

Northern Ireland Guidance Dredging, Disposal and Aggregate Dredging, under Part 4 of the Marine and Coastal Access Act 2009

August 2012



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1.0 Introduction

It is NIEA's role to licence dredging and disposal activities occurring within the Northern Ireland marine licensing area.

The purpose of this guidance is to:

- Introduce applicants to navigational dredging applications;
- Introduce applicants to disposal applications;
- Introduce applicants to aggregate dredging applications;
- Detail any applicable exemptions;

In determining an application for a marine licence NIEA must have regard to:

- The need to protect the environment;
- The need to protect human health;
- The need to prevent interference with legitimate uses of the sea; and
- Such other matters as NIEA thinks relevant.

1.1 Does the Project Require a Marine Licence?

Part 4 of the MCAA (marine licensing) states that a marine activity to do with any of the following requires a marine licence:

- To deposit any substance or object with the Northern Ireland marine licensing area, either in the sea or on or under the seabed, from:
 - Any vehicle, vessel aircraft or marine structure;
 - Any container floating in the sea; or
 - Any structure on land constructed or adapted wholly or mainly for the purpose of depositing solids in the sea.
- To deposit any substance or object anywhere in the sea or on or under the seabed from:
 - A British vessel, British aircraft or British marine structure, or
 - A container floating in the sea, if the deposit is controlled from a British vessel, British aircraft or British marine structure.
- To deposit any substances or object anywhere in the sea or on or under the seabed from a vehicle, vessel, aircraft, marine structure or floating container which was loaded with the substance or object:
 - In any part of the United Kingdom except Scotland, or
 - In the UK licensing area.
- To scuttle any vessel or floating container in the Northern Ireland marine licensing area.
- To scuttle any vessel or floating container anywhere at sea, if the scuttling is controlled from a British vessel, British aircraft or British marine structure.
- To scuttle any vessel or floating container anywhere at sea, if the vessel or container has been towed or propelled, for the purpose of that scuttling:
 - From any part of the United Kingdom except Scotland, or

- From the UK marine licensing area, unless the towing or propelling began outside that area.
- To construct, alter or improve any works within the Northern Ireland marine licensing area either:
 - In or over the sea, or
 - On or under the seabed.
- To use a vehicle, vessel, aircraft, marine structure or floating container to remove any substance or object from the seabed within the UK marine licensing area.
- To carry out any form of dredging within the Northern Ireland marine licensing area (whether or not involving the removal of any material from the sea or seabed).
- To deposit or use any explosive substance or article within the Northern Ireland marine licensing area either in the sea or on the seabed.
- To incinerate any substance or object on any vehicle, vessel, marine structure or floating structure or floating container in the Northern Ireland marine licensing area.
- To incinerate any substance or object anywhere at sea on:
 - A British vessel or British marine structure, or
 - A container floating in the sea, if the incineration is controlled from a British vessel, British aircraft or British marine structure.
- To load a vehicle, vessel, aircraft, marine structure or floating container in any part of the United Kingdom except Scotland, or in the UK marine licensing area, with any substance or object for incineration anywhere at sea.

Any activity seaward of mean high water springs (MHWS) will require a licence if it falls within the 13 categories above, unless an appropriate exemption applies. You should contact NIEA to discuss whether your proposal can be considered as an exempt activity under the Marine Licensing (Exempted Activity) Order 2011.

Dredging includes any device to move any material (whether suspended or not) from one part of the sea or seabed to another. Therefore, hydrodynamic dredging and plough dredging are activities that are licensable under the MCAA but were not previously licensed under The Food and Environment Protection Act 1985.

Incineration means the combustion of a substance or object for the purpose of its thermal destruction.

The **UK marine licensing area** consists of the UK marine area¹, other than the Scottish inshore region.

Please refer to the Marine Licensing Guidance No. 1: Overview and Process for detailed information about each step in the application process and how to apply online.

¹ 'UK marine area' consists of the following:

- a. The area within the seaward limits of the territorial sea adjacent to the United Kingdom;
- b. Any area of sea within the limits of the exclusive economic zone;
- c. The area of sea within the limits of the UK sector of the continental shelf (so far as not falling within the exclusive economic zone and includes the bed and subsoil of the within those areas.

The area of sea mentioned in c. is to be treated as part of the UK marine area for any purpose only to the extent that such treatment for that purpose does not contravene any international obligation binding on the United Kingdom or Her Majesty's government.

