

Stephen Eades  
Friends of the Earth  
Marine Information Network (Marinet)  
Allington House  
Allington  
Chippenham  
Wiltshire SN14 6LN

Our Ref: MA 234

Date: 19th May 2008

Dear Mr Eades,

**THE ENVIRONMENTAL IMPACT ASSESSMENT AND NATURAL HABITATS  
(EXTRACTION OF MINERALS BY MARINE DREDGING) (ENGLAND AND NORTHERN  
IRELAND) REGULATIONS 2007**

**DREDGING APPLICATION BY WESTMINSTER GRAVELS LIMITED TO EXTRACT  
COARSE SAND AGGREGATE FROM AREA 457 IN LIVERPOOL BAY**

Please see the attached decision letter and Schedule of Conditions addressed to Westminster Gravels Limited concerning a proposal for extracting up to 18 million tonnes (mt) of coarse sand aggregate from Area 457 over a 15 year period at a rate of up to 1.2 mt per annum. Area 457 is located approximately 25 km from the northwest coast of England and 28 km from the north coast of Wales.

Yours sincerely



**Iain Mathieson**  
**Marine Environment Team**

Mr Ian Taylor  
Westminster Gravels Limited  
Westminster House  
Crompton Way  
Segensworth West  
Fareham  
Hampshire  
PO15 5SS

Our Ref: MA 234

Date: 19<sup>th</sup> May 2008

Dear Mr Taylor,

**THE ENVIRONMENTAL IMPACT ASSESSMENT AND NATURAL HABITATS  
(EXTRACTION OF MINERALS BY MARINE DREDGING) (ENGLAND AND NORTHERN  
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COARSE SAND AGGREGATE FROM AREA 457 IN LIVERPOOL BAY**

1. I am writing further to your initial letter of 22 May 1998 to the then Department of the Environment, Transport & the Regions under the now superseded informal Government View (GV) procedures for a favourable GV on a proposal for the extraction of up to 18 million tonnes (mt) of coarse sand aggregate from Area 457 over a 15 year period at a rate of up to 1.2 mt per annum. Area 457 is located approximately 25 km from the northwest coast of England and 28 km from the north coast of Wales. The application was for 65 km<sup>2</sup> but incorporates exclusion zones around two existing sub-sea oil and gas pipelines giving a net area of 54.67 km<sup>2</sup>.

2. The application area is as shown on the chart at Annex 1 and is defined by the following WGS84 co-ordinates:

	Latitude	Longitude
A	53 40.010	-3 33.347
B	53 40.006	-3 27.959
C	53 38.442	-3 29.604
D	53 38.013	-3 30.106
E	53 38.013	-3 27.830
F	53 36.477	-3 27.830
G	53 35.515	-3 29.259
H	53 35.543	-3 35.152
I	53 37.013	-3 38.079
J	53 38.006	-3 38.080
K	53 38.013	-3 33.813

3. The application is accompanied by an Environmental Statement (ES) which includes a Coastal Impact Study (CIS). A Consultation Report and Supplementary ES were prepared following public consultation by the applicant. Finally, a technical note of sediment transport through Area 457 was produced. The CIS and technical note were prepared by the coastal processes consultant HR Wallingford on behalf of the applicant.

### **Procedural Issues**

4. The Environmental Impact Assessment and Natural Habitats (Extraction of Minerals by Marine Dredging) (England and Northern Ireland) Regulations 2007 (the regulations) came into force on 1 May 2007 and, as you had already submitted an ES to accompany your application for a favourable GV, it will now proceed, by virtue of regulation 31 (1) (a), to be determined by the Secretary of State as a dredging application under the new regulations.

5. In addition, as specified in regulation 31 (2), the Secretary of State has given careful consideration to the amount of publicity already given to this application - as detailed below - and is satisfied that it is substantially the same as that required by regulation 12 and decided that he may now proceed to issue a decision on the matter without any further publicity being required.

### **Public Consultation**

6. In mid 1999 consultation was carried out by the applicant to obtain environmental information on the area and identify key issues. In July 2000 the applicant circulated an Environmental Impact Assessment (EIA) Scoping Report to consultees. Issues raised and the remedial actions suggested to address them were reported in an ES. Under the GV Interim Procedures, in July 2002 the applicant circulated the GV application along with an ES and CIS produced in June 2002, to central government departments, local authorities, environmental bodies and other interested parties on a consultation list provided by the then Department for the Environment, Transport and the Regions. The application and both reports were advertised in Fishing News and the local press and deposited in two local authority offices for public inspection.

7. A Report on Consultation and a Supplementary ES, produced to address concerns raised during the 2002 public consultation exercise, were supplied by the applicant in December 2003 to consultees and others who had previously commented on the application. The consultees were invited by the applicants to respond with their comments directly to the then Office of the Deputy Prime Minister (ODPM).

8. In January 2004, in accordance with the GV Procedures, the then ODPM circulated the same Report on Consultation and Supplementary ES to all those parties who had previously been consulted on the application by the applicants or who had otherwise made representations on it, seeking confirmation as to whether their concerns which they had previously expressed had been satisfactorily resolved.

9. The responses from these parties expressed concern about the potential effects of the proposed dredging on sediment transport within Liverpool Bay and that cumulative and in-combination effects had not been adequately considered; nor had the importance of the protected conservation sites in the bay. The issues were that Area 457 may be a source of sand carried from offshore to supply beaches in the area; the availability of sediment offshore to replenish the extracted sediment; and the potential impact of the proposed dredging operations on the current sand extraction operations closer in-shore and on-shore. The lack of proposed mitigation and monitoring measures was also highlighted.

10. A number of parties initially raised at this stage the issue that the applicant had failed to demonstrate a pressing need for the dredged material. However, the Supplement to the ES explained the identification of a market for high quality marine aggregate in Lancashire and the northwest of England, there being limited reserves in the region of high grade construction sand suitable for general building and the manufacture of concrete. Also, the supply of high grade sand from marine sources would reduce pressure on existing land-based sources and the call for more land-based quarries.

11. In April 2004 an objection was lodged by Merseyside Environmental Advisory Service on behalf of Sefton Council and the Metropolitan Borough of Wirral against the application as they considered that a number of issues which could potentially affect the Wirral coastline had not been adequately addressed.

12. These issues reflected those raised by other parties to the effect that the applicant had failed to adequately demonstrate that there would be no coastal impacts or to quantify any such impacts and had failed to demonstrate that there would not be a likely significant impact on potentially internationally designated sites of nature conservation importance.

13. Further discussions on these issues were held between the parties, with a technical meeting being held in May 2007. A technical note of sediment transport through Area 457 was produced on behalf of the applicant by HR Wallingford and presented to Merseyside Environmental Advisory Service, Sefton Council and the Metropolitan Borough of Wirral. They all considered this further additional information and considered that their outstanding concerns with the application had been satisfactorily addressed and that the proposed dredging would not affect the coastline or sediment supply and, consequently, would not impact on any internationally designated coastal nature conservation sites. Merseyside Environmental Advisory Service, Sefton Council and the Metropolitan Borough of Wirral then withdrew their objections to the application subject to the imposition of monitoring conditions to identify any potential adverse effects of the dredging operations on the marine environment.

