

# SAND AND GRAVEL SUPPLY FOR SOUTH EAST WALES – POSITION STATEMENT

## 1. Introduction:

1.1 Aggregates are the basic constituents used in construction and, at the moment, are crucial to society's well-being. They are essential components required for the transport infrastructure, housing, commercial and industrial development, health, education and leisure facilities and many other facets of modern living. The overarching objective in planning for aggregates provision is to ensure supply is managed in a sustainable way so that the best balance between environmental, economic and social considerations is struck, while making sure that the environmental and amenity impacts of any necessary extraction are kept to a level that is acceptable to the determining authority.

1.2 Aggregates are either coarse materials like crushed rock, or finer materials such as sand and gravel, and may be primary, that is, naturally-occurring materials or secondary/recycled products that have been previously used for other purposes. The term "coarse aggregates" usually applies to material exceeding 5mm in particle size that is extracted from a range of consolidated rock types by blasting, crushing and screening operations and includes limestone, igneous rock and sandstone, all of which are present in Wales. Fine aggregates are used for the manufacture of ready mixed concrete, concrete products, building sand, asphalt and macadam for roads and pavements, fill, pipe bedding and horticulture, and can be provided from a number of sources:

- dredging from the sea-bed;
- extraction from land-based sand and gravel pits;
- imports from other regions; and,
- secondary materials resulting from other operations such as crushed rock fines (CRFs) from hard rock quarries or from china clay extraction in South West England.

None of these are without some amenity and environmental consequences and therefore choices have to be made about the comparative impact of each supply option while recognising that such choices will have a very different impact on the areas and local communities in close proximity to the source of supply.

1.3 The pattern of supply of sand and gravel for construction purposes in South East Wales is unique in the UK because of its current and historic dependence on marine dredged resources. There is no active land based extraction of sand and gravel in South East Wales although fine material from crushed rock quarries satisfies part of the demand. However, Minerals Planning Policy Wales and the draft Aggregates Technical Advice Note require safeguarding of potential land-based resources of sand and gravel in South East Wales.

1.4 Dredging for aggregates inevitably disturbs the marine environment. The extent to which it does so and its significance on human activities and environmental

resources depends on a number of factors such as the size, nature or location of the dredging operation. Careful consideration will be given to proposals that might impact adversely on areas that are important for fish spawning, migration routes or as nursery and over-wintering grounds; war graves, wrecks and other remains of archaeological interest; and areas within or adjacent to Sites of Special Scientific Interest (SSSIs), National Parks, Heritage Coast, Areas of Outstanding Natural Beauty (AONBs), European Sites - Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Marine Protected Areas (MPAs), Ramsar Sites, Marine Nature Reserves and other nationally designated conservation areas.

1.5 There is evidence of sand movement between offshore sandbanks within some parts of the Bristol Channel and the beaches of South East Wales. These links are generally weak, however, and do not imply that dredging will inevitably have an impact on the beaches. The exception is Nash Bank where it is clear that dredging cannot continue indefinitely without eventually giving rise to localised impacts on the adjoining coast. No such impacts have yet been detected, and none are anticipated in the short to medium term, but it would be prudent to phase out the current operations here over the next 5 to 10 years.

1.6 There are widely diverse views on the desirability of different options for the future supply of sand and gravel. The Welsh Assembly Government has undertaken a number of pieces of research to enable an objective decision to be taken about the best possible method of supplying fine aggregates to meet the demands of the construction industry. These are summarised in section 2.

1.7 Draft Marine Aggregates Dredging Policy, South Wales (MADP) issued for consultation in May 2001. This set out the Assembly's draft strategic level policy in relation to the extraction of marine sand and gravel for aggregates from the Bristol Channel and Severn Estuary. The purpose of the document was to steer industry towards areas where dredging is likely to be acceptable, thus providing greater certainty to advise long term planning and investment decisions in relation to applications for dredging licences. Over 1200 responses were received to the consultation draft. The majority of responses expressed concern about future dredging at Helwick Bank because of the belief that dredging is causing an impact on coastal areas and loss of sand from beaches on Gower. Many responses supported the proposal to move aggregates dredging to sand resources in deeper waters although this view was not unanimous. This proposal drew significant criticism from the Centre for Environment, Fisheries and Aquaculture Science (CEFAS), and from the Countryside Council for Wales and English Nature. These agencies have subsequently modified their objections provided that further detailed investigations are undertaken in relation to any proposals for dredging in the outer Channel. There was also concern from organisations on the English coast that moving dredging activities away from the Welsh coast could result in adverse impact on the English side of the Channel which is claimed to be even more sensitive to coastal changes.

1.8 Draft Minerals Technical Advice Note (MTAN) (Wales) Aggregates issued for consultation in February 2002. This consultation document sets out detailed advice on the mechanisms for delivering the policy for aggregates extraction by mineral planning authorities and the aggregates industry that is set out in Minerals Planning Policy Wales 2000. The responses to the draft will be considered when the

findings of a research study currently being undertaken for the Welsh Assembly Government to “Establish a methodology for appraising aggregates demand and supply” are available (see paragraphs 2.7 and 2.8).

