



# National Policy on the Sea Disposal of Waste

MARINE POLLUTION PREVENTION



## 1. INTRODUCTION

The objectives and policies in this policy document identify the matters to be considered in any proposal to dispose of or deposit waste or other matter within the exclusive economic zone of New Zealand (EEZ). Regional Councils, in terms of their regional coastal plans under the Resource Management Act, deal with the disposal or deposition of waste within the coastal marine area.

Standards for the disposal of waste at sea within New Zealand are derived from the 1996 Protocol to the International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 (the 1996 Protocol). New Zealand is a party to this Protocol.

The global aim of the 1996 Protocol is to:

*“protect and preserve the marine environment from all sources of pollution and take effective measures, according to ... scientific, technical and economic capabilities, to prevent, reduce and where practicable eliminate pollution caused by dumping or incineration at sea of wastes or other matter.”*

Key principles of the 1996 Protocol include the consideration of, avoidance, re-use and minimisation of waste sources in order to minimise the amount of material that is required to be disposed of, and taking a precautionary approach when considering proposals to dispose of waste at sea. Alternative options to marine disposal include land-based disposal and beneficial re-use of the material. However there may be technical constraints and potential adverse environmental, social and economic effects associated with these alternative options.

The 1996 Protocol defines categories of wastes that may be considered for marine disposal, provided it can be demonstrated that effects will be avoided, remedied or mitigated. As such, categories of waste that may be considered for disposal within the EEZ include:

- (a) Dredged material;
- (b) Sewage sludge;
- (c) Fish waste, or material resulting from industrial fish processing operations;
- (d) Vessels and platforms or other man-made structures at sea;
- (e) Inert, inorganic geological material;
- (f) Organic material of natural origin; and
- (g) Bulky items primarily comprising iron, steel, concrete and similarly unharmed materials for which the concern is physical impact, and limited to those circumstances where such wastes are generated at locations, such as small islands with isolated communities, having no practicable access to disposal options other than dumping.

In New Zealand the Maritime Transport Act (1994) (MTA) establishes the framework for the application and enforcement of the standards and processes set out in the 1996 Protocol for marine disposal activities within the EEZ. The MTA authorises the Director of Maritime New Zealand (the Director) to issue a permit for the disposal of waste or other matter:

- (a) Into the sea, or onto or into the seabed, within the exclusive economic zone of New Zealand; or
- (b) Onto or into the continental shelf of New Zealand beyond the outer limits of that exclusive economic zone, or into the sea above that part of the continental shelf.

The requirements of the MTA are implemented through Marine Protection Rule -Part 180 – *Dumping of Waste or Other Matter*. To assist in the assessment and issuing of dumping permits, Maritime NZ has also prepared the *New Zealand Guidelines for Sea Disposal of Waste* (NZGSDW) which provides detailed technical information supporting the assessment approach.

## 1.1 Effects of Disposal and Deposition of Material in the Marine Environment

The disposal of material in the EEZ may result in adverse effects on marine ecology and the wider marine environment. This is through physical effects upon seabed communities, as well as water and sediment quality. The type and scale of any effects are largely determined by the amount and type of material being disposed of, the level of contamination, the method of disposal and the characteristics of the disposal site.

The deposition of material usually involves the smothering or disturbance of a portion of the seabed along with the associated flora and fauna. Monitoring programmes from both overseas and New Zealand have shown that the degree to which benthic fauna are smothered and their ability to recover is related to the amount and rate of deposition of sediment. The disposal of material may also involve the short-term discharge of sediments and associated contaminants into the water column during the actual disposal operation.

Longer-term impacts upon water quality may occur as sediment becomes re-suspended from the deposition site or as contaminants leach out. These contaminants may have significant adverse effects upon biota if present in toxic concentrations. Longer term and more widespread environmental effects as well as potential risks to human health may occur if they become bio-accumulated through the food chain.

## 1.2 Disposal of Dredged Material

To date, the disposal of dredged material has been the most common form of marine disposal in the EEZ.