In this section 'sea' includes:

Any area submerged at mean high water spring tide:

- Which is closed, whether permanently or intermittently, by a lock or other artificial means against the regular action of the tide, but
- Into which seawater is caused or permitted to flow, whether continuously or from time to time, and
- From which seawater is caused or permitted to flow, whether continuously or from time to time.

2.0 Dredging Activities (non-aggregate)

Dredging is an excavation activity or operation usually carried out at least partly underwater, in shallow seas or fresh water areas with the purpose of removing bottom sediments and relocating them. This technique is often used to keep waterways navigable. Material from dredging can sometimes be used as a source material during beach nourishment and habitat creation activities.

Harbour authorities, port and marina operators, dredging companies, developers and others carry out a variety of dredging operations including:

- Excavation of material to deepen or create navigational channels and berths to provide additional harbour infrastructure or provide access for deeper draught vessels;
- Removal of accumulated sediments from harbour channels and berths to ensure a safe depth of water for navigational purposes;
- Dredging to remove areas of seabed during construction works, e.g. laying foundations, pipelines and outfalls;
- Pre-sweep dredging: levelling the seabed or removing obstructions prior to laying pipelines and cables;
- Extraction of sands and gravels to provide construction material, contract fill or for engineered sea defences and beach nourishment.

There are two types of dredging (non-aggregate) licensed by NIEA. These are:

- Capital dredging; and
- Maintenance dredging.

Capital dredging is the removal of material to create a greater depth than had previously existed.

The NIEA definition of capital dredging is:

Material arising from the excavation of the seabed, generally for construction or navigational purposes, in an area or down to a level (relative to Ordnance Datum) not previously dredged during the preceding 10 years.

Maintenance dredging is required to maintain water depths in areas where sedimentation occurs. It involves the removal of recent unconsolidated sediments, such as mud, sand and gravel. It is undertaken by many ports, berth operators and marinas, to maintain safe, navigable channels and berths. It generally consists of cycles or a series of repeat dredges.

The NIEA definition of maintenance dredging is:

- *Material (generally of an unconsolidated nature) arising:*
 - *From an area where the level of the seabed to be achieved by the dredging proposed is not lower (relative to Ordnance Datum), than it has been at any time during the preceding 10 years; or*
 - *From an area for which there is evidence that dredging has previously been undertaken to that level (or lower) during that period.*

Under the Food and Environment Protection Act 1985 (FEPA), a licence was required for the disposal of dredged material at sea, but **not** for the dredging

activity itself. Under the MCAA all dredging activities will require a marine licence unless Section 75 of the Act applies.

2.1 Section 75 – Dredging and associated disposal authorised under local Acts of Harbour Orders

Section 75 of the MCAA includes an exemption from licensing for dredging or the disposal of dredged material carried out by or on behalf of a harbour authority. The exemption only applies if the dredging or disposal is authorised by and carried out in accordance with a Harbour Order or Local Act.

To comply with the EU Waste Framework Directive (2008/98/EC), the MCAA was amended (The Marine and Coastal Access Act 2009 (Amendment) Regulations 2011). The amendment to the MCAA added another condition to section 75 – deposits at sea would only be exempt from marine licensing where:

- The licensing authority is satisfied that the sediments were not hazardous;
- The purpose of the deposit was for land reclamation, managing waters and waterways, preventing floods or mitigating floods and droughts; and
- The activity involves the relocation of sediments inside surface waters, e.g. the removal of dredged material from transitional and coastal waters and its deposit in other surface waters.

The effect of the amended section 75 is that:

- **Harbour authorities will not need a marine licence to deposit dredged material for the purposes of land reclamation, managing waters and waterways, preventing floods and droughts within surface waters provided the activity is authorised by a local Act or Harbour Order and they have demonstrated to NIEA satisfaction that the sediments are non-hazardous.** The properties that determine whether a waste is hazardous or not are set out in Annex II to the EU Waste Framework Directive.
- Forms of dredging which do not involve deposits (e.g. plough dredging, water injection dredging and agitation dredging) will not need a licence if they are carried out by a harbour authority in accordance with a Harbour Order or local Act.

If a harbour authority is in any doubt about whether their activity is exempt they should consult NIEA Marine Licensing Team.

2.2 Section 75 – Dredging by anyone other than a harbour authority

Dredging is a licensable activity under the MCAA. This means that marinas and harbours without dredging powers and others will need a licence to dredge. This includes forms of dredging such as plough dredging, agitation dredging and water injection dredging.