1.9 The purpose of this position statement, therefore, is to announce how the Welsh Assembly Government intends to guide decisions that need to be taken in relation to marine aggregates in the Bristol Channel and Severn Estuary. Until the policy documents are finalised, decisions relating to the provision of fine aggregates in South East Wales will be made, unless exceptional circumstances require, in accordance with the policy set out in this document.

## **2. Relevant Research studies:**

### ***Bristol Channel Marine Aggregates Study (2000)***

2.1 The Bristol Channel Marine Aggregates Study (the BCMA study), completed in August 2000, provides much of the scientific data upon which the policies in draft MADP were developed. The BCMA study was undertaken by Posford Duvivier Environment and ABP Research and Consultancy for the Assembly, former Department of Environment Transport and the Regions and the Crown Estate which owns the majority of the seabed within the Bristol Channel and Severn Estuary. The study provides the best available database of information available on the resources and constraints relating to marine aggregates and much of the information has been placed onto a digital Geographical Information System (GIS).

### ***South Wales Sand and Gravel: Appraisal of Land-based extraction in South East Wales (September 2000)***

2.2 This independent study was commissioned by the Assembly and undertaken by Symonds to assess the nature and distribution of potential land-based sand and gravel resources, and to provide a preliminary economic and environmental review of a range of other supply options, including primary, secondary, recycled and imported aggregates. The study concluded that there is a need for a robust and co-ordinated system that will:

- identify a preferred strategy for the most suitable pattern of future aggregates provision;
- monitor the environmental impacts of the prevailing supply regime and identify the possible need for change;
- provide a practical mechanism for implementing the preferred strategy if this differs from the current supply regime.

The study recommended that the most urgent need was to safeguard the potential land-based resources that had been identified from unnecessary sterilisation.

### ***Crushed Rock Sand: A Reconnaissance Survey (2000)***

2.3 This study was commissioned by the Assembly and undertaken independently by the British Geological Survey to assess the potential of certain hard rock units in South Wales to produce crushed rock sand. It found that manufactured sand from

hard rock quarrying already partially replaces natural sands in the local construction industry and this pattern is increasing. However, even if crushed rock sands are produced in large quantities there will still be a need for natural sands for supplementation to achieve acceptable workability in concrete.

### ***Comparative Impact Assessment of Land and Marine Sand and Gravel in South East Wales***

2.4 This innovative study was commissioned by the Welsh Assembly Government in 2001 and the final report was published in May 2002. The objective was to provide independent advice to aid policy development in relation to continuing to dredge sand from the Bristol Channel, or beginning the extraction of sand from land-based sources. The research assessed the potential of all options for the supply of fine aggregates to South East Wales.

2.5 In relation to future marine dredging, it recommends that:

- generally dredging should be steered towards the western areas of the Bristol Channel;
- some dredging, in particular from Nash Bank, may in future have an effect on nearby beaches and the wider sediment environment although it states that no significant impacts on the coastline have yet been detected,. Being prudent, however, it advises that dredging from Nash Bank should be phased out over a period of 5 to 10 years. Nash Bank is currently the main source of marine dredged sand in the Bristol Channel (supplying up to 900,00 tonnes each year, or 40% of the material that enters South Wales);
- continued dredging from Helwick and new dredging from Nobel Banks should be viewed favourably subject to further detailed studies.

2.6 In relation to future land-based supply, it recommends that:

- significant areas of potential land-based resources should be safeguarded;
- the Assembly and the South Wales Regional Aggregates Working Party (RAWP) should establish a mechanism for keeping future supply options under review;
- proposals to develop facilities for the import of secondary materials such as crushed rock sand or china clay waste into South East Wales by sea or rail should be considered favourably.

2.7 The Welsh Assembly Government accepts the underlying sustainable principle of conserving resources for future generations that lies behind the above recommendations of the research studies. We require Unitary Development Plans (UDPs) to demonstrate how they have met this principle. The research below will make recommendations on the future role of the RAWPs to assist in this process. We are investigating the practicalities of using secondary materials although its use has limitations and is not a panacea that will change radically the present supply pattern.

### ***Establishing a methodology for appraising aggregates demand and supply (EMAADS)***

2.8 The Assembly have recently commissioned Arup to undertake this research, the objective being to establish a new methodology for estimating demand and supply of aggregates based on sustainable aims in accord with the notions in the draft Minerals Technical Advice Note for Aggregates. It stresses the importance of environmental capacity, and expects to be radical in its approach to questioning the historical patterns of supply which are now being generally called into question.

2.9 The study will be completed by Summer 2003 and its conclusions will be considered by the Assembly in producing the final version of the Aggregates MTAN. It may have implications for the way in which fine aggregates are supplied to the markets of South East Wales.