14. In addition, BHP Billington Petroleum Limited is the operator of two oil and gas facilities comprising platforms and subsurface pipelines in Liverpool Bay. It raised concerns in relation to risk and safety of the proposed dredging activity with their offshore infrastructure. It requested that primacy be given to the current holders of oil and gas licences; that a ship collision risk assessment should include the potential for ship to platform collision; and for an active exclusion zone to be placed around two sub-sea pipelines. These requests have been accepted by the applicants who have indicated their

agreement to having them reflected in the conditions attached to any Dredging Permission that might be issued by the Secretary of State.

15. The Joint Nature Conservation Committee (JNCC) raised concerns with the ES and Supplementary ES to the effect that areas in Liverpool Bay could qualify for designation as European sites of nature conservation importance under the European 'Birds' and 'Habitats' Directives. Consequently, it requested an assessment of potential areas for possible designation as marine Special Protection Areas (SPAs); a clear demonstration of no significant potential impacts on birds; and that an assessment of cumulative impacts should consider other dredging activities in the area as well as oil and gas developments, offshore wind farms and sea defences. It also requested a reassessment of the possible presence of biogenic reef.

16. Following additional information supplied by the applicant on the proposed marine SPA and on the distribution data of birds, JNCC stated that it was content that no further assessment of potential areas for designation was required. A more in-depth assessment of the cumulative impacts of the proposed dredging was also supplied by the applicant, who also agreed to undertake a pre-dredge survey to investigate the potential of biogenic reef within the proposed dredging area.

17 In August 2006 JNCC confirmed that it had no further outstanding issues with the application as long as the commitments made within the ES and subsequent communications and agreements were followed and that monitoring requirements and mitigation measures were included in the Schedule of Conditions to address issues with biogenic reefs and birds.

## **Consideration**

18. The Secretary of State has carefully considered the application, all the environmental information, including the CIS, ES, Supplementary ES and the technical note of sediment transport through Area 457; the draft schedule of conditions describing proposed monitoring and mitigation measures, as submitted by the applicant; and all the comments of consultees and all other representations received.

19. He has also considered the application in the light of guidance in *Marine Minerals Guidance Note 1: Guidance on the Extraction by Dredging of Sand, Gravel and Other Minerals from the English Seabed* (MMG1) 2002, the *National and Regional Guidelines for Aggregates Provision in England 2001-2016* (2003), *Minerals Policy Statement 1: Planning and Minerals* (MPS1) 2006 and the Aggregates section of the related *Practice Guide* (2006). While MPS1 and its related *Practice Guide* were only published in November 2006, the Secretary of State does not consider that they contain any new evidence or matters of fact which would affect his decision. Paragraph 80 of the MPS1 *Practice Guide* states that MPS1 takes account of the contribution of marine dredged aggregate to national aggregate supply, but does not give comprehensive guidance on it. The relevant policy guidance is *Marine Minerals Guidance Note 1*.

20. The Secretary of State notes that the main concerns of consultees and other parties raised during the consultation stages related to the need for the dredged material, coastal impact, the possible altered transportation of sediment and the related cumulative and in-combination effects with other activities in Liverpool Bay, especially in relation to Offshore Wind Farms. The Secretary of State has, in accordance with the guidance in MMG1, carefully considered the potential environmental impacts of the proposal. He takes the view that the concerns raised by consultees can be satisfactorily addressed by appropriate monitoring and mitigation measures as set out in the Schedule of Conditions attached at Annex 2.

## **Decision**

21. Having carefully taken into account the above considerations and all the information before him, the Secretary of State has concluded that there is a need for the dredged material and that the proposed extraction from Area 457 Liverpool Bay of up to 1.2 mt of coarse sand aggregate per annum over a 15 year period will not affect the coastline and will not significantly affect the marine environment, provided that it is carried out in accordance with conditions to mitigate any potential adverse effects and to provide for adequate monitoring. He, therefore, hereby grants dredging permission for this proposal subject to the schedule of conditions set out in Annex 2 to this letter which include a requirement for him to review the continuation of dredging in the permitted area after 5 and 10 years.

22. The 5 and 10 year reviews will be informed by Substantive Reviews, undertaken on behalf of the operator by acknowledged independent experts in the appropriate fields, of the dredging operations within the permitted dredging area, summarising the results of the monitoring undertaken to date and detailing the environmental effects of the dredging operations and the effectiveness of the conditions imposed on the dredging operations and recommending any variations to the dredging operations that may be necessary to protect the environment. The Secretary of State will seek the views of appropriate consultation bodies on these Substantive Reviews when they are received by him, so that he is able to take their advice into account when deciding whether the dredging operations may continue beyond 5 and 10 years and, if so, on what terms and conditions. The schedule of conditions at Annex 2 also provides that, in the event of any significant adverse environmental impacts being identified in any circumstance, the Secretary of State may propose to vary the terms and conditions of this dredging permission or may propose to revoke it but will only do so following consultation with such of the consultation bodies as he considers necessary.

23. This dredging permission will enure solely for the benefit of the owner of the minerals to be dredged, the Crown Estate, which may, with the prior written agreement of the Secretary of State assign it, in whole or in part, to an operator or operators who may carry out the dredging operations hereby permitted.

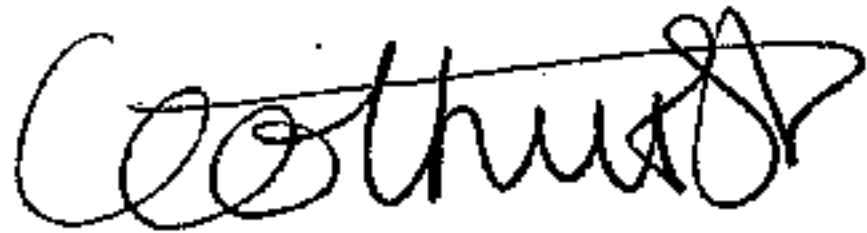
24. You are reminded that under regulation 16 (6), where a permission has been transferred, with the regulator's approval, the transferee must notify the regulator of the

transferred permission and of the date of transfer within 40 days, otherwise it shall cease to have effect.

25. This dredging permission does not convey any additional approval or consent under any other enactment, bye-law, order or regulation which may be required in relation to any operations carried out in accordance with the conditions in Annex 2 to this letter.

26. This decision letter with attachments is being copied to all consultees and all other parties who have otherwise made representations on this application; it will be posted on the Marine and Fisheries Agency (MFA) web-site ([www.mfa.gov.uk](http://www.mfa.gov.uk)); and it will be available, by prior arrangement, for public inspection in the marine minerals dredging application public register maintained at the MFA's offices at 3-8, Whitehall Place, London. SW1A 2HH. Telephone: 020 7270 8646 E-mail: [marineminerals@mfa.gsi.gov.uk](mailto:marineminerals@mfa.gsi.gov.uk)

Yours sincerely

A handwritten signature in black ink, appearing to read 'Laura Tolhurst', with a stylized flourish at the end.

