



MINISTER FOR THE ENVIRONMENT;
LABOUR RELATIONS

Statement No.

000494

**STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
(PURSUANT TO THE PROVISIONS OF THE
ENVIRONMENTAL PROTECTION ACT 1986)**

**MEDIUM-TERM SHELLSAND DREDGING
SUCCESS BANK, OWEN ANCHORAGE**

Proposal: Dredging of approximately 9.1 million tonnes of shellsand from two zones on Success Bank, Owen Anchorage, as documented in schedule 1 of this statement.

Proponent: Cockburn Cement Limited

Proponent Address: Lot 242, Russell Road East, Munster WA 6166

Assessment Number: 1027

Report of the Environmental Protection Authority: Bulletin 901

The proposal to which the above report of the Environmental Protection Authority relates may be implemented subject to the following conditions and procedures:

1 Implementation

- 1-1 Subject to these conditions and procedures, the proponent shall implement the proposal as documented in schedule 1 of this statement.
- 1-2 Where, in the course of implementing the proposal, the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

2 Proponent Commitments

- 2-1 The proponent shall implement the consolidated environmental management commitments documented in schedule 2 of this statement.

Published on

10 FEB 1999

- 2-2 The proponent shall implement subsequent environmental management commitments which the proponent makes as part of the fulfilment of conditions and procedures in this statement.

3 Environmental Management System

- 3-1 In order to manage the environmental impacts of the project, and to fulfil the requirements of the conditions and procedures in this statement, prior to commencement of operations, the proponent shall demonstrate to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection that there is in place an environmental management system which includes the following elements:

- 1 An environmental policy and corporate commitment to it;
- 2 Mechanisms and processes to ensure:
 - (1) planning to meet environmental requirements;
 - (2) implementation and operation of actions to meet environmental requirements;
 - (3) measurement and evaluation of environmental performance; and
- 3 Review and improvement of environmental outcomes.

- 3-2 The proponent shall implement the environmental management system referred to in condition 3-1 within six months of the formal authority issued to the decision-making authorities under Section 45(7) of the Environmental Protection Act 1986.

4 Seagrass

- 4-1 The proponent shall use the seagrass in the project area where dredging for shellsand will occur for transplanting trials, consistent with the proponent's commitments and research programme outlined in the document entitled 'Cockburn Cement Shellsand Dredging Environmental Management Programme (1995)'.

5 Post-dredging Closure Plan

- 5-1 Within two years of the formal authority issued to the decision-making authorities under Section 45(7) of the Environmental Protection Act 1986, the proponent shall prepare a post-dredging closure plan indicating how transplanting research will be applied to ongoing seagrass re-establishment, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority, the Department of Resources Development and the Fremantle Port Authority.

- 5-2 The Environmental Protection Authority will seek public comment on the plan required by condition 5-1 for at least four weeks, prior to providing advice to the Minister for the Environment.

6 Annual Report (Environmental Management Plan)

- 6-1 In the Annual Report on the 'Shellsand Dredging - Environmental Management Plan' (published by the proponent each year during the period of the operation), the proponent shall include a summary statement of the research results to the end of each year, showing:

- 1 those research results adopted for incorporation into the environmental management of the proposal;
- 2 any research results which are not adopted, or which indicate that aspects of the environment are being adversely affected, including measures or steps introduced to overcome those effects; and
- 3 a detailed audit of both the area of seagrass affected by current and ongoing operations, and the area transplanted. This audit shall also show statistics relevant to the monitoring of the performance of the transplanted material.

7 Proponent

- 7-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the Environmental Protection Act is responsible for the implementation of the proposal until such time as the Minister for the Environment has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person in respect of the proposal.
- 7-2 Any request for the exercise of that power of the Minister referred to in condition 7-1 shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the proposal in accordance with the conditions and procedures set out in the statement.
- 7-3 The proponent shall notify the Minister for the Environment of any change of proponent contact name and address within 30 days of such change.

8 Commencement

- 8-1 The proponent shall provide evidence to the Minister for the Environment within five years of the date of this statement that the proposal has been substantially commenced.
- 8-2 Where the proposal has not been substantially commenced within five years of the date of this statement, the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment will determine any question as to whether the proposal has been substantially commenced.
- 8-3 The proponent shall make application to the Minister for the Environment for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement.
- 8-4 Where the proponent demonstrates to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority that the environmental parameters of the proposal have not changed significantly, then the Minister may grant an extension not exceeding five years for the substantial commencement of the proposal.

9 Compliance Auditing

- 9-1 The proponent shall submit periodic Performance and Compliance Reports, in accordance with an audit program prepared in consultation between the proponent and the Department of Environmental Protection.
- 9-2 Unless otherwise specified, the Department of Environmental Protection is responsible for assessing compliance with the conditions contained in this statement and for issuing formal clearance of conditions.

