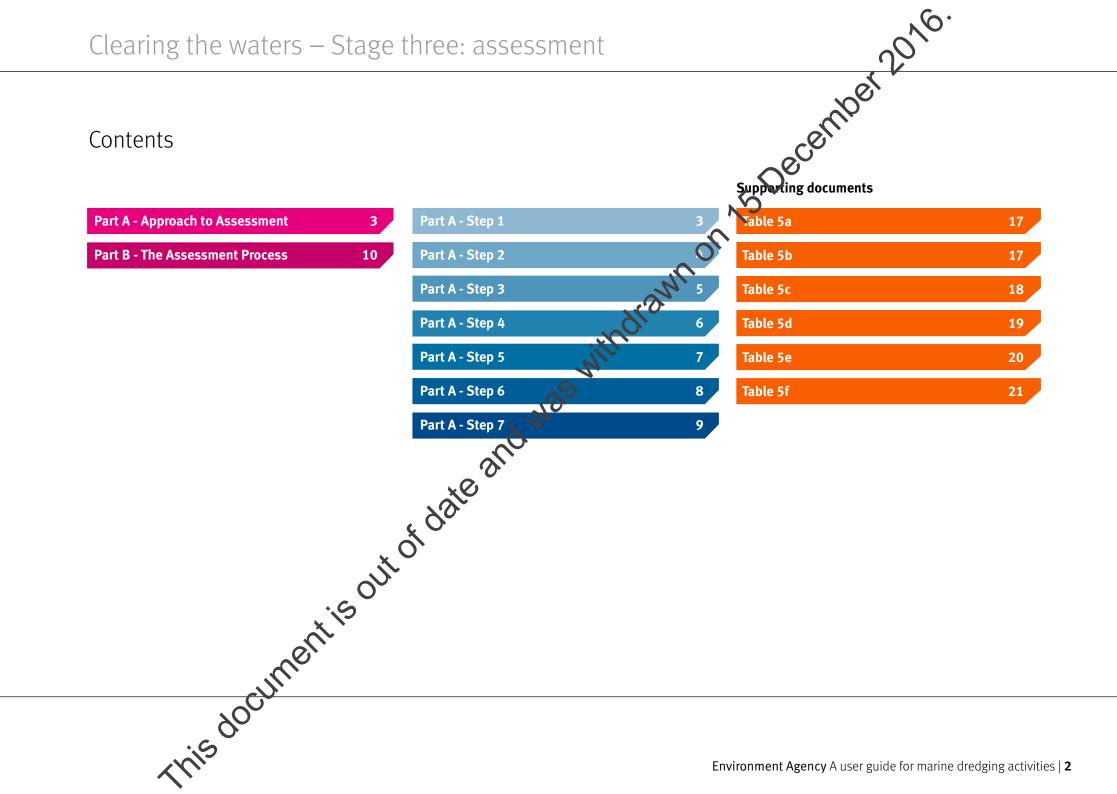
# **Cleaning the** out user guide for marine dredging activities -tage three: as essenent

0

Agency

15 Decemi

vironment



# Part A - Approach to Assessment

## Part A - Step 1: defining the scope of the assessment

The user will reach the Assessment stage because the Maintenance Dredging and Disposal Process or the New Dredging and Disposal Project Process

For New Dredging and Disposal Projects only the assessment should include:

- 15 December 2016.

# Part A - Step 2: indicate likelihood of effect at water body level

This doounent is out of date and was withdrawn on 15 December 2016. Step 2 is designed to make a preliminary judgement on how likely it is that the proposed dredging or disposal activity could have a **non-temporary effect** on status at water body level. Such an effect could involve deterioration in status. Alternatively, it could be that the dredging or disposal prevents the water body from meeting its WFD objective (whether "good status" or lower if an alternative objective has been set).

Step 2 recognises there may be a great deal of knowledge and understanding about certain dredging or disposal activities. For example, environmental investigations may previously have been carried out into the same potential effect, particularly within Natura 2000 sites, and/or there may already be a WFD-proofed dredging or disposal strategy in place which is sufficient to meet the needs of the WFD.

Based on existing knowledge, consider whether or not dredging or disposal is likely to affect status at water body level.