**Laura Tolhurst**  
**Marine Environment Team**

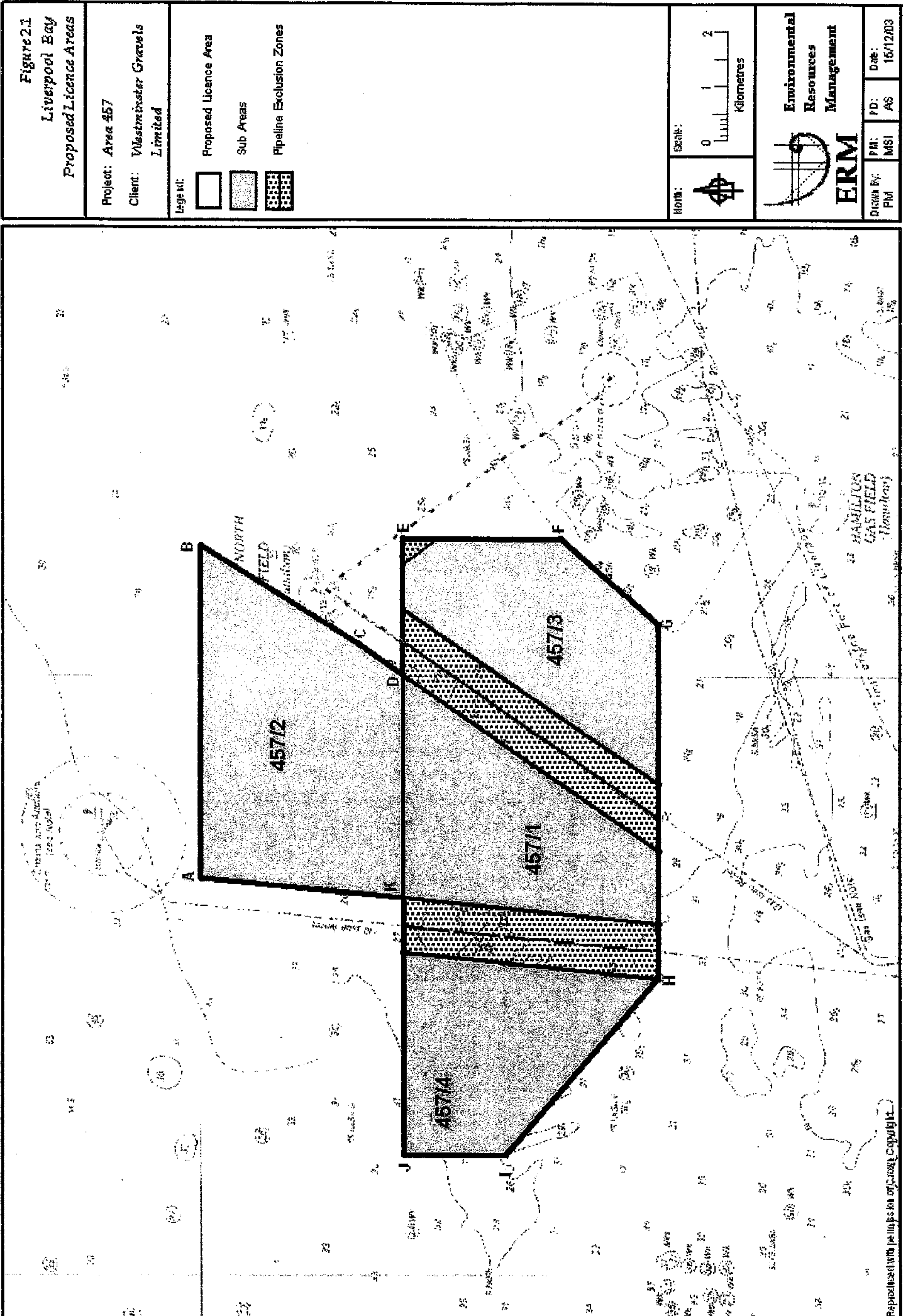


Figure 2.1  
Liverpool Bay  
Proposed Licence Areas

Project: Area 457  
Client: Westminster Gravel  
Limited

- Legend:
- Proposed Licence Area
  - Sub Areas
  - Pipeline Exclusion Zones

North:

Scale:

**ERM**  
Environmental  
Resources  
Management

DRAWN BY: PM	P.M.I.: MSI	P.D.: AS	Date: 16/12/03
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**AREA 457, LIVERPOOL BAY  
DREDGING PERMISSION  
DRAFT SCHEDULE OF CONDITIONS**

Interpretation

In these conditions unless stated otherwise –

"as dredged / wet weight", in relation to aggregate, means in the state in which the aggregate is landed and discharged from a dredging vessel before any processing on land;

"consultation bodies" means the organisations and persons who the Secretary of State considers have an interest in this dredging proposal/operation by reason of their specific environmental responsibilities;

"conversion factor" means the factor which is used to convert between tonnes and m<sup>3</sup>

"date of commencement of dredging" means the date on which the dredging operations commence within the Permission Area as defined below, as notified to the Secretary of State pursuant to Condition 4.2;

"dredging operations" means the dredging operations which are the subject of this Dredging Permission;

"Operator" means the holder of this Dredging Permission relating to dredging within the Permission Area

"Permission Area" means the area which is the subject of this Dredging Permission, which comprises Area 457;

"Point of discharge" means the point at which aggregate is discharged from the dredging vessel

"Quarterly returns" means returns for the periods:  
January, February and March (Quarter 1)  
April, May, June (Quarter 2)  
July, August, September (Quarter 3)  
October, November, December (Quarter 4)

"Secretary of State" means the Secretary of State for the Environment, Food and Rural Affairs;

"Substantive Review" means a document or documents setting out: the results of the monitoring undertaken in accordance with these conditions to date; a description of the environmental effects of the dredging operations to date as recorded by that monitoring; conclusions as to the effectiveness of these conditions; recommendations as to any variations to the dredging operations which may be necessary to protect the environment; and recommendations as to any variations to these conditions which may be necessary to monitor the effects of future dredging.

## **1. General**

1.1 All the conditions herein relate to Area 457 Liverpool Bay.

*Reason: to monitor and mitigate the effects of the dredging covered in this Dredging Permission.*

## **2. Quantity**

2.1 Subject to Condition 17.3 and 17.5, the total quantity of material to be extracted during the period covered by this Dredging Permission shall not exceed 18 million tonnes.

*Reason: to protect the marine environment.*

## **3. Extraction Rate**

3.1 Subject to Condition 2.1 the amount of material extracted shall not exceed 1.2 million tonnes per annum. If less than the permitted maximum volume of material is dredged in a given year, tonnage rollover is not permitted.

*Reason: To comply with the submitted application including the environmental statement and the further environmental information submitted with the application, and in order to protect the marine environment.*

3.2 The Operator shall by 28<sup>th</sup> February on an annual basis for the duration of the permission:

- (i) provide quarterly returns to the Secretary of State in writing of the amount of material landed from Area 457 at the point of discharge, in both tonnes and m<sup>3</sup> (wet weight / as dredged) for the preceding calendar year;
- (ii) provide the conversion factor applied.