2.3 Sampling of Dredged Material

As part of the marine licence application process for dredging, disposal, alternative use or joint dredging and disposal applications, the applicant will be required to undertake sampling to inform their application.

Regulation 67(4) states:

The appropriate licensing authority may require an applicant:

- *To supply such information;*
- *To produce such articles;*
- *To permit such articles;*
- *To permit such investigations, examinations and tests;*

as in the opinion of the authority may be necessary or expedient to enable it to determine an application.

Therefore, NIEA can require sample analysis from applicants for any activity, including land reclamation using dredged material, disposal and alternative use of dredged material.

NIEA may advise the applicant to collect samples which adequately represent the area under consideration. NIEA will provide information on where to collect samples from both location and depth, and the number of samples required. NIEA use Action Levels (see table 1) as part of a 'weight of evidence' approach with a range of other assessment methods to make management decisions on whether the dredged material is suitable for sea disposal:

- Historical data and knowledge regarding the dredging site;
- The material's physical characteristics;
- The disposal site characteristics and other relevant data.

Table 1. Action levels used in the assessment of dredged material, where* indicates these levels were set in 1994. (See Appendix 1)

Below Action Level One: In general, contaminant levels in dredged material below Action Level 1 are of no concern and are unlikely to influence the licensing decision.

Above Action Level Two: Dredged material with contaminant levels above Action Level 2 is considered unsuitable for sea disposal. This most often applies only to a part of a proposed dredging area and so that area can be excluded from disposal at sea and disposed of by other routes, e.g. landfill.

Between Action Levels One and Two: Dredged material with contaminant levels between Action 1 and 2 requires further consideration and possible further testing before a decision will be made.

NIEA will decide on which disposal site is most suitable to receive the dredge material if the application is successful and inform the applicant within the licence document. NIEA will take on board responses from our scientific advisors, current licences, disposal site capacity and type, e.g. dispersive/retaining and location/distance from the project.

3.0 Disposal

The disposal of waste at sea can pose a threat to marine life if not properly controlled so it is strictly regulated through the MCAA licensing system. It is NIEA's policy that no waste should be disposed of at sea if there is a safe and practicable land-based alternative. Since the end of 1998 most forms of disposal at sea have been prohibited:

- Disposal of radioactive waste stopped at the end of 1982;
- Disposal of industrial waste stopped at the end of 1992;
- Disposal of sewage sludge was phased out during 1998.

There are two main types of disposal activity still licensed by NIEA:

- Disposal of dredged material at sea, e.g.:
 - Capital dredged material
 - Maintenance dredged material.
- Miscellaneous disposal, e.g.:
 - Animal by-products (shells)
 - Explosives and munitions
 - Tracers
 - Others.
- Alternative use, e.g.:
 - Habitat creation/feeding (salt marsh & mudflat)
 - Beach nourishment.

The disposal of dredged material at sea is strictly controlled and only permitted where no alternative means of disposal is possible or practical. The MCAA provides the necessary statutory means to meet the UK's obligations under both the OSPAR and London Conventions which address the prevention of marine pollution from dumping at sea (see actions 3.1.1 and [3.1.2](#) for more information).

A few other types of waste, including the deposit of shells, may still be considered for disposal at sea. The deposit of explosives/munitions and tracers also fall under the disposal category as they will not be retrieved after the activity.

3.1 Management Options for Dredged Material

The process of dredging creates spoils (excess material), which are carried away from the dredged area. Dredging can produce material for land reclamation or other purposes; however, historically spoil has been disposed of to sea.

Once dredged material has been produced it is classed as a waste material. Once a material has entered the waste stream it is strictly controlled. Disposal of dredged material is controlled under the London Convention 1972, the OSPAR Convention 1992 and the EU Waste Framework Directive².

3.1.1 The London Convention 1972

² Directive 2008/98/EC

The **Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter** 1972 (London Convention) is an agreement to control pollution of the sea by dumping. It covers the deliberate disposal at sea of wastes or other matter from vessels, aircraft and platforms. It does not cover discharges from land-based sources such as pipes and outfalls, wastes generated incidental to normal operation of vehicles, or placement of materials for purpose other than mere disposal.

