DARWIN CITY WATERFRONT REDEVELOPMENT

Preliminary Draft Framework for Operational Environmental Management Plan

Prepared for

Department of Infrastructure, Planning and Environment

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Project Manager:	
	Paul Lloyd
	Senior Environmental Scientist

URS Australia Pty Ltd Level 1, Arkaba House, The Esplanade GPO Box 2005, Darwin NT 0801 Australia Tel: 61 8 8980 2900 Fax: 61 8 8941 3920

Project Director:

Charles Johnston Northern Territory Manager

Author: (Optional)

Damien Demunck Senior Environmental Planner **3 May 2004** G:/Projects/2003/36909/007 Draft



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Introduction

A framework for environmental management for the operational phase of the DCWR is required to mitigate and monitor any potential adverse environmental, heritage and socioeconomic impacts. The framework should contain policies, management strategies and actions and procedures that are specific to operational activities undertaken at the DCWR during its operational phase. The framework should be prepared before commencement of operation of the initial major facility on the site.

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Background

The gradual withdrawal of industrial activity at the site and corresponding decline in associated land uses has given rise to an opportunity to redevelop the site to cater for increased recreational, tourism, cultural and retail uses. The redevelopment will enable opportunities site clean-up, expansion of the Darwin CBD and increased employment and economic activity for the Darwin and NT economy.

Preliminary activity within the DCWR project involves demolition of remnant, disused and redundant facilities and infrastructure, remediation of contaminated soils and water and the construction of buildings, facilities and infrastructure associated with the content of the Master Plan for the site.

It is understood that the DCWR will become operational upon completion of construction of the Convention and Exhibition Centre (CEC), which is the first building anticipated for delivery within the project. Staging of the various phases of development is dependent upon demand and market forces.

Evolution of the project and associated development within the site will affect the nature of activities conducted during the gradual increase in operational activities.

2.1.1 Management structure

The management structure of the proponent, site operators (or lessees), developer and contractors should be described to enable environmental responsibilities and communications networks to be clearly defined.

2.1.2 Legislation, Policies and Guidelines

Describe all legislation, policies and guidelines relevant to the routine operation of the DCWR site. The principles of ecologically sustainable development should be described and taken into account.

2.1.3 Development

Upon completion of construction and commencement of operation, it is anticipated that the DCWR will undergo further development. Discuss the types and extent of ongoing development, based on the Master Plan, and the potential broad impacts that could result from their operations.

2.1.4 Activities

Describe the activities to be conducted on the site during operation, including tourist, commercial, government, retail, entertainment, cultural and government activities anticipated during operation of the wharf precinct.

Issues associated with the operation of the site include environmental, heritage and socioeconomic criteria. They are listed below.

3.1.1 Biological Environment

- *Control of Weeds* detail how weed control measures will be undertaken in landscaped areas, surrounding native vegetation on Stokes Hill and within the escarpment area. The timing, dosage and location of weed spraying and monitoring of the effects of weed spraying should be discussed;
- *Biting Insects* abatement measures to control biting insect threats to the public should be detailed, including stormwater management, reducing opportunities for mosquito breeding habitats in construction materials and facilities, management of vegetation that may be conducive to mosquito habitat, site maintenance to prevent topographical depressions and ponding, monitoring for exotic species and adult mosquito control.
- *Protection of Ecological Values* the ecological values of the site, such as significant vegetation, remnant terrestrial ecological habitats and the natural aquatic features of the marine environment should be maintained via clearly defined management strategies. A program for monitoring the health and extent of ecological habitats and values should be detailed to enable assessment as a performance indicator of the DCWR.

3.1.2 Built Environment

- *Waste Management* describe the requirements for minimising and managing solid and liquid waste during operation of facilities within the site. Detail the requirements of contractors, lessees and the public in avoiding, reducing, recycling, treating and disposing of wastes associated with commercial and domestic categories of waste. Explain how wastes will be classified, segregated, handled and disposed of, including the requirement for licences;
- Marina Operations outline how potential impacts caused by marina activities will be mitigated against.
 Possible contingencies might include oil spill, vessel discharges, vessel collision, introduction of marine pests and noise disturbance. Develop a monitoring and reporting strategy to ensure any impacts are identified as early as possible. Develop performance indicators to assist the extent of continuous improvement of environmental impacts within the marina;
- *Refuelling* discuss mitigation measures to be applied during refuelling activities within Kitchener Bay and adjacent the wharves to minimise environmental effects and to plan for contingencies during operations instead of deploying measures after a contingency has occurred;
- Maintenance Dredging detail the strategies used to minimise disturbance to the marine ecology within Kitchener Bay and Darwin Harbour. Discuss mitigation measures to control turbidity, contain and dispose of contaminated marine sediments and monitor dredged material for impacts on marine biota;