*Reason: to ensure that the Secretary of State is kept informed, in a timely manner, of the dredging activity associated with this permission.*

## **4. Duration**

4.1 The dredging operations within the area must be commenced within 24 months of the date of this Dredging Permission otherwise it shall cease to be of any effect.

*Reason: To prevent the accumulation of unimplemented Dredging Permissions.*

4.2 The Operator shall notify the Secretary of State in writing of the date on which dredging operations commenced within the Permission area within 7 days of them commencing.

*Reason: To facilitate the effective monitoring of the dredging.*

4.3 Subject to consideration of Condition 17.3 and 17.5 this Dredging Permission is valid for a period of 15 years from the date of commencement of dredging.

Reason: to protect the marine environment.

## 5. Location of Dredging

5.1 Dredging shall be restricted to the area defined by the following WGS84 co-ordinates and shown on the chart at Annex 1:

	Latitude	Longitude
A	53 40.010	-3 33.347
B	53 40.006	-3 27.959
C	53 38.442	-3 29.604
D	53 38.013	-3 30.106
E	53 38.013	-3 27.830
F	53 36.477	-3 27.830
G	53 35.515	-3 29.259
H	53 35.543	-3 35.152
I	53 37.013	-3 38.079
J	53 38.006	-3 38.080
K	53 38.013	-3 33.813

Reason: To protect the marine environment.

## 6. Wrecks and Archaeology

6.1 The Operator shall at all times observe and comply with the Joint Nautical Archaeological Policy Committee (JNAPC) Code of Practice for Seabed Developers, the Guidance Note *Marine Aggregate Dredging and the Historic Environment*, issued by the British Marine Aggregate Producers Association and English Heritage in April 2003, the related *Protocol for Reporting Finds of Archaeological Interest*, issued in August 2005 and any subsequent replacements of those documents.

Reason: to protect wrecks and archaeology.

6.2 The Operator shall comply with the requirements set out by *the Protections of Wrecks Act 1973* and the *Merchant Shipping Act 1995* regarding the reporting and ownership of wrecks and notification of the Receiver of Wrecks.

6.3 An exclusion zone of 100m radius where no dredging shall take place is to be observed around the two known wreck sites at co-ordinates 53 36.813N -3 28.844E and 53 36.013N -3 29.228E in sub-area 457/3, and around any other sites of archaeological interest that may be discovered within the area.

Reason for Conditions 6.2 and 6.3: To protect known wreck sites.

6.4 Should any previously unreported wrecks become identified within the boundaries of the Permission area during either monitoring or dredging, precautionary dredging exclusion zones shall be instituted around them. Any new zones shall be

defined in consultation with an independent marine archaeological consultant and English Heritage and notified to the Secretary of State. Exclusion zones may be reviewed by the Operator in the light of archaeological assessment of existing and new geophysical data. Any revision of the exclusion zones must be approved in writing by the Secretary of State. Copies of any approved revision of the zones shall be supplied by the Operator to English Heritage before the new zones come into force.

Reason: to protect wrecks and items of archaeological importance.

6.5 In the event that features of archaeological interest are encountered in the course of dredging, the Operator shall comply with the provisions of the *Protocol for Reporting Finds of Archaeological Interest* referred to in Condition 6.1 above, and any subsequent replacements of that protocol. The Operator shall notify regional archaeologists, English Heritage and the Secretary of State of the find. The Secretary of State may, in the light of such notification, seek to vary the terms or conditions of the Dredging Permission, but will only do so following consultation with such of the consultation bodies as he considers necessary.

Reason: to protect areas of archaeological interest.

6.6 Any items of ship-borne or aircraft debris or non-wreck material identified as being of archaeological interest and retrieved from dredged material as it is processed ashore shall be stabilised, recorded and reported by the Operator under the formal protocol referred to in Condition 6.1 above.

Reason: to protect items of archaeological interest

## **7. Navigation**

7.1 Any vessels used in the dredging operations shall at all times exhibit sounds and signals in accordance with the International Regulations for the Prevention of Collisions at Sea 1972 as amended.

7.2 No dredging shall take place until the Operator has obtained information from Trinity House on navigational marks in the area. Damage shall not be caused to such marks nor shall they be removed. The Operator shall be liable for any expenses arising from damage to or movement of such marks.

7.3 No dredging shall take place until the Operator has obtained any consent necessary under Section 34 of the Coast Protection Act 1949, to which the Marine Works (Environmental Impact Assessment) Regulations 2007 may apply..

Reason for Conditions 7.1 to 7.3: to maintain safe navigation at sea, in the interests of protecting the marine environment.

7.4 The Operator shall ensure that:

(i) all dredging vessels are equipped with and use Automatic Identification System (AIS) transponders and electronic charting systems type approved by an organisation recognised by the Maritime and Coastguard Agency (MCA) and fitted with the "wheelmark" symbol, as required under the EU Marine Equipment Directive;

Reason: to enable identification of the vessel to other vessels and oil and gas platforms.

(ii) All dredging vessels operating in the Permission area shall be fitted with Differential Global Positioning System (DGPS) that allow accurate positioning of the vessel;

Reason: to target the resource accurately and avoid interference with oil and gas structures.

(iii) all dredging vessels to be equipped with the appropriate navigation and warning equipment including lights, fog warnings, radar and VHF radio;

(iv) all dredging vessels adhere to the Convention on the International Regulations for Preventing Collisions at Sea 1972, as amended (COLREGS) at all times;

Reason for Conditions 7.4 iii and iv: to prevent collision, and associated pollution, with other vessels and oil and gas platforms, in the interests of protecting the marine environment.

## **8. Working Arrangements**

8.1 All dredgers operating in the Permission Area shall be fitted with an Electronic Monitoring System approved by the Marine and Fisheries Agency.

Reason: to facilitate the effective monitoring of the dredging.

### **Vessel Access to dredging area**

8.2 Dredging vessels transiting to and from the Permission Area shall use specific vessel shipping lanes.

Reason: to avoid disturbance of common scoter and red-throated divers.

### **Dredging Method**

8.3 All dredging in the Permission Area shall be carried out by Trailer Hopper Suction Dredging. Other dredging techniques shall only be carried out with the prior written agreement of the Secretary of State.

Reason: to comply with the submitted application and to protect the marine environment.

### **Condition of the Seabed**

8.4 The Operator shall ensure that when dredging operations have ceased within an Active Dredging Zone a minimum of 0.5m of aggregate resource remains as substrate.

8.5 The Operator shall ensure that the seabed is left in a similar condition at the cessation of dredging to that which existed before dredging commenced.

*Reason for Conditions 8.4 and 8.5: to protect the marine environment and to facilitate the environmental recovery of the seabed once dredging has ceased.*

### **On-Board Screening**

8.6 Only on-board screening of dredged material to remove oversized shelly and gravel fragments may be carried out in the Permission area. Loading times and screening should be minimized, and where practicable, cargoes will be loaded without screening.

*Reason: to protect the marine environment and to minimize cumulative and in-combination effects.*

### **Zoning arrangements**

8.7 Dredging shall be restricted to 3 zones not exceeding 10 km<sup>2</sup> in total at any one time, with only one dredger in each zone operating at any one time. Two zones shall be active with a third 'call-off' zone accessed on a project-by-project basis only when larger volumes of material are required. No single dredging zone shall be larger than 5 km<sup>2</sup>.

