Marine aggregate dredging

Dredging for marine minerals has occurred in UK waters for many years, in response to the need for sand and gravel used as construction aggregate and for beach replenishment. The Bristol Channel is the main source of fine aggregates for South Wales, with six sandbanks licensed for dredging. Existing marine aggregates licences in these areas would permit removal of about 4.5 million tonnes each year. However, actual removal of dredged aggregates amounts to less than 2 million tonnes annually, of which two thirds is landed at South Wales wharves.[i]

Nash Bank is currently the main source of marine dredged sand in the Bristol Channel, supplying up to 900,000 tonnes each year. However, a recent study commissioned by the Welsh Assembly Government (WAG) advised that dredging from Nash Bank should be phased out over a period of 5 to 10 years, due to concerns over its impact upon adjacent beaches and the wider sediment environment.[ii] It further advised that dredging should generally be steered towards western areas of the Channel.

The Crown Estate, as owner of the seabed out to the 12 nautical mile limit of the territorial sea, issues commercial licences to dredge for marine aggregates. The existing non-statutory "Government View" system of issuing licences will shortly be replaced by a new statutory system, which will consolidate environmental legislation for this sector (see over) and transpose the provisions of the Environmental Impact Assessment and Habitats Directives, insofar as they relate to marine minerals dredging, into UK law. The new Regulations will apply to England, Wales and Northern Ireland.

This briefing examines the current framework for regulating marine aggregate dredging, and identifies the limitations of the interim system that the new Regulations will need to address.

INTERNATIONAL AND EUROPEAN LEGISLATION

Mineral Rights

The Territorial Sovereignty of the UK enables it to assert property rights in the mineral resources under its territorial sea out to 12 nautical miles. Furthermore, the Geneva Convention on the Continental Shelf 1958 and the United Nations Convention on the Law of the Sea (UNCLOS) 1982, provide sovereign rights over the continental shelf outside territorial waters for the purpose of exploring and exploiting its natural resources[iii]. The title to minerals pass upon recovery in accordance with UNCLOS.

Environmental Impact Assessment

EU Directive 85/337/EEC (as amended by Directives 97/11/EC and 2001/42/EC) on the Assessment of the Effects of Certain Plans and Programmes on the Environment, integrates environmental considerations into the preparation and adoption of plans and programmes liable to have significant effects on the environment, by subjecting them to an Environmental Impact Assessment (EIA). EIA has formed part of the non-statutory Government View (GV) procedure of assessing dredging applications since 1989, and Environmental Statements (ES) have been submitted with every GV application, owing to the co-operation and goodwill of the dredging industry. However, proposed new regulations will subject marine dredging of minerals to a statutory Government View Procedure, involving a full EIA of the impact of dredging from the seabed.

Protection of Ecosystems and Biological Diversity

As part of its ongoing work under Annex V of OSPAR[iv], the Commission has undertaken to further assess which species and habitats need to be protected and those human activities that are likely to have an actual or potential adverse effect on them and upon ecological processes. This includes assessment, *inter alia*, of the effects of sand and gravel extraction and exploration for oil, gas and solid minerals. Based on this, the Commission will, if necessary, continue to draw up programmes and measures in accordance with Annex V of OSPAR with a view to controlling human activities or, where practicable, restoring marine areas which have been adversely affected.

UK LEGISLATION

Traditionally, there has not been any statutory control of marine dredging in the UK apart from that exercised by Harbour Authorities within their specific areas of jurisdiction and by Coast Protection Authorities within 3 miles of the coast. Proposals for dredging of marine minerals in Welsh waters in areas outside planning control[v] are currently determined through the non-statutory GV system described below. However, it may be necessary to consider certain legislation in determining applications for dredging licenses (**box 1**).

Dredging for aggregates above the mean low water mark (MLWM) on areas contiguous with the foreshore and some other areas is covered by the Town and Country Planning Act 1990.