9-3 Where compliance with any condition or procedure is in dispute, the matter will be determined by the Minister for the Environment.

Note

- 1 The Minister for the Environment set conditions on short-term shellsand dredging (Assessment number 1022, Environmental Protection Authority Bulletin 833) in Statement 468 which was published on 24 February 1998.

CHERYL EDWARDES (Mrs) MLA
MINISTER FOR THE ENVIRONMENT

10 FEB 1999

Schedule 1

The Proposal

The medium-term dredging of shellsand involves suction dredging over an estimated six year period of about 9.1 million tonnes of shellsand sediment from two zones on Success Bank, Owen Anchorage. The two zones total 99 hectares of seafloor between the Kwinana Shipping Channel and a second partly constructed channel to the east, excluding a 100m buffer zone immediately east of the Fremantle Port Authority (FPA) Shipping Channel (Figure 1).

The key characteristics of the proposal are described in the table below.

Element	Description
Site location and area	<ul style="list-style-type: none"> • Dredging, in accordance with a 'dredging management programme' of 99 hectares in 2 zones on Success Bank containing approximately 9.1 million tonnes of shellsand sediment averaging 92% calcium carbonate; • The dredged depth generally will be 13 to 14 metres below the sea surface; • The dredging is a continuation of earlier shellsand operations on Success Bank.
Timing	<ul style="list-style-type: none"> • The operation is scheduled over a period 1997 to approximately end of 2002 or to the end of the resource;
Operation	<ul style="list-style-type: none"> • Water-jet suction dredge acquiring sediment at the rate of 800 tonnes per hour in depths of 5 to 16 metres operating 12 hours a day; • Dredged sediment as a slurry is transferred by barge to a spoil dump adjacent to Woodman Point; • Sediment is recovered, washed and pumped via pipeline to Cockburn's Munster manufacturing plant.
Management measures	<ul style="list-style-type: none"> • Cockburn commits to implementing all the programmes of scientific and technical investigations outlined in the Environmental Management Plan (February 1995) and 'Supplement' (September 1995); • Cockburn commits to a detailed environmental management audit (Appendix 1 of Consultative Environmental Review); • Cockburn commits to a dredging programme gaining access first to lower seagrass cover.
Long-term access	<ul style="list-style-type: none"> • Plans for longer-term access will be referred to the Environmental Protection Authority.

Plans, Specifications, Charts

Figure 1: Location of proposed medium-term dredging.



Figure 1
 COCKBURN CEMENT LIMITED
 SUCCESS BAY, MEDIUM TERM DREDGING PROPOSAL
 PROPOSED MEDIUM TERM DREDGING RESOURCE



Auth: PAI Date: 08/08

**Proponent's Consolidated Environmental Management
Commitments**

August 1996

**MEDIUM-TERM SHELLSAND DREDGING
SUCCESS BANK, OWEN ANCHORAGE (1027)**

COCKBURN CEMENT LIMITED

The Proponent's consolidated environmental management commitments (August 1996) are as follows:

- 1 The proponent will implement all of the programmes of scientific and technical investigation as outlined in the EMP (Cockburn Cement Limited, February 1995) and its Supplement (Cockburn Cement Limited, December 1995).

The investigations, which are summarised in Attachment 1, include:

- 1 determining the influence of dredging on wave climate and shoreline stability;
 - 2 determining the ecological significance of seagrass;
 - 3 developing techniques for seagrass rehabilitation;
 - 4 developing techniques for beneficiation; and
 - 5 examination of alternative resources.
- 2 The proponent will implement a detailed audit programme which will be developed for this project. A proposed audit programme is shown in Attachment 2.
 - 3 The proponent will refer its plan for long-term resources for assessment by the Environmental Protection Authority under Part IV of the Environmental Protection Act at least 15 months prior to the expected depletion of the medium-term resource.
 - 4 The proponent will implement a dredging programme that prioritises dredging areas, gaining access to areas of lower seagrass cover first.

ADDENDUM ONE TO AUDIT TABLE ONE: Major milestones for implementing EMP studies and for preparing Cockburn's strategy for long-term resource acquisition as described in this CER.