~ 15 December 2016. Consider what data are available about the Lis of the dredging or disposal activity on the WFD arameter(s). Use Table 5a - f as a guide for the type of information that may be useful. Use Table 5a - f as a guide for the type of information that may be useful. Highlight existing data which are potentially relevant to any assessment. With the transformation that may be useful. Highlight existing data which are potentially relevant to any assessment. Highlight existing data which are potentially relevant to any assessment. Highlight existing data which are potentially relevant to any assessment. Highlight existing data which are potentially relevant to any assessment.

# Part A - Step 4: determining the scope of the assessment

The user may wish to consider the following:

- Whether, for each quality element or protected area characteristic, there is sufficient evidence to be sure there will be no effect on water status at water body level. Assuming that evidence can be provided to substantiate this decision, it may not be necessary to carry out any additional assessment.
- This doounent is out of date and was withdrawn on 15 December 2016. • Whether, in order to determine an appropriate level of assessment, consideration needs to be given to the current status of the water body and the associated level of confidence; the indicative likelihood of an effect taking into account existing knowledge or prior investigations; and data availability. Depending upon the issues to be addressed and available information an assessment may be high level or may be more extensive.

Tables 5a and b provide guidance on the data types that may be needed to inform as assessment.

# Part A - Step 5: consider delivery mechanism for assessment

This doounent is out of date and was withdrawn on 15 December 2016. Once you have established what is required in terms of data collection and assessment, determine whether the required assessment can be undertaken as part of another, ongoing or planned, assessment process. These include environmental impact assessment, environmental appraisal or appropriate assessment. If no such assessments are ongoing, or if it is not possible to include the WFD within their scope, a WFDspecific assessment will be necessary.

# Part A - Step 6: Agree scope and form of assessment

It is recommended that the scope and form of the proposed assessment is discussed with the Environment Agency and the appropriate regulator - usually the MMO/Welsh Government and/or the statutory port or harbour authority.

This downent is out of date and was withdrawn on 15 December 2016. If a port or harbour authority has powers to carry out the activity then it is recommended that consultation takes place with the Environment Agency as WFD competent authority in England and Wales to confirm the scope and form of the assessment.

# Part A - Step 7: agreeing baseline WFD data version

This document is out of date and was withdrawn on 15 December 2016. Finally, before starting the assessment, the user needs to discuss and agree with the Environment Agency which version of the WFD baseline data (WiYBY website, relevant River Basin Management Plan etc) will form the 'baseline' for the assessment.

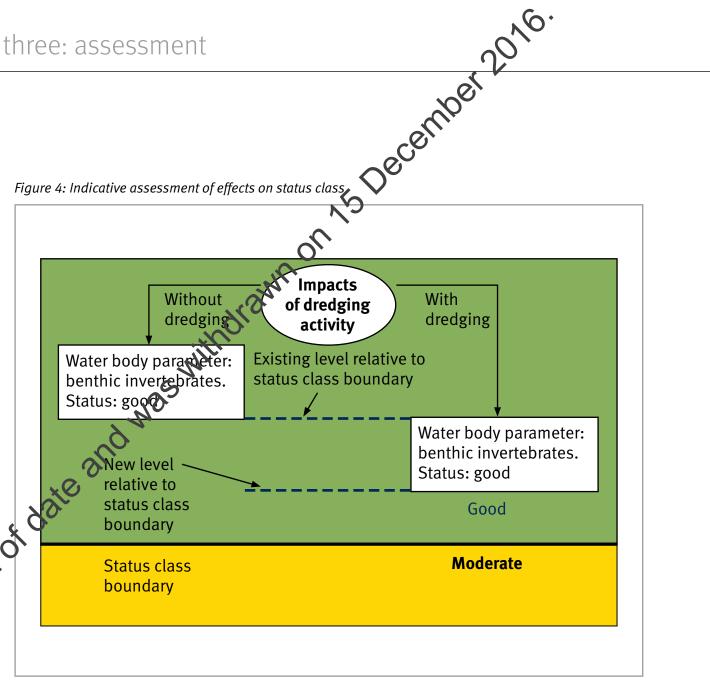
This is an important step given that data availability and hence both the WFD classifications and the trigger thresholds - are expected to change significantly over the course of WFD implementation.