3.1.2 The OSPAR Convention 1992

The **Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR convention)** regulates international cooperation on environmental protection in the North-East Atlantic. It updates the 1972 Oslo Convention on dumping waste at sea and the 1974 Paris Convention on land-based sources of marine pollution. OSPAR is managed by the **OSPAR Commission**.

3.1.3 Requirements of the OSPAR Convention 1992

Contracting Parties must take all possible steps to prevent and eliminate pollution and take the necessary measures to protect the marine area against the adverse effects of human activities so as to safeguard human health and to conserve marine ecosystems and, when practicable, restore marine areas which have been adversely affected.

Contracting Parties comprise the fifteen following governments: Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom, together with the European Community.

Contracting Parties must take all possible steps to prevent and eliminate pollution by dumping or incineration of wastes or other matter in accordance with the provisions of the 1992 OSPAR Convention, in particular as provided for in Annex II to the Convention.

Article 4(1) (a) of Annex II requires Contracting Parties to ensure that no such materials are '**dumped**' without authorisation or regulation by their competent authorities. In addition, Article 4(1) (b) of Annex II requires Contracting Parties to ensure that such authorisation or regulation is in accordance with the relevant applicable criteria, guidelines and procedures adopted by the Commission.

Furthermore, Article 4(3) of Annex II of the OSPAR Convention requires Contracting Parties to keep records and report to the Commission on the nature and quantities of wastes or matter '**dumped**' at sea in accordance with Article 4(1) of Annex II and the locations and methods of dumping used.

NIEA meets this requirement by requiring that certified returns of quantities of substances or articles deposited under every OSPAR disposal activity type to be submitted to NIEA by 31 January each year. The returns must specify the full licence number and amount deposited each calendar month at each authorised deposit site. Where no deposit is made in a given year **NIL** return is required.

3.1.4 The Waste Framework Directive: The Waste Hierarchy

Waste policy is strongly governed by the waste hierarchy. The waste hierarchy comprises:

- Prevention;
- Re-use;
- Recycle;
- Other recovery;
- Disposal.

The processing and final destination of dredged material determines its status within the waste hierarchy. The waste hierarchy is central in understanding the management options for dealing with dredged material, especially contaminated dredged material.

3.1.4.1 Prevention

The waste hierarchy places a strong emphasis on waste prevention or minimisation of waste. This can include:

- The withdrawal of an application;
- The refusal of a licence; and
- Minimisation of the waste, e.g. reduction of the amount to be dredged therefore reducing the amount of dredged material produced.

Where prevention or minimisation is not possible, e.g. dredging is required to ensure navigational safety, management options for dealing with dredged material should take the following prioritisation:

Re-use>Recycle>Other Recovery>Disposal (last resort).

3.1.4.2 Re-use

Where prevention is not possible, the first step in the process is to identify any re-uses of the dredged material. NIEA will endeavour, where possible, to work with applicants, nature conservation bodies, coast protection authorities, harbour authorities and others, to identify potential schemes to utilise dredged material in a practical and appropriate manner. However, the re-use of dredged material may be limited by the contamination status of the material or by regulatory issues.

It may be possible in some circumstances to differentially use the fractions from a dredging campaign, e.g. if there is any clean sand this may be re-used and any other material not suitable for re-use might be recycled, recovered or disposed of to sea (depending on whether it can be classed as safe to dispose at sea).

3.1.4.3 Recycling

Recycling of dredged material is where the material is in a different form to that originally, e.g. to produce bricks or aggregate material. Generally, these are land-based solutions with any material produced used in land construction projects.

3.1.4.4 Other Recovery

There are currently very few examples of recovery from dredged material. Biomass or energy recovered from dredged material is one example.

3.1.4.5 Disposal

In terms of waste hierarchy disposal should always be the last option. Disposal is subject to extensive control, driven by:

- International law and treaties (e.g. the London Convention, the OSPAR Convention, the Waste Framework Directive, the Water Framework Directive, the Habitats Directive; the Birds Directive); and
- UK law (e.g. the Marine and Coastal Access Act, the Offshore Marine Conservation (Natural Habitats, & c. Regulations, the Conservation of Habitats and Species Regulations).

A range of disposal options include:

- Land disposal;
- Unconfined marine disposal;
- Confined disposal facilities, e.g. purpose built structures for the isolation of dredged material;
- Contained aquatic disposal, e.g. open water disposal of dredged material in pits/trenches followed by capping with clean sediment;
- Level-bottom capping, e.g. placement of dredged material directly onto the seabed followed by capping with clean sediment; and
- Disposal in geotextile bags.