Government View (GV) Procedure

The Crown Estate (CE) owns most of the seabed and issues commercial licences to dredge for marine minerals pending a favourable "Government View" (GV) from the Minerals and Waste Planning Division of the Office of the Deputy Prime Minister (ODPM) or, in Wales, the Welsh Assembly Government (WAG). The GV procedure is an informal, non-statutory system that has been in place since 1968. Guidelines[vi] on the Procedure require the applicant to undertake a Scoping Study, an Environmental Impact Assessment and Coastal Impact Study (CIS) of the proposal. Extensive consultation is undertaken within Government, with specialists, independent consultees, local authorities and the general public. In considering applications for a GV, ODPM / WAG maintain a presumption against dredging unless the environmental and coastal impacts are satisfactorily resolved. If the view is favourable, the CE issues a licence and dredging can take place subject to the conditions attached to the licence.

It should be noted that the GV procedure relates only to applications to dredge seabed owned by the CE and does not apply to other seabed owners or to the dredging of material for the maintenance of navigation channels, ports and harbours nor to capital dredging during their construction.

Applications for the extraction of marine minerals are currently operating under the Interim Government View Procedures pending introduction of the new statutory regulations. The Interim Procedures were introduced in 1998 to make the application and determination process more rapid and transparent. Both the Interim and proposed statutory measures are to be administered by WAG.

Box 1 Legislation relevant to dredging applications

Coastal Protection Act 1949 – s.34 requires consent for removal of any object or materials from the seashore below mean low water springs, and allows Coastal Protection Authorities to control dredging within 3 miles of the coast.

Food and Environment Protection Act – Part II requires that a licence be obtained to deposit any articles or substances in the sea or under the seabed.

Conservation (Natural Habitats &c.) Regulations 1994

Transport and Works Act 1992

Water Resources Act 1991

Water Industry Act 1991

Sea Fisheries (Wildlife Conservation) Act 1992

Protection of Wrecks Act 1973

Ancient Monuments and Archaeological Areas Act 1979

Protection of Military Remains Act 1986

International Regulations for Preventing Collisions at Sea 1972 (COLREGS) as amended by the **Merchant Shipping Regulations 1996**

Water Environment (Water Framework Directive) (England and Wales) Regulations 2003

The Telecommunications Act 1984

Secondary Legislation, Plans and Policies

The current non-statutory GV procedure will shortly be replaced by new regulations that have been prepared to secure compliance through a statutory regime. It is anticipated that the *Environmental Impact Assessment and Habitats (Extraction of Minerals by Marine*

Dredging) Regulations (the Regulations) will enter into force later this year and will apply to England, Wales and Northern Ireland. The Regulations will embody the requirements of the EC Directive on EIA, the Habitats Directive (which covers territorial waters) and other relevant legislation, insofar as they relate to this type of dredging. The Assembly will provide guidance on how the Regulations apply to Wales.[vii]

The new statutory regime will separate the CE from the environmental consideration of dredging proposals. As such, the commercial licence issued by the CE will become distinct from the dredging permission issued by the ODPM / WAG. The new Regulations will also require the full environmental statement to be submitted with the application, to be determined as submitted.

Box 2 Objectives of the IMADP

- Identify areas where dredging for marine aggregates is likely to be acceptable.
- Protect the marine and coastal environment – landscape, habitats, ecology and heritage.
- Control the impacts of marine dredging to acceptable levels.
- Encourage efficient and appropriate use of dredged aggregates.
- Safeguard resources from sterilisation.
- Protect the interests of other users of the area.

Interim Marine Aggregate Dredging Policy (South Wales)

The Interim Marine Aggregates Dredging Policy (IMADP)[viii] (November 2004) is an interim document that formalises the strategy and policy of the WAG with respect to marine aggregate dredging applications, until the new Regulations supersede the GV procedures in 2005. The document sets out the strategic level policy in relation to the extraction of marine sand, gravel and coal from the Bristol Channel, Severn Estuary and River Severn, and provides a context for consistent, clear and open decision-making in relation to dredging applications. It will be taken into account in all future decisions on marine aggregate extraction, including Dredging Licence Applications, and in guiding marine dredging towards preferred areas.

The spatially variable IMADP is based on sediment environments, which are classed as favourable, precautionary, or unlikely to be acceptable according to environmental and social criteria. The period of time for which a positive GV is given is site-specific, but while an application in a Favourable Sediment Environment will be considered for a 15-year GV, within a Precautionary Sediment Environment a GV of between 3-7 years is more likely.