# Part B: the assessment process

Environmental assessment is a routinely-used process that enables developers and regulators to consider the impacts of a project in a structured and transparent way. Environmental assessment can be formal (for example as required under Environmental Impact Assessment (EIA)) or informal (for example an environmental appraisal of the impacts of a minor dredge).

Although EIA and environmental appraisal usually consider the effects of a project on a range of environmental parameters, environmental assessment can also focus on the potential impacts specific to a single subject area. Two examples of focused assessments are the appropriate assessment process and Maintenance Dredging Protocol. Such assessments, required under the EC Habitats Directive, only consider the impacts of an activity on the cited interest feature(s) of a designated conservation site. Similarly, an assessment of effects under the WFD will need to focus on the potential for impacts on the status of the various WFD parameters.

While the overlap between these parameters and those usually considered in EIA is recognised, we stress that the WFD assessment process will diffe It will only consider whether the activity will there a significant non-temporary effect on the status of one or more WFD parameters at water body level.



As illustrated in Figure 4, this means that the WFD "test" will involve determining whether the activity is likely to affect a parameter sufficiently to lower its existing status class.

Figure 4 shows that, while this particular dredging activity would affect benthic invertebrates, the overall effect does not change the status of the water body. No further evaluation, mitigation, etc. would therefore be required in this case under the WFD.

This process is slightly different when assessing affects on WFD priority substances. The assessment must consider whether the activity is likely to cause the parameter to fail to achieve good chemical status (GCS) (that is, cause a deterioration from "pass" to "fail") or prevent the water body achieving GCS (that is, prevent an otherwise anticipated improvement from "fail" to "pass").

#### **Baseline data**

An assessment of the effects of a dredging and disposal activity on a water body will require the operator and regulator to have access to data and information. Information will be required to characterise the dredged material, dredge site, disposal site and the surrounding area. Table 5a - f sets out recommendations for these data requirements. The data requirements associated with an individual assessment shoul we agreed during the assessment process.

Whilst it can be useful to combine parts of the WFD assessment with other environmental information to determine the significance of any effects. Water body size and the temperative characteristics of an impact are among variety of factors that can lead to important ferences in decisions on 'significance'. In a very large water body, for example, an impact might be locally significant order EIA but too small to affect WFD states at water body level. Conversely, in a very shall water body which is a part of a very large Special Area of Conservation, an impact which's insignificant in terms of the

integrity the Suropean site may nonetheless affect a large proportion of the water body and hence affect wD status. Another example is where the Nucular parameter in question is already very Hose to a WFD status class boundary: an impact which is not significant in EIA terms may still cause a deterioration between status classes.

Secentber 2016. Temporal issues are also relevant. Most biological to collect data - care is needed when interpreting information to determine the significance of the signif Natameters, for example, are monitored on a However, unless there is a measurable long term consequence, temporary effects may not be relevant to WFD water body status (see Section 4.11)/

#### Assessment of impacts on WFD parameters

The objective of the WFD assessment is to consider whether the activity will have a **non-temporary effect on status at water body level** on those parameters included within its scope.

Any assessment to meet the requirements of the WFD, whether as part of an EIA, environmental appraisal or a specific WFD assessment, should follow a standard process. The following steps are likely to form part of such an assessment:

- Step 1: consultation and further elaboration of scope with regulators and key stakeholders
- Step 2: data collation and/or collection
- Step 3: baseline environment description (for the parameter(s) scoped into the assessment)
- Step 4: identification of how the proposed activity may affect the baseline environment (what type of changes could occur)
- Step 5: qualitative/quantitative description of the predicted changes including the area affected and the duration of the change
- Step 6: impact assessment (the significance of the predicted change against the relevant standard and thresholds)
- Step 7: discussion (including levels of contidence and certainty)

Steps 1 to 4 should be relatively straightforward (and may, in some cases, be undertaken as part of wider EIA or environmental appraisal). Steps 5 to 7 may require more effort and consideration because they must address the particular requirements of the WFD. Before starting step 5, ensure sufficient citaled information on the proposed activity is available (as set out in the Trigger Table) to allow you to usentify accurately how that activity could charge the WFD baseline environment.