*Reason: to minimise any cumulative and in-combination effects.*

8.8 The co-ordinates of the Active Dredging Zones will be identified and the first Active Dredging Zone to be dredged will be selected by the Operator after the pre-dredge surveys required by Conditions 13.4 and 13.5 and prior to the commencement of full-scale dredging within the Permission area, in consultation with the Centre for Environment Fisheries and Aquaculture Science, English Heritage, Natural England, the Joint Nature Conservation Committee, the Environment Agency, the MFA's local District Inspector and relevant fishing organisations, as advised by the Marine and Fisheries Agency's local District Inspector. The co-ordinates of the Active Dredging Zones and the details of the first Active Dredging Zone to be dredged will be submitted to the Secretary of State in writing for his approval. No dredging shall take place until the Secretary of State has approved in writing the co-ordinates of the Active Dredging Zones and the selection of the first Active Dredge Zone to be dredged and until the relevant period of notice has been given, in accordance with Condition 8.9.

*Reason: to ensure that dredging takes place in an orderly and programmed manner to protect the marine environment.*

8.9 The Operator shall notify in writing the Centre for Environment Fisheries and Aquaculture Science, English Heritage, Natural England, the Joint Nature Conservation Committee, the Environment Agency, the MFA's local District Inspector and relevant fishing organisations, as advised by the Marine and Fisheries Agency's local District Inspector, of the co-ordinates of the first Active Dredging Zones to be dredged as soon as possible after these have been approved by the Secretary of State and not later than 6 weeks before commencement of dredging. The Operator shall notify the same bodies of the co-ordinates of all Active Dredging Zones subsequently approved by the Secretary of State not later than 6 weeks before the commencement of dredging in those Zones.

## **Required notice before moving between zones**

8.10 The Operator shall give at least 3 months notice in writing to the Secretary of State, the Centre for Environment Fisheries and Aquaculture Science, English Heritage, Natural England, the Joint Nature Conservation Committee, the Environment Agency and to relevant fishing organisations, as advised by the Marine and Fisheries Agency's local District Inspector, of their intention to cease dredging in an Active Dredging Zone and to commence dredging in another.

8.11 For each project with the intention to dredge aggregate within the third 'call-off' zone, the Operator shall give at least 6 weeks notice in writing to the Secretary of State, the Centre for Environment Fisheries and Aquaculture Science, English Heritage, Natural England, the Joint Nature Conservation Committee and the Environment Agency and to relevant fishing organisations, as advised by the Marine and Fisheries Agency's local District Inspector.. Any such notification shall include details of the predicted tonnage and the likely duration of the dredging activity.

*Reason for Conditions 8.9 to 8.11: to facilitate the effective monitoring of the dredging and to enable local fishermen to avoid dredging operations in the interests of navigation safety, and (consequently) the protection of the marine environment.*

## **9. Oil and Gas Infrastructure**

9.1 An exclusion zone of 500m where no dredging shall take place will be observed either side of the existing subsea oil and gas pipelines. These zones are identified by the following WGS84 coordinates:

### Exclusion Zone 1

Latitude	Longitude
53 38.012	-3 34.750
53 38.013	-3 33.813
53 35.539	-3 34.237
53 35.543	-3 35.152

### Exclusion Zone 2

Latitude	Longitude
53 38.013	-3 30.106
53 38.013	-3 29.000
53 35.529	-3 31.870
53 35.533	-3 32.990

### Exclusion Zone 3

Latitude	Longitude
53 38.013	-3 28.249
53 38.013	-3 27.830
53 37.675	-3 27.830

9.2 An exclusion zone of 500m where no dredging shall take place will be observed around the Hamilton North and Douglas platforms and wellheads.

9.3 An exclusion zone of 500m where no dredging shall take place must be observed around any new temporary or permanent infrastructure such as drilling rigs, pipelines, platforms and well heads.

9.4 The Operator shall ensure that International Safety Management (ISM) procedures for dealing with potential collision and pollution scenarios, including Emergency Response Plans, are in place.

*Reason for Conditions 9.1 to 9.4: to reduce potential impacts on oil and gas industry infrastructure and (consequently) to protect the marine environment.*

## **10. Liaison**

10.1 The Operator shall ensure that communication with the fishing industry concerning proposed dredging operations occurs no later than 6 weeks before the commencement of dredging within any dredging area. This shall be carried out with the assistance of the Marine and Fisheries Agency's local District Inspector.

10.2 The Operator is to maintain ongoing liaison with the offshore oil and gas operators active in the area.

*Reason for 10.1 and 10.2: to enable local fishermen and oil and gas operators to avoid dredging operations in the interests of navigation safety and (consequently) the protection of the marine environment.*

## **11. Monitoring Programme**

11.1 A programme of monitoring shall be undertaken at the Operators' expense in accordance with Conditions 12, 13, 14 and 15.

11.2 The Operator shall appoint independent experts in the appropriate field to undertake the monitoring surveys.

11.3 Any changes to the monitoring programme must be approved by the Secretary of State in writing following the Operator consulting with the Centre for Environment Fisheries and Aquaculture Science, English Heritage, Natural England, the Joint Nature Conservation Committee, the Environment Agency and the Marine and Fisheries Agency's local District Inspector. Copies of the approved specification will be provided to the consultation bodies listed in Condition 16.1(iii) by the Operator within 7 days of approval having been received. The programme is outlined in the three stages in Conditions 13, 14 and 15 below.

*Reason for Conditions 11.1 to 11.3: to facilitate the effective monitoring of the effects of dredging.*

## **12. Annual Monitoring Report Fees**

12.1 An annual fee, as determined by the Secretary of State, shall be paid for considering monitoring reports prepared in respect of the pre-dredge, operational and post-dredge periods. The first annual fee for considering monitoring reports is payable when the first monitoring report is submitted in accordance with the conditions attached to the Dredging Permission and the fee will then be payable annually on that day until the last post-dredge monitoring report is submitted or otherwise as agreed by the Secretary of State.

*Reason : to recover the cost of considering pre-dredge, operational and post-dredge monitoring reports in accordance with conditions imposed under regulation 13(6) of the Environmental Impact Assessment and Natural Habitats (Extraction of Minerals by Marine Dredging) (England and Northern Ireland) Regulations 2007.*

## **13. Pre-Dredge Monitoring Programme**

13.1 The Operator shall ensure that:

(i) a specification for a programme of pre-dredge monitoring is drawn up in consultation with the Centre for Environment, Fisheries and Aquaculture Science, Natural England, the Joint Nature Conservation Committee, the Environment Agency, English Heritage the MFA's local District Inspector and other relevant bodies, as advised by the Secretary of State;

(ii) the agreed specification shall be submitted to the Secretary of State for his approval following consultation with those bodies outlined in Condition 13 (i);

(iii) copies of the approved specification shall be provided to the consultation bodies mentioned in Condition 16.1(iii) by the Operator within 7 days of approval having been received in writing from the Secretary of State;

(iv) the specification is implemented by the Operator as approved in writing by the Secretary of State, using acknowledged independent experts in the appropriate fields.