3.2 Disposal Sites

Where an application is submitted for a marine licence to dispose to sea NIEA will decide on which disposal site is most suitable to receive the dredge material if the application is successful. NIEA will look at current licences, disposal site capacity and type, e.g. dispersive/retaining and location/distance from the project when deciding on the appropriate disposal site location.

NIEA will advise the applicant of the disposal site they can dispose of dredged material to if the application is successful in the licence document.

3.3 Designation of a New Disposal Site & Disposal Site Characterisation

If it is identified that a new disposal site is required the applicant should engage with NIEA as early as possible. A new disposal site can only be designated after:

- The applicant has undertaken characterisation of the candidate disposal sites;
- NIEA have consulted all interested stakeholders on the new disposal site;
- NIEA deems the new disposal site to be acceptable.

If possible, the process of gathering data and carrying out the disposal site characterisation should occur before an application is made so as not to delay the licence decision.

If it is identified during the application process that a new disposal site needs to be characterised the application will be put on hold. There is a large amount of information required in order to characterise a new disposal site. If the applicant is at the start of the process and does not have this information, the application will be withdrawn. A new application will then be required once the applicant has produced all the information required.

Consultation on the proposed disposal site can be carried out in parallel with a disposal application; however the two consultation processes will be separate.

The main stages the applicant must undertake when characterising a new disposal site are detailed below ([section 3.3.1](#)). Where existing information/data is absent or inadequate, site-specific field work will be required to address gaps.

3.3.1 Need for a New Disposal Site?

The first stage in considering the selection of a new disposal site is to determine the need for a new site. An assessment of the need should be undertaken and include an evaluation of:

- The first short and long term disposal needs of the port/ports likely to use the site;
- The suitability and capacity of any existing disposal site that could possibly accommodate the material;
- Potential alternative disposal options, such as beach nourishment, land reclamation, habitat enhancement; and
- Determination of the acceptability of the material to be disposed of to sea.

The principal factors to be considered when selecting a disposal site are listed in Annex III parts B and C of the London Convention 1972. These have been further refined in the Waste Specific Guidelines that supplement Annex 2 of the 1996 Protocol.

The following steps should be taken to identify potentially suitable areas for a new sea disposal site:

- Determination of the area within which the material can be reasonably transported and disposed (taking into account economic and operational feasibility);
- Fishing and shell fishing grounds (commercial and recreational);
- Spawning, feeding and nursery grounds (commercial and recreational);
- Migration routes of important fisheries (commercial and recreational);
- Migration routes of marine mammals;
- Aquaculture sites;
- Present and potential areas of special importance for conservation and scientific purposes such as marine protected areas;
- Renewable energy sites (offshore wind farms, wave and tidal devices);
- Cables and pipelines;
- Marine aggregate extraction areas;
- Shipping lanes;
- Anchorage;
- Military exclusion zones;
- Marine archaeological sites;
- Beaches and recreational areas;
- Intake sites for industrial uses such as cooling, desalination and aquaculture.

3.3.2 Dredged Material characteristics

The physical characteristics of the material to be disposed are important in determining the suitability of a potential disposal site, e.g. a site may be restrictive of the types of material suitable for disposal at that site. Physical, chemical and biological (including toxicological) characteristics of the material need to be determined as part of the disposal site characterisation process (*in situ* and as the material is disposed).

For the purpose of habitat protection, it is advantageous to seek compatibility between the physical characteristics of the dredged material and the sediment type at the disposal site.

3.3.3 New Disposal Site(s) Characteristics

An evaluation of the new site(s) to determine potential adverse effects should be undertaken (considering spatial and temporal effects) including:

- The nature of the seabed (topography, geochemical and geological characteristics, benthic communities, fisheries resources, prior disposal activities);
- The physical nature of the water column (depth, temperature, pycnocline/thermocline, currents (tidal, wave induced, residual), suspended matter);
- The chemical and biological nature of the water column (pH, salinity, dissolved oxygen, nutrients, primary productivity, contaminant concentrations);
- Type of disposal site, e.g. dispersive;
- Biological and ecological effects of the dredged material (toxicological and bioaccumulation effects, changes in community structure, disruption of ecological processes, degradation of water and sediment quality and alteration of sediment characteristics).

3.3.4 Potential Adverse Effects

An assessment of the potential adverse effects of the new site(s) is required. Sites with unacceptable impacts must be eliminated from the process. If no sites are acceptable then assessment should be revisited. If after this the adverse effects are still unacceptable then the new site cannot be designated.