Assessing the significance of an dentified impact is an important but standard part of EIA. It usually involves comparing the moact with published standards and thresholds. For the WFD, the standards and thresholds that should be applied as part of the consideration of significance are the status class boundaries. However, at the time of preparing this guidance not all status class boundaries have been defined. Where boundaries have not yet been defined for a parameter(s), expert judgment will be required to assess the significance of a potential impact.

To date, standards have only been set in coastal and transitional water bodies for a limited number of parameters relevant to dredging and disposal. These include dissolved oxygen, nitrogen, specific pollutants and the current list of priority substances. The details of the standards themselves and the background to their establishment are included within various UKTAG

reported it will often be necessary to understand the second standards are derived and added for other WFD parameters they are likely to be made available first through the UKTAG web site\*. We will revise and update this guidance framework as further standards for transitional and coastal waters become available. It is important that you agree with the regulator which version of the baseline data and threshold standards are to be used for a particular assessment.

#### Assessing impacts on protected areas

Effects on WFD parameters are usually only considered significant if they affect status at water body level. Effects on protected areas can, however, be at a more local level. Also, the exclusion of temporary effects does not apply to effects at these sites.

In the case of Natura 2000 sites in particular, it is likely that any such effects would be dealt with firstand-foremost through the relevant legislation (with which dredging and disposal activities must already comply). Effects on other relevant protected areas such as bathing waters and shellfish waters are not, however, presently covered by the existing dredging and disposal licensing regime. They should be considered as part of any WFD assessment.

\* http://www.wfduk.org/reference environmental-standards

In the absence of specific guidance a WFD assessment will need expert assessment of the likely effects of the activity on the characteristics of the protected area. It must draw on the relevant existing standards and objectives in a similar way to the approach already used for EIA.

#### Preventing achievement of River Basin Management Plan measures (new dredging and disposal projects only)

Where a water body is not already achieving its objectives, the RBMP will describe a series of proposed improvements or measures. Any new development activity could potentially compromise or render the proposed measures ineffective, in turn preventing the water body from meeting its ecological objective.

Those undertaking new dredging and disposal activities in a water body which is not already at its WFD target status must ensure that these activities do not cause deterioration or compromise improvements that would otherwise take place.

In order to assess whether the proposed dredging of disposal activities could affect the ability of the valer body to meet its WFD target status, the user of this guidance needs to have some knowledge about:

which WFD parameters are failing to meet the objectives for the water body, usually good status (or potential);

- the reasons for failure (i.e. the activities or modifications responsible for the water body failing to meet its WFD targets)
- any exemptions that have been applied (for example, if achieving good status/potential has been shown to be disproportionately costly technically infeasible); and
- any measures set out in the River Basin Management Plan which are designed to deliver an improvement in the failing parameter(s).

Understanding whether dredging or disposal might compromise the achievement of WFD target status can be quite difficult in practice, not least because the River Basin Management Plans do not always make clear the full bange of measures applying to a particular water body. The examples below are therefore designed to help the user of the guidance understand the different possibilities.

# Example 1

### Water body X, failing on nitrogen and fish

Water body 'X' is failing to meet its WFD ecological target with regard to dissolved inorganic nitrogen (at moderate status) and fish fauna (at poor status) There are two causes of failure:

• the runoff of nutrients from agricultural land, and

theresence of a sluice which prevents the pstream migration of certain fish species.

Measures described in the River Basin Management Plan to address these issues include:

- changes in farming practices (i.e. to crops with reduced fertiliser requirements) and
- construction of a fish ladder

The construction and operation of the fish ladder will neither affect nor be affected by dredging and disposal activities. The trigger tables confirm that dredging activities do not usually affect nutrient status. Neither dredging nor disposal will therefore prevent the water body improving to good status.

In this case it can be concluded that dredging and disposal will not affect the ability of the water body to meet its WFD objectives, and no further assessment will be required in this regard.