13.2 No dredging shall take place until the pre-dredge monitoring programme specification has been approved in writing by the Secretary of State.

13.3 Any changes to the approved monitoring scheme must be:

(i) approved in writing by the Secretary of State;

(ii) copied to the consultation bodies mentioned in Condition 16.1(iii) by the Operator within 7 days of approval having been received;

(ii) implemented as approved.

13.4 The programme of monitoring required by Condition 13.1(i) shall include provision for the following surveys to cover the Permission Area and reference

sites/surrounding areas as specified below. Such surveys shall include benthic ecology, conservation habitats and species, seabed sediment analysis and seismic survey.

Specifically, but not exclusively, the specifications for such surveys should include the following detail:

(i) Benthic ecology. A benthic survey of the Permission area and beyond its limits will be undertaken prior to the commencement of dredging. The survey shall be developed in consultation with the Centre for Environment, Fisheries and Aquaculture Science, Natural England, the Joint Nature Conservation Committee, the Environment Agency and contain information relating to species composition, community structure and biomass of invertebrate communities within and adjacent to the Permission area. In addition to the grab sampling, beam trawl sampling may also be undertaken in order to qualitatively assess epibenthic species likely to occur in the Permission Area and its vicinity.

(ii) Conservation habitats and species. A focused, conservation review of side-scan sonar and swath data will be undertaken, identifying any significant areas exhibiting differences in reflectivity / texture which will be correlated with existing sample data. The specifications of such surveys shall be agreed with Natural England and the Joint Nature Conservation Committee and confirmed by the Secretary of State in writing. As part of the baseline surveys of the Permission Area, all potential conservation features identified will be investigated using techniques as advised by Natural England / the Joint Nature Conservation Committee to determine their conservation significance. The Operator shall provide a report of these investigations to Natural England and the Joint Nature Conservation Committee. In the event that the survey identifies any habitats of conservation significance, the Secretary of State may propose to vary the terms and conditions to which this permission is subject or may propose to withdraw the permission, but will only do so following consultation with such of the consultation bodies as he sees necessary.

(iii) Seabed sediment analysis. Sediment samples will be collected during pre-dredge baseline survey to provide further details of sediment chemical contamination levels. In addition, a grab sampling survey of the Permission area and surroundings will be undertaken to provide samples of particle size analysis. This may be undertaken in conjunction with the benthic survey.

(iv) Vibrocore and seismic techniques. Seismic profiling will be undertaken at a maximum line spacing of 1000m and 2000m tie lines and will cover the Permission Area. Data will be interpreted to confirm the limits and thickness of the sand and gravel deposits in the Permission Area.

13.5 In addition, the following surveys shall be carried out over the Permission Area, and beyond its limits, to a specification agreed with the Centre for Environment, Fisheries and Aquaculture Science, the Joint Nature Conservation Committee, Natural England and the Environment Agency.

(i) High resolution sidescan sonar (ca 500 kHz). A 100% seabed coverage sidescan sonar survey will be undertaken.

(ii) Bathymetry. Bathymetry of the seabed is to be mapped for an area at least 500m around the outside of the permission area and a 1km corridor along tidal flow. A topographic map of the seabed covering the Permission and surrounding Areas is to be produced and compared with existing bathymetric charts of the area. The results of the survey are to be taken into account when deciding on zoning arrangements.

(iii) Near-bed sediment sampling. Near-bed suspended load samples shall be collected within the lowest part of the water column, i.e. within 1 m of the seabed, and the concentration particle size distributions of the sediments collected established. Such sampling should be repeated at the times of peak ebb and flood currents on a spring tide close to the landward and seaward boundaries of each zone in which dredging is planned to take place. The near-bed sediment sampling should be practicable and subject to the availability of suitable and established methodology and equipment.

13.6 The Operator shall notify those consultation bodies mentioned in Condition 16.1(iii) in writing of the date and location of the pre-dredge surveys required by Conditions 13.4 and 13.5, not later than 6 weeks before the surveys are carried out.

13.7 The Operator shall ensure that at the earliest opportunity and no later than 6 months from the completion of the pre-dredge surveys required by Condition 13.4 and 13.5:

(i) a detailed report on the surveys required by Condition 13.4 and 13.5 is prepared by acknowledged independent experts in the appropriate fields;

(ii) the report includes evidence of consideration and development of suitable "indicators of change", drawn up in consultation with the Centre for Environment, Fisheries and Aquaculture Science, Natural England, the Joint Nature Conservation Committee and the Environment Agency;

(iii) copies of the report are provided to the consultation bodies mentioned in 16.1(iii) and to BHP Billington Petroleum Limited and to the local coastal authorities of Sefton Council and the Metropolitan Borough of Wirral within 6 months of the completion of the final survey;

*Reason for Conditions 13.1 to 13.7: to provide baseline data necessary for the effective monitoring of the effects of dredging, to evaluate the rates of accumulation of seabed sediments and for the identification of any exclusion zones required under this schedule of conditions.*

## **14. Operational Stage Monitoring Programme**

### **14.1 Annual Electronic Monitoring System (EMS) Fee**

(i) The Operator shall pay an annual fee, as determined by the Secretary of State, for interpreting and assessing the EMS data. The first annual fee is payable on the day on which dredging commences under the Dredging Permission and the fee is then

payable annually on that day until dredging under the Dredging Permission ceases or otherwise as agreed by the Secretary of State.

*Reason : to recover the cost of interpreting and assessing the results of monitoring Dredging Permissions in accordance with conditions imposed under regulation 13(6) of the Environmental Impact Assessment and Natural Habitats (Extraction of Minerals by Marine Dredging) (England and Northern Ireland) Regulations 2007.*

## **General**

14.2 The Operator shall ensure that:

(i) a specification for a programme of operational monitoring is drawn up in consultation with the Centre for Environment, Fisheries and Aquaculture Science, Natural England, the Joint Nature Conservation Committee, the Environment Agency, English Heritage the MFA's local District Inspector and other relevant bodies, as advised by the Secretary of State, following the analysis of the pre-dredge survey results and the preparation of the report on the surveys required under Condition 13.7(i). The specification shall include a timetable for the individual monitoring surveys which are to be undertaken during the first 5 years from the commencement of dredging within the Permission area;

The operational monitoring will be based on dredging intensity and will be designed in conjunction with the zoning requirements specified in Condition 8.7, the amount of material dredged in the previous period and planned for the forthcoming period and the predicted impact zone from all such activities. Monitoring will also be informed by the planned dredging activity within each 5 year substantive review periods.

(ii) the agreed specification is submitted to the Secretary of State for approval no later than 6 weeks before the monitoring programme is due to start;

(iii) the Operator shall ensure that the programme of monitoring is implemented in accordance with the approved specification using acknowledged independent experts in the appropriate fields and that the programme is maintained throughout the period in which dredging is carried out.

(iv) copies of the approved specification are provided to the consultation bodies referred to in Condition 16.1(ii) within 7 days of approval having been received.

