out sites in The Wash have remained broadly similar since the late 2000s (SCOS, 2021). Between years, there can be significant changes in the fine-scale distribution and spatial extents of the haul-out sites used during the breeding season within the SAC (Thompson et al., 2022). Reported changes in population size at different haul-out sites, e.g. at Blakeney, may affect the local distribution.

When considering the distribution of harbour seals at sea, a study by Carter et al. (2022) determined that distance to a haul-out site was the primary driver of at-sea distribution for harbour seal in the southern north sea, including The Wash, but variables such as sea surface temperature and depth were also important factors. High at-sea density areas in this

region extended further offshore than other locations where harbour seal are present in the UK (Carter et al., 2022).

Please see the 'Population' attribute for more information on the current population decline within the site. Please also refer to the 'Disturbance caused by human activity' attribute for more information on the pressures faced by harbour seals within the SAC.

The target has been set due to a lack of evidence that the feature is being impacted by any anthropogenic activities.

References

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