#### Example 2

#### Water body Z failing on benthic invertebrates

Water body 'Z' is designated as a heavily modified water body for navigation. This is used when dredging (which the WFD accepts is required to ensure safety of navigation) means that the WFD objectives of good ecological status cannot be achieved for one or more parameters. The target for these water bodies is therefore to achieve GEP. Water body 'Z' is also recorded in the River Basin Management Plan as failing to achieve GEP with regard to benthic invertebrate fauna. However, information in Annex B of the River Basin Management Plan confirms that it is 'technically infeasible' to meet the GEP objective given the ongoing use of the water body for navigation.

The 2015 WFD target therefore remains at 'moderate' and an extended deadline has been set, indicating that the water body is not expected to meet GEP with regard to invertebrates. The justification for not achieving GEP by 2015 is given as '*Not Required (MS)*: the reference *MS* is to *Morphology Sensitive* which - as explained in Annex E to the River Basin Management Plan - accepts that the failure to achieve GEP with respect to invertebrates is related to the water body's HMWB designation.

The designation of a heavily modified or artificial water body effectively protects the extent of the modification that was present at the time of designation and for the specified designated use. Thus, as navigation is a part of the reason for designation of the HMWB, and as maintenance dredging and disposal have been ongoing throughout the classification period, it can be concluded that the continuation of these activities will neither cause deterioration nor affect the ability of the water body to meet its WFD objectives

Whilst this example may appear somewhat complex, it reflects a real issue identified by a number of users of this guidance. It is therefore included here to highlight a 'double counting' problem, and to confirm that, in this particular case (i.e. maintenance dredging where the cause of failure is the same as the justification for designation as a heavily modified water body), no further assessment should be necessary.

# Assess cumulative effects (if relevant, new dredging and disposal projects only)

Given that, in some circumstances, the Environment Agency will need to consider cumulative effects in making a decision on a licence application, it may be useful for an operator to consider the cumulative effects of the various activities affecting water body status. This is likely to be participarly important if the water body status is ator near a status class boundary. Guidance on the approach to such an assessment is provided in this section.

#### New Dredging and Disposal Projects

Although individually a scheme may have an insignificant effect on the WFD quality elements in a water body, the combined effect of several small scale chemes may cause deterioration or otherwise prevent the water body achieving its objectives. In issessing an application, the Environment Agency as competent authority will consider the cumulative effects of existing pressures of a similar nature in a water body and the combined impacts of the proposed scheme. This assessment should only include other pressures affecting the same quality elements as those potentially affected by the proposal. If, cumulativer, the dredging and disposal activities proposed Ond cause deterioration or otherwise affect the ability of the water body to meet its WFD objectives, the Environment Agency will conclude that a more detailed investigation is needed. If the applicant is aware that there may be significant incombination effects, it would be prudent to include an assessment of these effects in the documentation accompanying the application.

#### **Maintenance Dredging and Disposal**

Whereas the potential effects of capital dredging and disposal schemes need to be considered in terms of their potential in-combination effects with other proposed as well as ongoing developments, maintenance dredging and disposal activities form part of the 'baseline'. Any effects of maintenance dredging will already have been accounted for in the WFD classification which took place during 2006-2008. It is not necessary to carry out a 'cumulative effects' assessment for maintenance dredging or disposal applications.

# The importance of the duration of the predicted effect

As noted, the WFD is concerned only with nontemporary effects on one or more WFD parameters at water body level. This means effects that will have medium- to long-term implications for the WFD quality elements, specific pollutants, priority substances or protected areas.

By their nature many of the effects associated with dredging and disposal activities are of limited

duration. This has already been recognised to some extent in the screening stage but it is essential to consider the duration of a predicted impact within the context of a WFD assessment to determine whether its effect is temporary or non-temporary. While "temporary" is not currently defined, activities will be managed on a case-by-case basis focusing on whether impacts are reversible (in the short term).

Note that the consideration of temporary effects is not applicable to protected areas.

# Dealing with low-confidence classifications or parameters that have not yet been assessed

Some of the classifications of WFD parameters are still uncertain. We have taken into account this uncertainty throughout this guidance framework, for example in the development of the trigger thresholds at screening stage and in the decision about the level of assessment required. It is equally important to recognise and record the levels of confidence during the assessment stage.