Dredging of internal waters is an essential activity to maintain navigable water depths in ports, harbours, marinas and inland waterways and for the future development of port facilities. Much of the material removed during dredging may require disposal at sea if there are no other alternatives such as land-based or beneficial re-use options or within the coastal marine area. Most of the material dredged is by nature similar to undisturbed sediments of inland and coastal waters. However, in some instances a significant proportion of dredged material may be contaminated by human activity and as such constraints might need to be applied when considering the disposal or re-use of these sediments.

A significant proportion of dredged material is disposed of within the 12 mile limit of the territorial sea (the coastal marine area under the Resource Management Act). However some regional coastal plans consider the disposal of dredged material within regional waters as unacceptable. Accordingly, disposal of dredged material has and does occur within the EEZ, beyond the coastal marine area.

## 1.3 Disposal of Other Waste

Periodically the need arises for the disposal of other forms of waste, such as fish-processing material, other organic waste and man-made structures such as vessels. The disposal of organic waste, if not managed properly, can pose environmental and health problems as well as potential aesthetic impacts.

The disposal of inorganic waste such as vessels may result in physical disturbance of the sea floor and again if not managed correctly may result in the discharge of contaminants from the vessel. Large bulky objects may also pose a navigation hazard or an entanglement hazard for fishing gear.

## 1.4 Overall Approach taken in this Policy Document

The overall approach taken by this policy addresses a number of key concepts provided for in the 1996 Protocol as well as those substantive issues identified by Maritime NZ during the consultation process for this policy.

Annex 2 to the 1996 Protocol places emphasis on progressively reducing the need to use the sea for dumping of wastes. Furthermore, it recognises that avoidance of pollution demands rigorous controls on the emission and dispersion of contaminating substances and the use of scientifically-based procedures for selecting appropriate options for waste disposal.

Therefore, consideration of the precautionary approach in assessing disposal options and applications, as well as consideration of alternatives to marine disposal, is addressed through a number of policies.

The concept of 'designated' sites is one of the major policy thrusts. While it is not intended to allocate or 'zone' specific sites, it is intended that applicants who propose to dispose of significant 'one-off' or regular amounts of dredged material, identify and survey sites that are appropriate for that purpose, and prepare management plans for those sites. Where multiple applications are likely to be made in specific areas (by more than one applicant), Maritime NZ will encourage applications for single sites from consortiums of more than one applicant. In this way, the material to be disposed of from specific geographic areas will be contained within single sites managed and surveyed for that purpose. The costs associated with surveying, establishing and maintaining such sites can therefore be distributed between potential users of the site.

In determining what volume of dredge material should be considered for this management approach, guidance has been taken from other New Zealand environmental statutes. The Minister of Conservation has acknowledged that volumes of dredge material that exceed 50,000m<sup>3</sup> are likely to give rise to greater than minor adverse effects and shall be considered to be Restricted Coastal Activities under the Resource Management Act (1991).

Accordingly, the proposed threshold whereby applications for the disposal of dredge material shall be disposed of at specific sites managed for that purpose shall be 50,000m<sup>3</sup> per annum.

Once accepted and permitted, this will allow dumping on an ongoing basis as determined by the management plan. It will also allow subsequent dumping (in accordance with the management plan) to be either dealt with on a non-notified basis (in accordance with Rule 180.7(a) of the Marine Protection Rules), and/or by a 'simple' evaluation, given the site has already been deemed 'appropriate'. The advantages of such an approach include:

- The effects of disposal are limited to a small number of sites surveyed for that purpose;
- Greater certainty is given to applicants wishing to dispose of dredge material that a suitable site exists where disposal may occur continuously over time;
- Greater certainty is given to the other users of the marine environment that any effects associated with the disposal of dredge material will be contained within a limited number of sites; and
- The management plan approach allows greater emphasis to be placed on the management of material to be disposed of at the site, compared with monitoring the effects after the material has been disposed of.

Applicants who wish to dispose of significant quantities of dredge material outside of these sites will be required to survey proposed alternative sites and to justify why alternative sites should be considered. Therefore there exists an operational advantage to managing and utilising a limited number of sites authorised for that purpose.

Marine Protection Rule - Parts 180.5 requires that the Director notify applications before they are assessed, while Part 180.7 allows that under certain circumstances, particularly where the effects of the disposal activity will be minor, notification is not required.