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Operational Issues

- *Wharf Operations* existing wharf operations include industrial, Defence (and other government agencies), commercial, retail and recreational activities conducted on the wharves. Measures to minimise impacts from these activities should be described, as well as the provision for increasing the intensity of these activities. Management strategies should be cognisant of refuelling operations (including fuel deliveries), quarantine issues and emergency contingencies and associated response measures.
- *Introduction of Marine Pests* identify steps for the management of discovery of potential marine pests and the requirements of ballast water management. Detail response plans to mitigate against potential marine pests and develop a monitoring program for detecting habitation on wharf structures and other marine infrastructure;
- *Noise* describe the potential adverse noise impacts derived from the site, including traffic, contractor and entertainment activities and develop mitigation measures to reduce disruption to nearby residents and local fauna;
- *Traffic* discuss the potential impacts caused by increased traffic movements to and from the site and develop a series of mitigation strategies to minimise disruption to local traffic and nearby residents. Outline emergency response measures and reporting procedures for minor accidents;
- *Air Emissions* detail the types and extent of air emissions emanating from the site and the likely effects on a local, regional and global scale. Describe the mitigation measures required to minimise these effects and also outline monitoring strategies to gauge improvements in environmental performance;
- *Earthworks* discuss the controls to be implemented to manage contaminated soils during any additional earthworks such as excavation, drilling, dredging and reclamation activities. Measures should be compatible with requirements outlined in State and Commonwealth procedures;
- Stormwater Drain Maintenance describe the controls to be implemented to minimise and control runoff from within existing stormwater networks. Discuss the function of the drainage network on the site and detail measures that will be undertaken to prevent siltation and ponding of drains to prevent the creation of biting insect habitat. Proposed measures should include engineering solutions such as adjusting culvert and drain heights, changes to flow regimes and flow diversions where required;
- *Maintenance Activities* detail the requirements for chemical use and storage and the management of any waste derived from maintenance materials. Indicate the daily timing of maintenance activities, measures to reduce disturbance to native flora and fauna and a system to monitor the amounts of materials used in maintenance activities for input into performance indicator reporting;
- *Operation of Major Facilities* discuss the operating parameters of each facility to implement practices that reduce energy and water use and generation of greenhouse gases and ozone-depleting substances.

3.1.3 Socioeconomic Environment

- *Cultural Heritage* Indigenous and European cultural heritage policies and procedures should be discussed and management strategies developed for ongoing management of all cultural heritage associated with the project area. Indigenous cultural items and places should be protected, especially the known Sacred Sites and known Aboriginal sites such as Damoe Ra Park. Measures to protect European cultural heritage should be clearly defined;
- Socioeconomic effects describe how operation of the major facilities (identified within the DCWR Master Plan) will affect and enhance the business opportunities for small businesses in the wharf precinct. On a wider scale, discuss the potential economic effects that may be encountered by small businesses in the Darwin CBD.



4.1.1 Management strategies

The management strategies should apply to each environmental, heritage and socioeconomic issue related to the operation of the site. They should contain a management commitment, detailed management actions/strategies, monitoring requirements and the process of reporting to stakeholders and regulatory authorities.

4.1.2 Monitoring Programs

Describe the proposed measures to minimise adverse impacts and monitor the effectiveness of safeguards that are implemented. Develop performance indicators to provide baseline information and develop benchmark information to gauge environmental performance. Validate performance indicators to ensure their applicability to all anticipated and potential impacts. Detail reactive monitoring programs to be applied in the event of unplanned contingencies and describe how operational monitoring programs are able to determine the difference between predicted and actual impacts.

4.1.3 Emergency response plans

An emergency response plan should be prepared to contend with events that are unplanned but still known to potentially occur at the site. The plan should contain emergency response sub-plans that are detailed enough to deal with contingencies such as:

- oil spills;
- vessel collision;
- major traffic accident;
- explosion;
- fire, including major fuel fire of vessels and infrastructure;
- bomb threat;
- gas release;
- medical emergency;
- earthquake;
- cyclone threat; and
- evacuation of the site area.

The sub-plan for each type of emergency should contain details for immediate actions, responsibilities and mitigation measures. The oil spill sub-plan should be compatible with the Darwin Port Authority's Oil Spill Contingency Plan.

The overarching emergency response plan should also define the responsibilities of personnel upon an emergency event, coordination and communications procedures, evacuation procedures and assembly points, internal and external notification and reporting of emergencies and dealing with media enquiries.

Additional elements of the emergency response plan should include an emergency notification list, a list of spare emergency equipment, an emergency communication procedure and a cyclone response flow chart.

4.1.4 Other Requirements

Reference should also be made to the requirements for proposed licences, permits and approvals for operation of facilities on the site. Relevant agencies involved in the approval process should be outlined, as should proposed reporting procedures related to the implementation of the framework, reporting of accidents and incidents and the results of internal and external audits. The publication of the operational framework, including any supporting plans and/or monitoring results should also be provided.

Limitations

SECTION 5

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