Confidence in the classification of a parameter should not influence the process of assessing the significance of a potential impact. Where an impact is identified, however, it should factor in the discussion about the timing of any response. In particular, levels of confidence will be a factor in deciding if it would appropriate to monitor and subsequently review the assessment rather than immediately implement mitigation measures. Where confidence is ow and the risks of delayed action are low, the decision on

the need for mitigation measures might be made at a later date.

In situations where a supporting element or specific pollutant is classified as "not yet assessed", any judgement on the significance of a predicted effect must take into account the likelihood of a consequential effect on one or more biological quality elements. This is because the WFD is concerned with the various supporting elements only where the have the potential to prevent a biological quality element from achieving "good status".

# The impact of low confidence on the impact assessment

The WFD introduces various assessment requirements that may not previously have been routinely applied to dredging (and to a lester extent disposal activities). These include, for example, the effects of dredging on the water column there may be a gap in the current science and knowledge base needed to support accurate impact assessments.

In the absence of such scientific support, it may not always be possible to attach a significance level to a predicted impact with sufficient confidence. It is mportant, therefore, to record the level of confidence associated with the impact assessment. It may also be more appropriate to delay imposing mitigation measures until a period of monitoring has provided more information on the relationship between the parameter and activity.

# RelationshippoElA

As indicated earlier, a WFD assessment could be prepare ras a stand-alone report or as part of a formateIA or environmental appraisal. Where the WFD assessment is included within such a wider process, you should still follow the stages set out in this guidance framework. The approach described in this guidance framework is intended to ensure that the activity will comply with the requirements of the WFD. However the approach we set out cannot constitute formal EIA – or indeed Appropriate Assessment – where one or both of these are required. You should still follow in full the relevant EIA/Habitats regulations and guidelines.

#### **Relationship to the Maintenance Dredging Protocol**

The Maintenance Dredging Protocol (MDP) is a mechanism by which the combined effects of dredging and disposal operations on designated Natura 2000 sites at a number of locations can be assessed. The MDP requires harbour authorities and terminal operators to work together to prepare a baseline document which summarises the history of dredging in the area and assesses its cumulative and in-combination effects on the conservation objectives for the designated site. This baseline document, once approved by Natural England, is used as the basis for assessing future dredging and disposal applications for ongoing activities. The MDP approach replaces what would otherwise be a requirement for formal appropriate assessment each time a licence is renewed.

This dooment is out of date and was with drawn on 15 December 2016. Where a WFD assessment under this guidance framework identifies that the dredging and/or disposal activity has the potential to affect the WFD-related features of a designated Natura 2000 site it must be addressed in accordance with the Habitats Directive. In such a case the MDP would be an appropriate mechanism through which the assessment is made. Alternatively this guidance output could be generated using the information required to inform an Appropriate Assessment by the relevant competent authority.

However, if the activity will impact other WFD-related characteristics not associated with a designated site (and assuming the project does not require EIA) there may also be a requirement to prepare a separate WFD assessment to address these issues.

Clearing the waters – Stage three	e: assessment		2016.
Table 5a: Dredging and disposal information required		Disposal	per
Information required	Dredging	Disposal	Any significant changes?
Location of proposed dredging or disposal activity (describe			
location(s) or provide grid reference or other coordinates)			
Dredge footprint (m <sup>2</sup> )		N <sup>3</sup>	
Dredge depth (m)			
Dredge volume (m <sup>3</sup> )		0	
Dredge timing and duration (proposed)		<u>,</u> ,	
Dredge methodology		n'	
Disposal location			
Sediment quality		Q,	
Table 5b: Water body specific information (NB. One table for each potentially impacted water body) Information required	Insert details of water bo	dies on interest	
Water body name	.0.		
River basin district			
	N		
Water body ID			
Size			
Designation (HMWB, AWB?)			