Applications for the establishment of sites to be managed specifically for the disposal of dredge material will be notified at the outset, but having once established that site as appropriate, it is not envisaged that subsequent use of the site will be subject to notification.

All other types of waste will be considered and notified on a case-by-case and site-by-site basis, although this will not necessarily preclude the use of sites covered by management plans being utilised to dispose of waste other than dredge material.

## 2. ISSUES

- 2.1 The disposal of dredged material is necessary when dredging is undertaken. Not all regional coastal plans in New Zealand have provision for the disposal of that material within their regional waters. As such there is a need to provide for the consideration of the material to be disposed of beyond regional limits within the EEZ.
- 2.2 If marine disposal is used, there is potential for adverse environmental effects on the marine environment associated with the disposal of dredged material.
- 2.3 A need is recognised for the adverse effects associated with the disposal of large volumes of dredge material to be contained within a limited number of sites surveyed and managed for that purpose.
- 2.4 Proposals may be made for the disposal of waste or solid matter other than that produced by dredging activities within the EEZ. Such disposal may also potentially have adverse environmental effects.
- 2.5 In providing for marine disposal, alternatives to disposal in the EEZ need to be considered.

## 3. OBJECTIVES

- 3.1 To provide for the appropriate disposal of dredged and other material within the EEZ while avoiding, remedying or mitigating adverse environmental effects.
- 3.2 To avoid the disposal of any type of waste and other matter in the EEZ, unless it is the best practicable option to promote the sustainable management of natural and physical resources.
- 3.3 To encourage the disposal of dredged material at sites specifically surveyed and managed for that purpose.

## 4. POLICIES

- 4.1 Subject to other relevant policies, the marine disposal of dredge material shall generally be considered appropriate, provided that it can be demonstrated that:
  - (a) There is no reasonable and practicable alternative disposal method or site; and
  - (b) Disposing of the dredged material in the EEZ is the best practicable option, having had regard to alternative disposal methods or sites; and
  - (c) The material can be satisfactorily contained within the disposal site, or if it is a dispersive site, adverse effects associated with the dispersal of the material will be avoided, remedied or mitigated; and
  - (d) There will be less environmental effect from disposing of the waste or other matter in the marine environment than on land; and
  - (e) The proposed disposal site will not interfere with or adversely affect in more than a minor way other legitimate users of the marine environment.

***Explanation:** It is a matter of both regional and national importance that navigable water depths are maintained in ports, harbours, marinas and inland waterways. As such, dredged material is the most common matter to be disposed of in the EEZ. Objective 3.1 and Policy 4.1 provide for the appropriate disposal of dredged material, subject to rigorous assessment and site selection criteria, which is contained in other policies.*

- 4.2 Subject to Policy 4.1, the disposal of waste or other matter in the EEZ shall be avoided, unless it can be demonstrated that:

- (a) there is no reasonable and practicable alternative disposal method onto land; and
- (b) in the case of inert inorganic material, the material being disposed of has similar physical characteristics to the sediments at the site; and
- (c) there will be less environmental effect from disposing of the waste or other matter in the marine environment than on land; and
- (d) the proposed disposal site will not interfere with or adversely affect in more than a minor way other legitimate users of the marine environment; and
- (e) the disposal, having considered (a) to (d) above, is for a purpose which has environmental, scientific, cultural, amenity or social benefits for the community, or will enhance the natural marine environment.

**Explanation:** *One of the main objectives of the London Convention and the 1996 Protocol is to prevent, reduce and where practicable, eliminate pollution caused by disposal. Policy 4.2 recognise that it is generally considered inappropriate to dispose of material derived from the land into the marine environment, unless there are significant benefits adequate to compensate for any adverse effects. This supports the principle that waste derived from land should be deposited on land. The policy identifies those circumstances, which may warrant the disposal of organic waste or solid inorganic waste or other matter, including vessels and other man-made structures in the marine environment.*

4.3 The marine disposal of dredged material, organic waste or other waste that is contaminated to an extent where those contaminants will result in a greater than minor adverse effect on the marine environment, shall generally be avoided, unless after undertaking an assessment of waste management options in terms of the NZGSDW, it can be demonstrated that:

- (a) there is no reasonable and practicable alternative disposal method or site; and
- (b) disposing of the contaminated dredged material, waste or other matter in the marine environment is the best practicable option, having had regard to alternative disposal methods or sites; and
- (c) the contaminants can be satisfactorily contained within the disposal site, or if it is a dispersive site, adverse effects associated with the release of contaminants will be avoided, remedied or mitigated.