3.3.5 Reasons for Site Selection

Early discussions with the seabed owner are recommended to ensure that they are involved in the process of identifying an area which is suitable for a new disposal site.

If two or more sites have been identified as acceptable then a comparison is required. The applicant should identify which site is their preferred disposal site and why.

3.3.6 Disposal Site Characterisation Submission

The applicant must submit a disposal site characterisation report to NIEA containing the assessment of the information detailed above;

- The need for the new disposal site;
- The dredged material characteristics;

- The disposal site characteristics;
- The assessment of potential effects; and
- The reasons for the site selection.

Once the report is submitted NIEA will undertake a consultation exercise with all stakeholders deemed to have an interest in the potential designation of a new disposal site.

If a disposal site is found to be acceptable then NIEA can designate the site as open. Where two or more sites prove to be equally acceptable then NIEA may take account of additional criteria to choose between them, this could be proximity to the area to be dredged or ease of access in relation to shipping lanes.

4.0 Alternative Use

The applicant must consider alternative means of disposal of dredged material before applying for a licence to dispose of dredged material at sea. As discussed in section 3.1.4 disposal at sea should be a last resort, where no other viable options for dealing with the dredged material are available. When considering uses of the dredged material the applicant must consider them in the following order:

Re-use>Recycle>Other Recovery>Disposal (last resort)

Where prevention is not possible re-use of the material must be considered in the first instance.

Re-use of dredged material includes:

- Beach nourishment;
- Intertidal feeding/creation, e.g. islands for birds, mudflat and salt marsh creation, fisheries habitat and wetland restoration.

When considering whether dredged material can be re-used the following must be considered:

- Contamination status of the material;
- Site selection;
- Technical feasibility;
- Environmental acceptability;
- Cost/benefit;
- Legal considerations.

Where an applicant has determined that there are no alternative uses for dredged material they can apply to NIEA for a marine licence to dispose of dredged material to sea as a last resort. The application must detail all the processes which the applicant went through to assess and screen out any other management options

5.0 Marine Aggregate Dredging Activities

Marine Aggregate Extraction is dredging that occurs offshore to extract aggregate from the seabed. Detailed procedural guidance *Marine Minerals Dredging from the British Seabed* (MMG 2) (contact NIEA for information) explains the statutory procedures for the control of certain dredging activities introduced by the Environmental Impact Assessment and Natural Habitats (Extraction of Minerals by Marine Dredging)(England and Northern Ireland) Regulations 2007 (the Regulations) and whilst the latter EIA regulations have now been repealed, many of the procedures remain relevant under the new licensing regime.

There are two main methods of dredging employed:

- Trailer suction hopper dredging: this is where a drag head is towed behind the vessel and aggregate is pumped up a dredge pipe to the hold;
- Static dredging: The vessel is anchored and the drag head remains stationary during dredging.

The process of dredging for marine minerals has the potential to cause impact to the marine environment and each dredge application must be considered carefully. We and our advisors scrutinise every application along with all the supporting documents to ensure that no unacceptable impacts to the marine environment and heritage will arise as a result of permitted dredging applications.

5.1 Deposits in the Course of Aggregate or Mineral Dredging

A marine licence is not required for the deposit of aggregate material at the site of aggregate dredging during the dredging activity.

During dredging, the aggregate material and water sucked into the dredge pipe fill up the dredge hold. As this happens the water is displaced and exits via spill ways. The deposit of these waters (whether by overflow or pumped discharge) from the hold of a vessel is exempt from requiring a marine licence in the normal course of aggregate or other mineral dredging at the site of dredging following its completion or during the return journey of the vessel.

5.2 Cleaning Aggregate Dredger Tanks

Under the Food and Environment Protection Act 1985 tank washings were exempt from requiring a licence. However, under the Marine and Coastal Access Act 2009 there require a marine licence.

If an applicant knows that they will be carrying out tank washing/cleaning when they are applying for their marine licence to undertake aggregate dredging, they can include tank washing in their licence application.

5.3 Environmental Impact Assessment

Dredging for marine aggregates was regulated under the Environmental Impact Assessment and Natural Habitats (Extraction of Minerals by Marine Dredging) (England and Northern Ireland) Regulations 2007.