The effectiveness of the IMADP will be measured by monitoring progress against stated objectives (**box 2**), and the Policy specifies possible indicators and quantified targets. The IMADP will be reviewed at five yearly intervals, although the Assembly may consider an earlier review if understanding of natural processes within the study area changes significantly.[ix]

The IMADP forms part of the integrated strategy for the supply of fine aggregates to South Wales. Planning policy for land-based extraction is set out in *Minerals Planning Policy Wales (MPPW) 2000*, and *Minerals Technical Advice Note (Wales) 1: Aggregates* (March 2004).

Box 3 Some of the interim strategic policies (sp) and interim policies (p) set out in the IMADP[x]

- The use of marine dredged sand and gravel will continue for the foreseeable future but only where this remains consistent with the principles of sustainable development. (SP1)
- Aggregates dredging will progressively, over the next ten years, become focused in areas offshore and to the West of the Bristol Channel where this remains consistent with the principles of sustainable development. (SP2)
- Considering only the "construction" market, maintaining a licensed capacity within Welsh waters of up to 2m tonnes per annum will be a factor in GV decisions. Strong justification on environmental, social and economic grounds will be required to demonstrate any need to exceed this capacity. (SP3)
- Applications for a GV will need to address cumulative and in-combination effects to permit appraisal of the environmental capacity at the scales of the Severn Estuary, and Inner, Central and Outer Bristol Channel areas. (SP6)
- EIA will be expected for new or renewed applications to dredge for aggregates. (P1)
- Screening for EIA will be expected for variations to licences to dredge for aggregates. (P2)
- Applications for aggregates dredging will undergo screening for significant effect on a designated, proposed or candidate European site or a Ramsar site. Unless it can be demonstrated that there is not the potential for significant effect, Appropriate Assessment will be required. (P3)
- Proposals for aggregates dredging likely to cause demonstrable harm to species or their habitats protected by the Wildlife & Countryside Act 1981, European Directives or identified in the UK Biodiversity Action Plan, or likely to cause demonstrable harm to a Site of Special Scientific Interest, National Nature Reserve or Marine Nature Reserve, are unlikely to receive a favourable GV. (P6 & P7)
- Aggregates dredging conditions will incorporate a management plan to cover monitoring and risk management linked to indicators, thresholds, and actions. (P13)

ADMINISTRATION

The marine aggregates industry is licensed by the Crown Estate (CE), as owners of the mineral rights to the seabed around the UK.[xi] Marine aggregate prospecting rights are awarded by the CE following competitive tender. The CE is now operating a "general consent" system for prospecting over fairly broad areas of seabed, which is intended to provide an information base for more detailed future extraction licence applications[xii]. If a viable deposit is located, then an application to dredge is submitted by the operator. The CE acts solely as landowner and planning permission is granted by ODPM in England or the WAG following a favourable GV.

The policies set out in the IMADP will be taken into consideration by the dredging industry and consultees including the Countryside Council for Wales (CCW), the Environment Agency (EA), Department for Environment and Rural Affairs (Defra), Centre for the Environment, Fisheries and Aquaculture Science

(CEFAS), and Cadw (Welsh Historic Monuments) when considering aggregate dredging from seabed in the ownership of the CE. Other owners of the seabed, local-planning authorities, harbour authorities and coastal groups are advised on the context within which dredging applications will need to be considered, and are expected to take proper account of the IMADP when considering proposals.

The enforcement of licence conditions by the CE is based on an Electronic Monitoring System (EMS), which remotely and automatically records the location, time and activity of operators. Defra also have a particular responsibility for overseeing and monitoring the effects of dredging.