ITEM	DATE
1. EVALUATE ECOLOGICAL SIGNIFICANCE OF SEAGRASSES 1.1 Initial appraisal for proposed medium-term area 1.2 Develop detailed assessment procedures based on measurements 1.3 Evaluate ecological effects of dredging potential sites for long-term resource - Success Bank - Parmelia Bank - Mewstone - other areas	complete mid 1998 to mid 1999 mid 1999
2. SEAGRASS TRANSPLANTATION 2.1 Develop and construct prototype mechanical transplanter 2.2 Trials, modification 2.3 Implement experimental transplantation 2.4 Design/develop/test high rate transplantation procedures 2.5 Monitor results	complete mid 1997 mid 1997 to mid 1999 1998 onwards continuous
3. WAVE MODELLING 3.1 Develop and calibrate wave model for Owen Anchorage 3.2 Assess influence on wave climate on proposed medium-term dredging 3.3 Evaluate effects on wave climate of dredging potential sites for long-term resource - Success Bank - Parmelia Bank - Mewstone - other areas	complete complete 1997 to mid 1999
4. BENEFICIATION 4.1 Laboratory trials 4.2 Pilot Plant (0.1-5 tph) 4.3 Design/construct small scale demonstration plant (200,000 tpa) 4.4 Select technology for full scale beneficiation of 2 million tpa 4.5 Design, construct and commission full scale production facility	complete mid 1997 mid 1998 mid to end 1999 2000 and 2001
5. ALTERNATIVE RESOURCES 5.1 Terrestrial Resources 5.1.1 Review potential terrestrial resources Geraldton to Augusta 5.1.2 Assess potential for terrestrial resources 5.1.3 Select sites, acquire resource 5.2 Marine Resources 5.2.1 Review existing information 5.2.2 Assess potential resources; grade, ease of extraction, environmental issues 5.2.3 Recommend potential marine resources for long-term dredging 5.2.4 Design/modify dredging equipment for use in other marine resources	end 1996 mid 1998 1999-2001 complete mid 1998 mid 1999 1999
6. DEVELOPMENT OF PROPOSAL FOR LONG-TERM RESOURCE ACQUISITION 6.1 Preliminary review and feasibility study of all potential resources with regard to economic, environmental and practical issues 6.2 Identification of candidate sites for long-term resource acquisition 6.3 Undertake detailed environmental assessments of candidate sites 6.4 Recommendations for long-term resource acquisition 6.5 Gain approval for site(s) for long-term resource acquisition	mid 1998 mid 1998 mid 1997 to mid 2000 mid 2000 end 2001

APPENDIX ONE

AUDITING SYSTEM FOR THE MANAGEMENT OF THE MEDIUM-TERM DREDGING PROGRAMME**1. PURPOSE AND COMPONENTS OF AUDIT SYSTEM**

This Appendix outlines the Compliance Audit System proposed by Cockburn with regard to its proposal for medium-term dredging. Audit Systems are normally established after Ministerial approval for a project has been given. Consequently, Audit Systems are constructed based on a combination of Ministerial requirements and the proponent's commitments. This Audit System has been prepared by the proponent prior to any approval and therefore only refers to commitments by the proponent. It is anticipated that this Audit System will be discussed with the DEP and modified where necessary subsequent to the review of this proposal.

The **objective** of a Compliance Audit System is to ensure that all of the proponent's commitments and the Ministerial Conditions applicable to a proposal are met by the proponent at the appropriate time and stage in the proposed project's life. The **purpose** of an Audit Compliance System is to provide a formal mechanism by which the DEP and the Company can track the progress of a project, and determine when and how the environmental conditions have been satisfied. This is achieved by establishing an Audit Table which identifies the auditable elements of the project and the associated timetable for compliance, and by provision of periodic Progress and Compliance reports by the proponent to the DEP.

2. AUDIT TABLE

The purpose of an Audit Table is to identify the features that must be audited, to provide a timetable for actions to be taken and to indicate how environmental clearance is achieved. An Audit Table has been prepared for the components of the proposed medium-term dredging programme and is presented in Audit Table 1. This is accompanied by Addendum 1 which provides specific milestone dates for certain of the auditable features.

AUDIT TABLE NO 1: Conditions which Apply to the Medium-Term Shellsand Dredging: Owen Anchorage Project

CONDITIONS/COMMITMENT NO ENVIRONMENTAL FACTOR	WHAT ACTION MUST BE TAKEN	TO REQUIREMENTS OF	STATUS (if blank, activity not scheduled)
P1: COMMITMENTS	Action: Fulfill the commitments How: As per CER	DEP	
P2: IMPLEMENTATION OF PROPOSAL	Action: Adhere to the proposal How: In accordance with any designs, specifications, plans and or other technical material submitted by the proponent to the Environmental Protection Authority	DEP	
P3: REHABILITATION	Action: Rehabilitate any areas dredged from the date of commencement of medium-term area consistent with the results of the EMP studies	DEP	
P4: DREDGING	Action: Any medium-term dredging to be confined between the FPA shipping channel and the second channel on Success Bank Report: Annual reports	FPA DEP	
P5: EMP COMMITMENT - ECOLOGICAL SIGNIFICANCE OF SEAGRASS	Action: Evaluate the Ecological Significance of seagrasses, according to Addendum 1 of this audit table Report: Annual reports	DEP With advice from: FPA WA Fisheries DME	Underway
P6: EMP COMMITMENT - SEAGRASS TRANSPLANTATION	Action: Develop Technology for Seagrass Transplantation according to Addendum 1 of this audit table Report: Annual reports	DEP With advice from: FPA WA Fisheries DME	Underway