The Marine and Coastal Access Act brings together deposits, navigational activity and harbour works (currently regulated under the Marine Minerals

Regulations). To reflect the Act, the Marine Works Regulations were updated to include mineral dredging and The Marine Minerals Regulations were repealed.

5.4 Post-consent Sampling

A separate marine licence for sampling is not required where:

- Sampling to monitor aggregate resource has been included in the methodology of a deemed marine licence; or
- A condition has been included in the marine licence by NIEA stating that sampling is required.

5.5 Licence Duration

A marine licence for an aggregate activity will have the following structure:

- On the grounds of environmental processes associated with the structure and function of benthic habitat it is necessary for operations to commence no later than 12-18 months after the pre-dredge baseline is determined. If this period lapses then the baseline benthic conditions may have changed/shifted and the previous baseline study may not adequately reflect the current seabed condition. If the period has elapsed then the applicant will be required to conduct and submit another pre-dredge baseline survey, or the licence will be revoked;
- An operational stage: This is the period in which dredging occurs and may be up to a maximum term of 15 years; and
- A post-dredge stage: This allows the completion of post-dredge surveys and any other work that may have been agreed.

This means that marine licences for aggregate activities will typically have up to a maximum of 18 years duration comprising: 12 month grace period, up to 15 years operational and up to two years post-dredge to allow for any surveys required to discharge any conditions to assess restoration (although surveys may be scheduled later than two-years post dredging). The licence will terminate when the final post-dredge works have been formally signed off by NIEA.

5.6 The Crown Estate

Under the 1961 Crown Estate Act, The Crown Estate is charged with maintaining and enhancing both the value of the property and the revenue from it consistent with the requirements of good management.

The Crown Estate's Marine Estate comprises a large proportion of the UK seabed out to the 12 nautical mile territorial limit, in addition to the sovereign rights to explore and make use of the natural resources of the UK continental shelf, with the exception of oil, coal and gas. The Crown Estate's rights extend to the UK continental shelf for the exploitation of renewable energies under the Energy Act 2004, and they have full rights of the seabed out to 12nm (excluding oil, coal and gas) including the issuing of consents for non-exclusive sampling and licences for commercial aggregate extraction. However, the aggregate rights to some areas of seabed may be in private ownership.

Without a marine licence from NIEA, The Crown Estate will not issue a commercial licence to dredge aggregates.

5.7 Tonnage Returns

The licence holder is required to submit tonnage returns annually, on the anniversary of the licence commencement date. It is also possible to submit returns on a calendar year basis with the permitted tonnages for the first and last year of production allocated on a pro-rata basis.

The tonnage returns are used as a mechanism to check the tonnage used on the licence and to check that total removals are within permitted limits.

Table 1. (See Appendix 1) BASED ON UK FIGURES FROM OSPAR
CONVENTION FOR THE PREVENTION OF MARINE POLLUTION OF THE
NORTH-EAST ATLANTIC

MEETING OF THE WORKING GROUP ON THE ENVIRONMENTAL IMPACT OF
HUMAN ACTIVITIES (EIHA)

LONDON: 25 -27 NOVEMBER 2003

CONTRACTING PARTIES' NATIONAL ACTION LEVELS FOR DREDGED
MATERIAL

Appendix 1

Contaminant.	Existing Action level 1 mg.kg⁻¹ (ppm) (Dry Weight)	Existing Action level 2 mg.kg⁻¹ (ppm) (Dry Weight)
Arsenic (As)	20	50-100
Cadmium (Cd)	0.4	5
Chromium (Cr)	40	400
Copper (Cu)	40	400
Mercury (Hg)	0.3	3
Nickel (Ni)	20	200
Lead (Pb)	50	500
Zinc (Zn)	130	800
Tributyltin (TBT,DBT,MBT)	0.1	1.0
Polychlorinated Biphenyls (PCBs)	0.02	0.2
Polyaromatic Hydrocarbons		
Acenaphthene		
Acenaphthylene		
Anthracene		
Fluorene		
Naphthalene		
Phenanthrene		
Benzo[a]anthracene		
Benzo[b]fluoranthene		
Benzo[k]fluoranthene		
Benzo[g]perylene		
Benzo[a]pyrene		
Benzo[g,h,i]perylene		
Dibenzo[a,h]anthracene		
Chrysene		
Fluoranthene		
Pyrene		
Indeno(1,2,3cd)pyrene		
Total hydrocarbons	100	
Booster Biocide and Brominated Flame Retardants *	-	-