**Explanation:** *There are potential adverse effects from the marine disposal of contaminated waste which may be significant, depending on the type of waste, the level of contamination and the location and method of disposal. Policy 4.3 establishes that it is inappropriate to dispose of highly-contaminated material, or material that might otherwise result in adverse effects to the marine environment, and encourages the disposal of organic waste or waste with significant levels of contaminants outside of the marine environment.*

*However it is recognised that in some circumstances, marine disposal may be the most reasonable and practicable alternative and the option which best meets the sustainable management of the natural and physical resources of the coastal environment.*

4.4 A precautionary approach shall be taken when assessing any application to dispose of waste or other matter, where potentially significant adverse effects, which cannot be fully addressed due to inadequate information or understanding (particularly where this is due to a lack of scientific or technical knowledge), may arise from the proposal. In assessing any application, conditions may be imposed to ensure the effects of the activity are avoided, remedied or mitigated and may include, but not be limited to:

- (a) That permit holders may be required to keep and maintain records of waste disposal activities undertaken at sites within the EEZ, which shall be made available to the Director on request; and

- (b) That permit conditions and site management plans may be reviewed in order to avoid, remedy or mitigate any adverse effects which may be generated by the activity; and
- (c) That permit holders be required to regularly monitor the effects of the disposal; and
- (d) That the term of any permit be limited.

**Explanation.** *The 1996 Protocol includes, as a general obligation, application of a 'precautionary approach'. Uncertainties in relation to assessments of impacts on the marine environment will need to be considered and a precautionary approach applied in addressing these uncertainties. They should be applied with a view that acceptance of dumping under certain circumstances does not remove the obligation to make further attempts to reduce the necessity for dumping.*

## Site Selection

- 4.5 The disposal of dredge material where:
- (a) The volume exceeds 50,000m<sup>3</sup> per annum; or
  - (b) Subject to Policy 4. 3, the material is contaminated to an extent where those contaminants will result in a greater than minor adverse effect on the marine environment;

Shall be undertaken at sites surveyed and managed specifically for that purpose.

Proposals for the establishment of such sites shall demonstrate that:

- (a) The proposed site is located so as to avoid, as far as practicable, the spread or loss of sediment and other contaminants to the surrounding seabed and coastal waters through the action of coastal processes such as waves, tides and other currents, unless the use of a dispersive marine disposal site is the best practicable option given the type of material to be disposed of;
- (b) Use of the proposed site will avoid as far as practicable, remedy or mitigate adverse effects on:
  - i) the growth and reproduction of marine and coastal vegetation and the feeding, spawning and migratory patterns of marine and coastal fauna;
  - ii) recreational use of the EEZ;
  - iii) other established activities located in the EEZ which are likely to be affected by the disposal;
  - iv) water quality, including any contributing factors which may lead to or promote algal blooms.
- (c) The disposal will not result in the sustained loss of any habitat of a rare or endangered species.

**Explanation:** *It is recognised that in some areas multiple applications for marine disposal of significant volumes of dredge material have been processed on an annual basis. Policy 4.5 provides for specific sites where such disposal activities can occur over an extended time period, providing a high degree of certainty to both applicants requiring access to disposal site and other resource users seeking confidence that the impacts of disposal will be minimised and contained within sites surveyed and managed for that purpose.*

- 4.6 Sites as provided for in Policy 4.5 shall be the subject of a management plan approved by the Director, and prepared in consultation with those parties that have an interest in the site.

The scope of the Management plan shall include, but not necessarily be limited to:

- (a) A description of the nature of the site and the receiving environment;
- (b) The nature of the material permitted to be disposed of within the site;

- (c) The annual assimilative capacity of the site with respect to both quantity and quality of material to be disposed of;
- (d) An impact hypothesis describing the expected consequences of waste disposal;
- (e) The frequency and extent of impact monitoring required to be undertaken to verify the adequacy of the impact hypothesis;
- (f) The actions to be undertaken in the event that impact monitoring specified in (e) above demonstrates a greater than minor impact on the site resulting from waste disposal activities.