AUDIT TABLE NO 1: Conditions which Apply to the Medium-Term Shellsand Dredging: Owen Anchorage Project

CONDITIONS/COMMITMENT NO ENVIRONMENTAL FACTOR	WHAT ACTION MUST BE TAKEN	TO REQUIREMENTS OF	STATUS (if blank, activity not scheduled)
P7: EMP COMMITMENT - SEAGRASS MAPPING	Action: Undertake mapping of seagrass cover in study area, according to the following timetable: <ul style="list-style-type: none"> • map seagrasses 1995 complete • time series analysis 1965-1995 June 1997 • map seagrasses 1999 1999 Report: Annual reports	DEP With advice from: FPA WA Fisheries DME	Underway
P8: EMP COMMITMENT - ARTIFICIAL REEFS	Action: Develop Artificial Reefs, according to the following timetable: <ul style="list-style-type: none"> • design 1997 • installation, if feasible 1997 • assessment 1999 Report: Annual reports	DEP With advice from: FPA WA Fisheries DME	Underway
P9: EMP COMMITMENT - COMMERCIAL BENEFICIATION	Action: Develop commercial beneficiation process, according to Addendum 1 of this audit table Report: Annual reports	DME	Underway
P10: EMP COMMITMENT - ALTERNATIVE RESOURCES	Action: Evaluate alternate resources, according to Addendum 1 of this audit table Report: Annual Reports	DEP DME FPA	Underway
P11: EMP COMMITMENT - MEDIUM-TERM DREDGING PLANS	Action: Prepare dredging plans for medium-term dredging, and review regularly; at least quarterly Report: Annual reports	FPA DEP	Underway

AUDIT TABLE NO 1: Conditions which Apply to the Medium-Term Shellsand Dredging: Owen Anchorage Project

CONDITIONS/COMMITMENT NO ENVIRONMENTAL FACTOR	WHAT ACTION MUST BE TAKEN	TO REQUIREMENTS OF	STATUS (if blank, activity not scheduled)
P12: EMP COMMITMENT - WAVE MODELLING	Action: Undertake wave modelling of medium-term and potential long-term dredging options according to Addendum 1 of this audit table Report: Annual reports	DEP	Underway
P13: EMP COMMITMENT - SHORELINE MONITORING	Action: Implement routine summer and winter shoreline monitoring of Owen Anchorage Report: Annual reports	FPA DEP	Underway
P14: EMP COMMITMENT - PEER REVIEW	Action: Undertake international peer review of EMP studies Report: Periodically, at programme milestones and as projects end	DEP	Underway Initial review complete
P15: EMP COMMITMENT - LONG-TERM RESOURCES	Action: Develop a proposal for the long-term acquisition of resource, according to Addendum 1 of this audit table Report: Interim reports annually; proposal at least 15 months prior to the depletion of medium-term resource	DEP With advice from: FPA WA Fisheries DME	

Attachment 3 to Statement 494

Change to Proposal

Proposal: Medium-term Shellsand Dredging, Owen Anchorage

Proponent: Cockburn Cement Limited

Change: Change of approved dredge

Components of original proposal:

Component	Description
Operation	<ul style="list-style-type: none">• Water-jet suction dredge acquiring sediment at the rate of 800 tonnes per hour in depths of 5 to 16 metres operating 12 hours a day;• Dredged sediment as a slurry is transferred to a spoil dump adjacent to Woodman Point;• Sediment is recovered, washed and pumped via pipeline to Cockburn's Munster manufacturing plant.

Components of changed proposal:

Component	Description
Operation	<ul style="list-style-type: none">• Trailer suction split-hopper dredge acquiring sediment at the rate of ~600 tonnes/operational hour operating 24 hours a day;• The operational accuracy of dredging (with a tolerance of approximately ± 15 m) is consistent with Figure 1 of Ministerial Statement 494 and diagrams in Cockburn cement's Dredge Management Plans;• Dredge sediment as a slurry is transferred within the hopper of the dredge to the washplant jetty adjacent to Woodman point• Sediment is recovered, washed and pumped via pipeline to Cockburn's Munster manufacturing plant

CHAIRMAN
Environmental Protection Authority
under delegated authority

Approval date: 11.3.09