### **3. Current Pattern of Supply:**

3.1 There is no current land-based extraction of sand and gravel in South East Wales.

3.2 Existing marine aggregates licences in the Bristol Channel from Crown Estate seabed 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; two-thirds of that is landed in South Wales wharves. Virtually all of this dredged material is used in South Wales. In 1997, the date of the latest published survey, (Collation of the Results of the 1997 Aggregates Monitoring (AM) Survey for England and Wales – DETR 2000) only 16,000 tonnes of marine aggregates were exported from South Wales. The results of the AM 2001 survey will be available later this year.

3.3 Marine dredged aggregates are also obtained from Bedwin Sands 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.

### **4. Strategy for sand and gravel supply:**

4.1 As explained in section 2, the Welsh Assembly Government has commissioned a number of studies to provide advice and recommendations about the policy for the future supply of sand and gravel in South East Wales. The monitoring reports and data collected in accordance with conditions attached to the existing licences are carefully assessed to guide future licence applications and renewals of existing licences. The South East coast of Wales is consequently one of the most intensely monitored coastlines in the UK and the options for supply of the material the most carefully researched. This should not be overlooked.

4.2 **While other alternative sources of supply of suitable fine aggregates and more sustainable forms of construction that will use less primary materials will continue to be investigated, 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.**

4.3 The dredging industry requires sufficient access to suitable long-term resources to meet its fluctuating markets and to provide it with sufficient confidence to invest in new ships and wharves. At the same time, it is important that dredging activities do not significantly harm the environment including that of fisheries, or adversely affect habitats that may be sensitive to disturbance and unable to sustain recovery, or have an unacceptable affect on any other legitimate uses of the sea-bed.

4.4 Current evidence suggests that marine dredging for aggregates in South Wales will remain the main source of supply for the foreseeable future, but should adapt gradually in accord with managed change as follows:

- **Nash Bank:** Nash Bank is currently the main source of marine aggregates providing up to 900,000 tonnes of sand and gravel each year. The current licence has been renewed under several short-term interim approvals. It is only right that the aggregates dredging industry should now have greater certainty about the potential for future extraction from Nash Bank. As a result of a careful assessment of research studies and monitoring data it is concluded that there is a need for a gradual decline in extraction from Nash Bank so that dredging is terminated within 5 to 10 years. The current licence for Nash Bank will be renewed and assessed against this approach before February 2003.
- **Nobel Bank (including other Outer Channel sources):** dredging from deeper waters is likely to become the main focus for future dredging in the next 10 years. There are however gaps in information relating to biological data and areas of fisheries importance in the Outer Channel that will need careful investigations over the next year to determine appropriate mitigating measures and identify those areas that should not be dredged for aggregates.
- **Helwick Bank:** the gradual reduction of aggregates dredging from Nash Bank does not necessarily mean that there will be any need to increase the amount of dredging at Helwick Bank. The Assembly recognises that there is significant public interest in future dredging proposals at Helwick Bank and is continuing to assess the conclusions reached in research reports and the monitoring reports received in accord with the licence conditions. A decision on the future of dredging at Helwick is not imminent, as the current licence does not expire until June 2003. It will be concluded therefore next year in relation to the information then available.
- **Severn Estuary Sandbanks:** A cautious approach will be adopted in line with the important designations in the Estuary and the lack of monitoring information currently available.

- ***Culver and other mid Channel Sandbanks:*** These may be suitable to provide sand in the medium term to accommodate the demand for aggregates currently dredged from Nash Bank. Part of the resources with potential for extraction lie in English waters and therefore beyond the control of the Welsh Assembly Government. We will discuss with colleagues in the Office of the Deputy Prime Minister, their policy relating to future applications for a Government View for this area of the Bristol Channel.

4.5 **Alternative sources:** the Welsh Assembly Government will continue to encourage the use of other materials such as crushed rock sand and imported china clay waste or other recycled materials as fine aggregates, although it is not expected that these will make a significant contribution to overall supply to the region in the short term.

4.6 The continued extraction of marine dredged aggregates at present levels of production inevitably has an impact on the overall supply pattern and consequently on the likelihood of proposals coming forward for land based extraction. The Assembly does not wish to encourage such proposals but does consider that finite resources of limited availability should be safeguarded, in accordance with sustainable principles, for use by future generations if then required. The Assembly will consider the issues further in consultation with the Local Planning Authorities and the Regional Aggregates Working Party to determine a regional view about the total demand for sand and gravel resources in the future and the most suitable locations for their recovery.

4.7 **Imported Sand and Gravel:** the Welsh Assembly Government will assess carefully any planning proposals that are referred to it that would facilitate the importation of sand and gravel into south east Wales. Proposals will be considered more favourably if there will be no significant increase in adverse environmental impact in the source area within or outside Wales. Such proposals will be considered more acceptable if:

- Planning permission for extraction has already been approved, and
- Transport of material is by sea or rail rather than by road, and
- Facilities for distribution in Wales are sited in locations that do not have any adverse impact on local communities either through freight handling or onward transportation to markets.

4.8 Work will continue on the research to refine the methodology for appraising aggregates demand and supply with a view to using its findings to inform the Minerals TAN for Aggregates.