**Explanation:** *Once a disposal site has been established, any potential impacts on the site are most appropriately managed by way of managing the volumes and quality of material and the manner in which it is disposed of. As such, it is essential that such sites be subject to a management plan. For a management plan to effectively deliver sound resource management outcomes, input from all parties with an interest in the site should be sought during the preparation of such a plan. As such, these requirements are given effect by Policy 4.6.*

4.7 Proposals for the disposal of dredge material to a site surveyed and managed for that purpose, as provided for in Policies 4.5 & 4.6 above, shall demonstrate that:

- (a) After undertaking an assessment of waste management options in terms of the NZGSDW and the Site Management Plan, there are no reasonable and practicable alternatives either within or outside of the EEZ which would have less adverse effects on the environment; and
- (b) The disposal will be undertaken in accordance with the requirements of the Site Management Plan; and
- (c) The material is acceptable for disposal in the designated site using acceptable guidelines based on current published material for such disposal, as well as material that has been provided as part of the Site Management Plan approval.

**Explanation:** *Having accepted the principle that specific sites should be designated for the disposal of significant quantities of dredge material, the proper selection of such sites becomes of paramount importance. Prior to selecting a disposal site it is essential that data be available on the characteristics of the general area in which the site is to be located, as well as a consideration of some of the important amenities, biological features and other uses of the area. Size of the disposal site is also an important consideration.*

*An assessment of this nature is consistent with the accepted practice for the selection of disposal sites as set out in the Waste Assessment Guidance prepared by the London Convention Secretariat. As such, it is critical to giving effect to New Zealand's international obligations under the 1996 Protocol.*

4.8 The disposal of the following types of waste may be undertaken at any site within the EEZ, subject to the applicant demonstrating that the proposed site is suitable for the disposal of that type of waste:

- (a) Dredge material where the volume of material does not exceed 50,000 m<sup>3</sup> per annum; or
- (b) All other categories of waste that may be considered appropriate for disposal within the EEZ.

**Explanation:** *Minor volumes of dredge material and other categories of waste that may be considered for marine disposal, present a lower risk of causing environmental damage, provided the relevant site assessment and waste assessment frameworks are implemented. The onus for managing effects in this thus rests with the applicant and Maritime NZ.*

*Accordingly, it is considered appropriate that such applications be considered on a case-by-case basis, subject to rigorous assessment criteria.*

- 4.9 Proposals for the disposal of any waste or other matter within the EEZ provided for in Policy 4.8, shall demonstrate:
- (a) That after undertaking an assessment of waste management options in terms of the New Zealand Guidelines for the Sea Disposal of Waste, there are no reasonable and practicable alternatives either within or outside of the EEZ which would have less adverse effects on the environment; and
  - (b) That the disposal will be undertaken in a location and at times of the day or year that will avoid as far as practicable, remedy or mitigate adverse effects on:
    - i) the growth and reproduction of marine and coastal vegetation and the feeding, spawning and migratory patterns of marine and coastal fauna;
    - ii) recreational use of the EEZ;
    - iii) other established activities located in the EEZ which are likely to be affected by the disposal;
    - iv) water quality, including any contributing factors which may lead to or promote algal blooms.
  - (c) That in the case of vessels, platforms or other man-made structures, the disposal site is located in water depth greater than 2,000 metres, unless it can be demonstrated that a disposal site in shallower water is the best practicable option for the disposal of that material; and
  - (d) How adverse environmental effects will be avoided, remedied, or mitigated; and
  - (e) How assumptions made during the site selection and assessment process may be monitored to ensure that they are correct and sufficient/adequate/appropriate to protect the environment and human health.

**Explanation:** Policy 4.9 gives effect to Marine Protection Rule – Part 180.8 that requires the Director to assess every application in accordance with, *inter alia*:

- the criteria, measures and requirements for the granting of dumping permits set out in the London Convention; and
- the New Zealand Guidelines for the Sea Disposal of Waste.