**Aberdeen Harbour Board: Deposit of Maintenance Dredged Material**

**Marine Licence Application for 2022: Continuation sheet**

*Question 6(h): Potential impacts the works may have (including details of areas of concern e.g designated conservation and shellfish harvesting areas) and proposed mitigation in response to potential impacts*

## 1. Introduction

Maintenance dredging will take place within the River Dee Special Area of Conservation (SAC), which is designated for its populations of Atlantic salmon, freshwater pearl mussel and otter. Bottlenose dolphin population from the Moray Firth SAC occur regularly in and around Aberdeen Harbour.

Part of the maintenance dredging area is within 2 km of the Aberdeen Bathing Waters.

The offshore deposit site Aberdeen CR110 is outwith any protected areas.

This document describes the dredging and deposit operation, and the mitigation measures that will be in place to minimise impacts.

## 2. Description of dredging and deposit activity

As described in the Dredging Method Statement submitted with the marine licence application, Aberdeen Harbour Board's (AHB) annual maintenance trailer suction hopper dredging (TSHD) campaign is usually carried out once a year; however, occasionally an additional campaign is required to remove excessive accretion in the navigation channel and River Dee caused by severe storms.

The annual maintenance TSHD campaign is typically carried out in spring each year, after any winter storms. The start date and duration of the TSHD campaign is dependent on several factors, including:

- Annual accretion of material within the harbour – this is monitored by monthly bathymetric surveys;
- Weather conditions – dredging vessels cannot operate or transit in poor wind/wave conditions. Operating conditions will vary by dredger size and design; and
- Availability of dredging plant – dredging equipment tends to be in high demand, particularly in the spring when many UK ports and harbours require dredging.

The dates of AHB's TSHD campaigns in recent years are listed in Table 1. Over this period, the start of the campaign has been brought forward in the year in consultation with Marine Scotland – Licensing Operations Team (MS-LOT), NatureScot and the Dee District Salmon Fishery Board (DDSFB) due to concerns about the potential for dredging to affect smolt migration. This is discussed further in Section 3.

In recent years the duration of the maintenance dredging and deposit campaign has reduced, as shown in Table 1 and Table 2, predominantly due to an increase in the size of the dredging vessel and more recently a reduction in dredging volume due to mild winter weather.

The harbour must remain operational during dredging, so the dredging programme must be reactive to berth access requirements, internal vessel movements, and vessels entering and leaving the harbour.

*Table 1 Dredging dates 2014-2021*

| Year | Start date | End date | Notes |
|---|---|---|---|
| 2014 | 29th May | 30th June | |
| 2015 | 29th May | 24th June | |
| 2016 | 13th April | 3rd May | Emergency dredging campaign took place 19th February – 5th March to remove material carried downstream during severe winter storms |
| 2017 | 28th March | 6th April | Dredging volume was significantly lower than previous years due to mild winter weather |
| 2018 | 19th April | 15th May | No dredging 9th – 12th May due to dredger breakdown and repair |
| 2019 | 25th March | 12th April | Dredging volume was significantly lower than previous years due to mild winter weather. |
| 2020 | 16th March | 12th April | Dredging volume was significantly lower than previous years due to mild winter weather.<br>No dredging 19th - 21st and 23rd - 24th March and 1st April due to Covid-19 restrictions and poor weather. |
| 2021 | 15th March | 13th April | Dredging volume was significantly lower than previous years due to mild winter weather.<br>No dredging 5th – 6th April due to poor weather.<br>Limited dredging 9th – 10th April due to dredger breakdown and repair. |

The dredging process is not continuous: the average dredging time to fill the hopper is 1 hour 20 minutes, followed by 1 hour 10 minutes cycle time to the deposit site (30 minutes each way to motor to the site, and 10 minutes to discharge). Additional delays to avoid interactions with other vessels are common, e.g. it is common for the dredger returning from the deposit site to be instructed by Vessel Traffic Services to wait outside the harbour to allow other vessels to enter or leave. Table 2 shows the percentage of time spent dredging relative to the overall campaign duration in recent years.

During the annual TSHD campaign, plough dredging is undertaken by the dredging contractor to move material into areas where it is accessible to the TSHD. In addition, small-scale plough dredging is carried out by AHB throughout the year using its own work boat with a plough bar attachment. This operation is carried out on a 'little and often' basis to level off high spots within berths and the navigation channel, and is essential to ensuring safe navigation within the harbour. It negates the need for more frequent dredging and sea deposit campaigns. The plough dredging is carried out during the crew day shift, except in an emergency where an obstruction is identified which must be removed urgently, which may be at night-time. Most of

AHB's ploughing is, therefore, carried out during daylight hours, except for early mornings during the winter months when ploughing may commence in the 'day shift' but before daylight.

*Table 2 Summary of maintenance dredging activity 2015 - 2021*

| Year | Dredger name and hopper size | Dredging time Hours *(Days)* | Campaign duration Hours *(Days)* | % time dredging relative to campaign |
|---|---|---|---|---|
| 2015 | UK Dredging Marlin 3,000 $m^3$ | 232 *(20)* | 594 *(27)* | 39 |
| 2016 | Boskalis Shoalway 4,500 $m^3$ | 201 *(15)* | 475 *(21)* | 42 |
| 2017 | Boskalis Shoalway 4,500 $m^3$ | 86 *(6)* | 221 *(10)* | 39 |
| 2018 | UK Dredging Marlin 3,000 $m^3$ | 206 *(9)* | 525 *(22)* | 39 |
| 2019 | UK Dredging Marlin 3,000 $m^3$ | 159 *(7)* | 425 *(18)* | 37 |
| 2020 | UK Dredging Marlin 3,000 $m^3$ | 154 *(7)* | 654 *(28)* | 24 |
| 2021 | UK Dredging Marlin 3,000 $m^3$ | 202 *(9)* | 692 *(29)* | 29 |

## 3. Atlantic salmon

Part of the maintenance dredging takes place within the River Dee SAC. Atlantic salmon migrate to and from the River Dee and surrounding east coast catchments as part of their life cycle.