#### Table 5c: Information on water body ecological status

Clearing the waters – Stage three:	
Table 5c: Information on water body ecological status	RBMP or WiYBY
Information required on WFD ecological status	RBMP or WiYBY
Current ecological status or potential	$\bigcirc^{\circ}$
2015 ecological status or potential objective	
2027 ecological status or potential objectives	N-3
Type of exemption (if relevant)	
Justification for exemption	0`
WFD biological quality elements not meeting WFD objectives	
Activities, etc, causing failure(s)	N.
Any links to dredging and disposal?	N'O
Measures proposed to meet WFD objectives (including deadline)*	<sup>10</sup> 0.
WFD hydromorphology supporting elements not meeting WFD objectives	or withdrawn was
Activities, etc. causing failure(s)	S
Any links to dredging and disposal?	
GEP measures 'not in place' (if applicable)	, N
Measures proposed to meet other WFD objectives (including deadline)*	and
WFD physico-chemical supporting elements not meeting WFD objectives Activities, etc. causing failure(s) Any links to dredging and disposal?	
Activities, etc. causing failure(s)	
Any links to dredging and disposal?	
Measures proposed to meet WFD objectives (including deadline)*	
Specific pollutants not meeting WFD objectives	
Activities, etc. causing failure(s)	
Any links to dredging and disposal?	
Measures proposed to meet WFD objectives (including deadline)*	
* Include relevant generic measures as well as water body specific measures.	
90 <sup>0</sup> 0	
THIS	Environment Agency A user guide for marine dredging activities   18

#### *Table 5d: Information on water body chemical status*

Clearing the waters – Stage three	: assessment
Table 5d: Information on water body chemical status	Source or link
Information required on WFD chemical status	Source or link
Current chemical status	
2015 chemical status objective	
2027 chemical status objectives	
Type of exemption (if relevant)	
Justification for exemption	0
Priority substance not meeting WFD objectives	
Activities, etc, causing failure(s)	N
Any links to dredging and disposal?	<u> </u>
Measures proposed to meet WFD objectives including deadline	
Priority hazardous substances not meeting WFD objectives	
Activities, etc. causing failure(s)	N.
Any links to dredging and disposal?	S
Measures proposed to meet WFD objectives including deadline	
Agreed date to be used for baseline data	
	e and was
X	۷ ۷
XO	
v O,	
0*	
V`	
200	
	the second se
This document is out a	Environment Agency A user guide for marine dredging activities   :
N	

#### Table 5e: Information on protected areas

Clearing the waters – Stage three:	assessment 2000.
Table 5e: Information on protected areas	Name or site reference
Protected areas*	Name or site reference
Name/reference of Special Areas of Conservation and Special Protection Areas designated under the Birds Directive 79/409/ EEC and Habitats Directive 92/43/EEC, where maintenance or improvement of the status of water is an important factor in their protection	on to De
Name/reference of areas designated to protect economically significant aquatic species under the Freshwater Fish Directive 78/659/EEC or the Shellfish Directive 79/923/EEC	withdrawn 0
Name/reference of any recreational waters protected under Bathing Water Directives 76/160/EEC; 2006/7/EC	indi
Nutrient sensitive areas protected under the Nitrates Directive 91/676/EEC or Urban Wastewater Treatment Directive 91/271/ EEC	SWILL
Water bodies used for the abstraction of drinking water (unlikely to be affected by dredging or disposal)	

uk/rese. protected\_areatop \* Protected area maps can be accessed via http://www.environment-agency.gov.uk/research/plancing/33346.aspx. The register of protected areas which contains site details is at:

http://www.environment-agency.gov.uk/static/documents/Research/RBMP\_protected\_area

#### Table 5f: Protected area (1)

Clearing the waters – Stage three	: assessment
Table 5f: Protected area (1) (NB. complete one table for each protected area in or associated	emper
Information required on protected area statusName of and type of protected areaCurrent statusObjective and date for achievementFeatures of interest not meeting protected area objectivesActivities, etc. causing failure(s)Any links to dredging and disposal?Measures proposed to meet protected area objectives; deadline for achievement	Source or link 15 00 00 00 00 00 00 00 00 00 0
This document is out of dat	eand
This doct	Environment Agency A user guide for marine dredging activities

sency.gov.uk sency.gov.uk re rument-agency.gov.uk rdent hotline 0800 80 70 60 (24hrs) foodline 0845 988 1188 approximate call costs: 8p plus 6p per minute (standard landed) Please note charges will vary across telephone providers. Manual first: Viewing this optic reading a paper copy, please don't forget to reuse and recycle.

GEHO0812BWWI-E-E