ISSUES ARISING

The current non-statutory GV Procedure has several disadvantages:[xiii,xiv,xv]

- The GV Procedure is voluntary and compliance is dependent upon goodwill of the operator;
- The CE has a potential conflict of interest, since it licenses dredging and also collects royalties in respect of the minerals extracted;
- The GV does not apply to seabed owners other than the CE. Nevertheless, such bodies are expected to take "proper account" of the IMADP when considering proposals to dredge aggregates within the study area.
- The GV process is characteristically slow, often taking several years, as a result of industry lead-in times, and the time it takes for an applicant to complete the relevant environmental studies and consultation requirements and then for the consenting authority to issue a GV.
- The system has been described as insufficiently open and transparent;
- There is no Strategic Environmental Assessment (SEA) of dredging operations, and applications for licences are submitted and dealt with on a case-by-case basis for particular areas of the seabed. As such, there is no overview of the nature and extent of the resource beyond the specific licence application site, or data on less sensitive extraction areas;
- The GV Procedure does not apply within a Local Planning Authority area, where LPA consent is required, or where permitted under Local Harbour Acts. Where dredging within harbour authority areas is for commercial aggregates, both the harbour authority procedures and the GV will need to run in parallel.

The new statutory regime should provide a more robust framework for determining future marine minerals dredging applications, and hopefully ensure consistency between land- and sea-based decision making. Several key elements of the existing land-use planning system appear transferable to marine aggregate dredging, including the need to conserve natural resources and cultural heritage (as well as the resource itself); consistency in decision-making; conflict resolution; greater stakeholder involvement; and greater potential for sustainable development. The new regime must also operate independently of any commercial or land ownership considerations, and provide a forward-looking, strategic approach to marine aggregate dredging.

The long-awaited IMADP is welcomed and, when fully implemented, has considerable potential to meet the needs for a sustainable development framework for the extraction of marine aggregates. Any new policy, however, needs to link closely with existing planning for land-won aggregates, in order to ensure that supply and demand are met in a sustainable manner. Although the Policy relates to South Wales only, it should be remembered that the Bristol Channel and Severn Estuary is a single system and consideration should be given to a unified management policy to address issues that span the boundary between England and Wales. For instance, under the exsisting arangements, it is likely that a GV will be required from both the ODPM and the Assembly for a marine dredging proposal that straddles the boundary between England and Wales.

References

[i] Adcock, A. (2002) *Sand and gravel supply for SE Wales – position statement*. Planning Division, National Assembly for Wales, December 2002.

[ii] Thompson, A. *et al*. (2002) *Comparative impact assessment of land and marine sand and gravel in SE Wales – final report*. Symonds Group Ltd. Report to NAW. Contract 059/2001. May 2002.

[iii] UK Coastal Zone Law Notes, website: http://web.uct.ac.za/depts/pbl/jgibson/iczm/notes/note10.htm page last modified: August 2004

[iv] The Convention for the Protection of the Marine Environment of the North-East Atlantic 1992

[v] Aggregate extraction can also be consented through planning permission and through Harbour Works. For example, marine dredged aggregates are obtained from Bedwin Sands (Severn Estuary) near Newport under the terms of a planning consent granted by the mineral planning authority in 1987 and 1991. These permissions are not time-limited, but are subject to periodic review under the terms of the Environment Act 1995.

[vi] DETR (1998) *Government View: new arrangements for the licensing of minerals dredging.* DETR (now ODPM) / Welsh Office (now WAG).

[vii] WAG (2004) *Interim Marine Aggregates Dredging Policy, South Wales*. Welsh Assembly Government, November 2004.

[viii] *ibid*.

[ix] *ibid*. p.9

[x] *ibid*., p.3-5

[xi] There are key exceptions, including an area of seabed extending about 12 miles east from Avonmouth, the southern half of the bed of the Burry Inlet and Loughor Estuary which are part of the Duke of Beaufort's (Swangrove) Estate.

[xii] ODPM (2004) *A development plan for marine aggregate extraction in England – a scoping study*. Posford Haskoning Ltd., David Tyldesley Associates, CEFAS, & HR Wallingford Ltd. June 2004.

[xiii] Marker, B.R. (2003) *Marine minerals dredging in English waters – policy and consent procedures. European marine sand and gravel – shaping the future*. EMSAG Conference, 20-21 Feb 2003, Delft.

[xiv] *op cit*. ref (xii) (ODPM, 2004).

[xv] Boyes, S. *et al*. (2003) *Deficiencies in the current legislation relevant to nature conservation in the marine environment in the UK*. Report to the JNCC. Institute of Estuarine and Coastal Studies, University of Hull.