In recent years, Dredging Approvals issued by MS-LOT have prevented maintenance dredging operations between 13 April and 24 May (inclusive) to protect Atlantic salmon. AHB recognises the need for a precautionary approach to protect Atlantic salmon, and has repeatedly brought forward its maintenance dredging operations to accommodate requests from NatureScot and the DDSFB.

The DDSFB's response to last year's licence application[1] claims that dredging outside of this window '*can clearly be avoided*': this is not correct. Whilst AHB has managed to complete the dredging by 12 April for the last three years, this has coincided with significantly lower dredging volumes than in previous years due to mild winters (see Table 1). In a more typical year, the dredging campaign takes longer and so completion by 12 April could not be guaranteed, particularly with weather and operational delays. The prospect of having to stop dredging mid-campaign for a six-week period presents a potential hazard to navigation and a significant business risk to AHB.

Commencing dredging any earlier than late March is pointless due to the potential for late winter storms to transport material into the outer harbour, and heavy rainfall to wash fluvial

[1] Letter to MS-LOT dated 16 February 2021

material down the river into the harbour. With the smolt timing restriction, AHB faces a highly restrictive window within which to carry out its maintenance dredging, and is finding it increasingly difficult to secure a dredger within this window.

The DDSFB's suggestion that the timing restriction be significantly extended would place a totally unworkable restriction on maintenance dredging activities.

If a timing restriction is to be imposed, AHB requests that the later start date of 18th April is used, as recommended by NatureScot in their consultation response to the 2021 marine licence application[2].

## 4. Marine mammals

Bottlenose dolphins of the Moray Firth SAC occur regularly in and around Aberdeen Harbour. As in previous years, the following conditions will be in place to protect marine mammals:

- A dedicated watch will be kept by a trained Marine Mammal Observer (MMO) or someone else following the general guidance for and acting in the role of a MMO. No offshore deposit should take place if marine mammals are observed within 200 m of the deposit site in the 20 minutes prior to deposition. If marine mammals are observed within this area then deposition will be stopped until the area has been clear for at least 20 minutes.
- A formal log will be maintained whether or not marine mammals are sighted and the completed logs will be returned to Marine Scotland.

## 5. Bathing Waters

Part of the maintenance dredging area is within 2 km of the Aberdeen Bathing Water. The sea deposit site is outwith 2 km of the Bathing Water.

The Scottish Environment Protection Agency's (SEPA) standing advice for the Department for Business, Energy and Industrial Strategy and Marine Scotland on marine consultations[3] states: '*Any dredging/sea disposal operations should be cross checked to see if the proposed site is located in or adjacent to a designated bathing water (within 2 km). If so, ideally all physical operations should be done outwith the Bathing Water Season (1 June to 15 September)… Unless a strong case can be made as to why a particular operation would not present a risk to Bathing waters, all physical operations should be carried out outwith the Bathing Water Season (1 June to 15 September).*'

Due to smolt migration restrictions imposed on the maintenance dredging activities in recent years (see Section 3), AHB is in discussions with SEPA about delaying its annual dredging campaign until after 24 May, which will require dredging during the Bathing Water season. This could only be achieved during years when accretion in the harbour over the winter is relatively low and navigable depths have not been compromised earlier in the year.

[2] Letter dated 25th February 2021, NatureScot reference CLC161997.

[3] Land Use Planning System SEPA Guidance Note 13: SEPA standing advice for the Department for Business, Energy and Industrial Strategy and Marine Scotland on marine consultations. Issue No. 7 08/06/2017.

Aberdeen Beach Bathing Water quality is currently good[4]. Pollution risks at this site are from surface water urban drainage, agricultural run-off, combined sewer overflows and treated sewage effluent[5]. Maintenance dredging within Aberdeen Harbour has not been identified as a risk to the site, and there is no known evidence of dredging activities affecting bathing water quality at the site.

The material to be dredged is sampled every 3 years and is deemed by MS-LOT to be suitable for deposition at sea. The risk of maintenance dredging adversely affecting bathing water quality at Aberdeen Beach is considered to be negligible.

## 6. Cumulative impacts

### *6.1.Aberdeen Harbour Expansion Project*

The maintenance dredging and offshore deposition will be on-going at the same time as the construction of the Aberdeen Harbour Expansion Project (AHEP) in Nigg Bay south of the existing harbour. There will, therefore, be a temporal overall between the two projects.

As the annual maintenance dredging and deposition has been on-going for many years, the Environmental Statement for the AHEP considered the cumulative effects in the relevant chapters, including Chapters 10 (Nature Conservation), 13 (Fish and Shellfish), 15 (Marine Mammals) and Volume 4 (Habitats Regulations Assessment). The cumulative effects were deemed to be acceptable and a marine licence was granted for the AHEP.

## 7. Conclusion

There are no significant impacts predicted during the proposed maintenance dredging and offshore deposition, either alone or in combination with other projects, subject to the mitigation measures proposed in this document.

[4] https://www2.sepa.org.uk/BathingWaters/Classifications.aspx [accessed 13 October 2021]
[5] https://www2.sepa.org.uk/bathingwaters/Profiles.aspx [accessed 13 October 2021]