14.3 Any changes to the approved monitoring scheme must be:

(i) agreed by the relevant bodies mentioned in Condition 14.2(i);

(ii) submitted to the Secretary of State for approval no later than 6 weeks before the monitoring programme is due to start;

(ii) copied to the consultation bodies listed in Condition 16.1(iii) within 7 days of approval having been received; and

(iii) implemented as approved.

14.4 Unless otherwise stated, reports of operational stage monitoring shall provide a comparison with pre-dredge monitoring data, be prepared by acknowledged independent experts in the appropriate fields and submitted by the Operator to those consultation bodies referred to in Condition 16.1(iii) within 6 months of completion of monitoring surveys.

14.5 Where monitoring indicates that the dredging activities are having an adverse affect on the marine environment, the Secretary of State will consider what mitigation measures are necessary. Dredging operations may be suspended whilst further investigations are made.

14.6 The programme of monitoring required by Condition 14.2(i) shall be based on the dredged areas within the active zones defined in Condition 14.2(i) and appropriate reference sites/surrounding areas used for the pre-dredge surveys required by Condition 13.1(i), or such areas as are described below. The programme will be reviewed in the Substantive Reviews required by Condition 17. The Secretary of State may vary the monitoring programme following such Reviews, but will only do so following consultation with such of the consultation bodies as he sees necessary. The programme shall initially contain the following surveys as specified in Conditions 14.7 to 14.22.

*Reason for Conditions 14.2 to 14.6: to secure the effective environmental monitoring of the dredging in the interests of protecting the marine environment and assess whether the dredging operations are consistent to EIA predictions.*

### **Bathymetry**

14.7 A bathymetric survey of the dredged areas within the active zones defined in Condition 14.2 (i) and buffer areas is carried out annually. The resulting data will be compared with previous data sets to assess any significant changes to the seabed, i.e. bed changes beyond those which might reasonably be expected due to natural hydrodynamic processes. The results will be used to review zoning arrangements.

14.8 A copy of the bathymetric report shall be forwarded by the Operator to those consultation bodies mentioned in condition 16.1(iii) and to BHP Billiton Petroleum Limited, the local coastal authorities of Sefton Council and the Metropolitan Borough of Wirral and the United Kingdom Hydrographic Office.

### **Sidescan Sonar**

14.9 Sidescan sonar and swath surveys shall be carried out by the Operator in conjunction with bathymetric surveys in year 4 and year 9 to inform the five yearly reviews. The scope and extent of these surveys will be determined with reference to Section 14.2 (i).

14.10 A report shall be produced by the Operator, detailing any change in the seabed sediments and transport processes. The report shall be provided to the consultation

bodies mentioned in Condition 16.1(iii) and to BHP Billington Petroleum Limited, the local coastal authorities of Sefton Council and the Metropolitan Borough of Wirral.

*Reason for Conditions 14.7 to 14.10: to secure effective environmental monitoring, assess the rates of accretion and erosion, monitor any significant changes to the seabed topography and sandwave stability, modify the dredging strategy / zoning where appropriate and reduce environmental impact in the area.*

### **Benthic**

14.11 A benthic survey shall be undertaken by the Operator every two years. However, the Operator may be required by the Secretary of State to undertake additional surveys in order to provide further data to address concerns that might arise. The specification and scope shall be agreed in accordance with Section 14.2 with the Centre for Environment, Fisheries and Aquaculture Science, Natural England, the Joint Nature Conservation Committee, the Environment Agency and submitted for approval by the Secretary of State. The Operator shall provide a report of the findings of each benthic survey to the consultation bodies referred to in Condition 16.1(iii).

*Reason: to secure the effective environmental monitoring of the dredging in the interests of protecting the marine environment.*

### **Conservation habitats and species**

14.12 The status of any habitats and species of conservation significance identified in the pre-dredge assessment under Condition 13.4 will be reviewed by the Operator every two years and will be reported to the Secretary of State, Natural England and the Joint Nature Conservation Committee.

*Reason: to protect the marine environment*

### **Seabed sediment sampling**

14.13 Particle Size Distribution of seabed sediments to be collected at the same time and locations as benthic sampling survey stations and the results included as part of the Benthic report.

*Reason for Conditions 14.13 to 14.14: to secure the effective environmental monitoring of the dredging in the interests of protecting the marine environment.*

### **Archaeology**

14.14 Sidescan sonar data collected as part of Section and 13.5(i) and 14.9 shall be reviewed for potential archaeological significance by the Operator and reported to the Secretary of State and English Heritage.

*Reason: to protect wrecks, marine war graves and areas of archaeological interest.*

### **Pipeline Survey**

14.15 During dredging, the edge co-ordinates of the dredged area shall be carefully recorded. A survey of the edges of dredged areas adjacent to the pipelines, and the

seabed for at least 200m towards the pipelines, shall be carried out in the spring/summer following the dredging activity and the results compared with the original mapping.

14.16 If it is clear that changes have occurred to the seabed right across the 200m width, the survey shall be extended at least as far as the pipelines, or to include the part of the seabed that has undergone the change in question, whichever is the greater.

14.17 The results shall be forwarded to BHP Billiton Petroleum Limited within 3 months of the survey. If there is any trend for the dredged areas to cause significant channeling, or in any other way to threaten the integrity of Liverpool Bay pipelines, dredging in that area shall cease and remedial measures will be agreed in consultation with BHP Billiton Petroleum Limited, submitted for approval by the Secretary of State and implemented as approved.

14.18 If the results indicate any significant change, even if that change does not immediately threaten the pipelines, the area shall be surveyed annually until stability of the seabed can be demonstrated.

14.19 The repeatability of the surveys shall be better than  $\pm 0.2$  m vertically, referenced from a common surface and  $\pm 2$  m horizontally.

### **Reporting on Pipeline Surveys**

14.21 Where two or more surveys are to be compared, bathymetric charts shall be prepared and superimposed on one another, each survey being identified by a different colour. At critical locations, especially if change has occurred in undredged areas, cross sectional profiles shall be prepared comparing the results of the two surveys. One end of these sections shall always be within the dredged area.

14.22 Scales of charts shall be 1:2500 horizontally and 1:100 vertically, or to larger scales if these show insufficient detail. Within 3 months of completion of the survey, copies of the completed comparison surveys shall be submitted to the Secretary of State and two paper copies and an electronic copy (in CD or DVD format) shall be provided to BHP Billiton Petroleum Limited.

*Reason for Conditions 14.16 to 14.22: to observe any direct threat to pipeline integrity, particularly the development of exposures and spans, and ensure that dredging in Area 457 has no impact on the integrity of nearby pipelines.*

## **15. Post-dredge Monitoring**

15.1 The Operator shall ensure that:

(i) a specification for a programme of post-dredge monitoring is drawn up in consultation with the Centre for Environment, Fisheries and Aquaculture Science, Natural England, the Joint Nature Conservation Committee, the Environment Agency, English Heritage, the MFA's local District Inspector and other relevant bodies, as advised by the Secretary of State;

- (ii) the agreed specification is submitted to the Secretary of State for written approval;
- (iii) the programme of monitoring is implemented in accordance with the specification as approved in writing by the Secretary of State, and using acknowledged independent experts in the appropriate fields, within 12 months from the cessation of the dredging within the Permission Area;
- (iv) any changes to the monitoring programme as approved by the Secretary of State are only implemented with the prior written approval of the Secretary of State;
- (v) copies of the approved specification, and of any approved changes to it, are provided to the consultation bodies referred to in Condition 16.1(iii) within 7 days of approval having been received.

15.2 The programme of monitoring required by Condition 15.1(i) shall include provision for the following surveys to cover the dredged areas and reference sites:

- (i) benthic ecology. A benthic survey shall be carried out in accordance with the specification for the pre-dredge benthic survey under Condition 13.4. The scale and rate of recovery of benthic communities will be assessed, based on comparison of the baseline, operational and post dredge benthic surveys outlined in these Conditions;
- (ii) sidescan sonar.

15.3 In addition, the following surveys shall be carried out over the dredged areas and a 500m strip around its perimeter:

- (i) bathymetry and
- (ii) seabed sediment sampling.

15.4 The Operator shall ensure that:

- (i) monitoring results are used to produce a report describing the condition of the seabed following the cessation of dredging within the Permission Area. The report shall also include an assessment of the need for further post-dredge monitoring of the Permission Area; and recommendations as to what remedial action, if any, needs to be taken to ensure that the seabed is left in a condition similar to that which existed before dredging commenced;
- (ii) copies of the report are provided to the consultation bodies referred to in Condition 16.1(iii) within 6 months of the completion of the fieldwork;
- (iii) within 3 months from the date of submission of the report required by Condition 15.4(i), a scheme for any remedial work recommended in the report or by the Secretary of State shall be drawn up in consultation with the Centre for Environment, Fisheries and Aquaculture Science, Natural England, the Joint Nature Conservation Committee, the Environment Agency, English Heritage and other relevant bodies, as advised by the Secretary of State and submitted to the Secretary of State for approval. Copies of the approved scheme shall be provided to the consultation bodies referred to in Condition

16.1(ii) by the Operator within 7 days of approval having been received. The scheme shall be implemented as approved. If remedial work is considered to be necessary, the Operator shall be responsible for undertaking such work only in respect of those unacceptable adverse effects which are directly attributable to dredging activities undertaken by the Operator in the Permission Area.

*Reason for Conditions 15.1 to 15.4: to assess the effectiveness of these Conditions in preventing significant adverse environmental effects and to confirm or otherwise the predictions made in the environmental statement and the further environmental information submitted with the application.*

## **16. Preparation, Control and Distribution of Reports**

16.1 The Operator shall ensure that:

(i) detailed reports on the results of the monitoring required by Conditions 13, 14 and 15 are prepared by acknowledged independent experts in the appropriate fields;

(ii) under this Schedule of Conditions, where agreement by consultation bodies is required, the Operator shall provide documentary evidence of the agreement of those consultation bodies as part of any submission seeking the approval of the Secretary of State.

(iii) copies of all the approved specifications, all reports and the results of all surveys and monitoring required by these Conditions are provided to the Secretary of State, the Centre for Environment, Fisheries and Aquaculture Science (four copies), Natural England, the Joint Nature Conservation Committee, the Environment Agency, English Heritage and the MFA's local District Inspector, and are made available, on request, to all other bodies consulted on the application, within 6 months of the completion of the fieldwork unless otherwise specified in the Conditions.

*Reason: to ensure that the Secretary of State and other consultation bodies are kept informed in a timely manner of the environmental effects of the dredging.*

## **17. REVIEWS OF COMPLIANCE, MONITORING AND SUBSTANTIVE REVIEWS OF THE DREDGING OPERATIONS**

17.1 The Operator shall produce a report on compliance with the Conditions to which this Dredging Permission is subject. The report shall include a summary of the monitoring and details of any screening activities undertaken during the period in question and describe the spatial extent of direct and indirect impacts associated with dredging activities within the Permission Area. The substantive review shall also include a resources assessment based on bathymetry and volume estimates to ensure that a minimum of 0.5 m of sand is retained across the dredging area. The Operator shall submit copies of it to the Secretary of State and those consultation bodies listed in Condition 16.1(iii) within 6 months of the end of each 12 month period following the date of commencement of dredging.

*Reason: to ensure that the Secretary of State and other consultation bodies are kept informed in a timely manner of the Operators' compliance with the Conditions to which this Dredging Permission is subject.*

17.2 The Operator shall ensure that the "indicators of change" referred to in Condition 13.7(ii) above are reviewed in consultation with the Centre for Environment, Fisheries and Aquaculture Science, Natural England, the Joint Nature Conservation Committee and the Environment Agency at the time the Substantive Reviews required by Condition 17.4 are prepared.

*Reason: to protect the marine environment and to allow appropriate mitigating actions to be taken at the earliest possible opportunity, if significant adverse environmental impacts are detected.*

17.3 Dredging may only continue within the Permission Area beyond 5 and 10 years from the date of commencement of dredging if the Substantive Reviews of dredging required by Condition 17.4 demonstrate to the satisfaction of the Secretary of State that no significant adverse environmental impacts have resulted from the dredging operations, and provided the Secretary of State confirms this in writing.

*Reason: to protect the marine environment.*

17.4 Within 6 months of the start of the 5 and 10 years following the date of commencement of dredging in the Permission Area, the Operator shall ensure that a Substantive Review of the dredging operations within the Area is prepared and submitted to the Secretary of State, using acknowledged independent experts in the appropriate fields. The Review will summarise the results of the monitoring undertaken to date; detail the environmental effects of the dredging operations; report on the effectiveness of the Conditions imposed on the dredging operations; recommend any variations to the dredging operations as may be necessary to protect the environment, and any variations to the programme of monitoring as may be necessary to ensure that effective environmental monitoring of the dredging is maintained. The Substantive Review shall be copied by the Operator at the time of its submission to the Secretary of State to the consultation bodies referred to in Condition 16.1(iii), BHP Billington Petroleum Limited and the local coastal authorities of Sefton Council and the Metropolitan Borough of Wirral.

*Reason: to inform the Secretary of State's decision on whether the dredging operations may continue beyond 5 and 10 years in accordance with Condition 17.3 and to protect the marine environment.*

17.5 In the event that any significant adverse environmental impacts are identified either from the 5 or 10 year Substantive Reviews or in any other circumstance, the Secretary of State may propose to vary the terms and conditions to which this Dredging Permission is subject or may propose to revoke the Dredging Permission, but will only do so following consultation with such of the consultation bodies as he considers necessary.

*Reason: to protect the marine environment.*

17.6 The Operator shall produce a final report of all the monitoring undertaken in accordance with these Conditions within 9 months from the cessation of dredging within the Permission Area, in consultation with the Centre for Environment, Fisheries and Aquaculture Science, Natural England, the Joint Nature Conservation Committee, the Environment Agency and English Heritage and approved by the Secretary of State

beforehand. The report shall be submitted to those consultation bodies referred to in Condition 16.1(iii).

*Reason: to assess the effectiveness of these Conditions in preventing significant adverse environmental effects and to confirm or otherwise the predictions made in the Environmental Statement.*