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Published on 6 June 2007

Statement No. 742

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

HELENA EAST PRECINCT REMEDIATION & REDEVELOPMENT MIDLAND, CITY OF SWAN

Proposal: The remediation of approximately 17 hectares of land, known as the Helena East Precinct and the Southern Embankment located centrally in the former Railway Workshops area, which includes relocation of contaminated soil to an area immediately east of the Police Operations Support Facility known as the Meat Industry Association Containment Cell, as documented in schedule 1 of this statement.

Proponent: Midland Redevelopment Authority

Proponent Address: Corner Helena Street and Yelverton Drive, MIDLAND WA 6056

Assessment Number: 1524

Report of the Environmental Protection Authority: Bulletin 1234

The proposal referred to in the above report of the Environmental Protection Authority may be implemented. The implementation of that proposal is subject to the following conditions and procedures:

1 Proposal Implementation

1-1 The proponent shall implement the proposal as documented and described in schedule 1 of this statement subject to the conditions and procedures of this statement.

2 Proponent Nomination and Contact Details

2-1 The proponent for the time being nominated by the Minister for the Environment under sections 38(6) or 38(7) of the *Environmental Protection Act 1986* is responsible for the implementation of the proposal.

2-2 The proponent shall notify the Chief Executive Officer of the Department of Environment and Conservation (CEO) of any change of the name and address of the proponent for the serving of a notice or other correspondence within 30 days of such change.

3 Time Limit of Authorisation

3-1 The authorisation to implement the proposal provided for in this statement shall lapse and be void within five years after the date of this statement if the proposal to which this statement relates is not substantially commenced.

3-2 The proponent shall provide the CEO with written evidence which demonstrates that the proposal has substantially commenced on or before the expiration of five years from the date of this statement.

4 Compliance Reporting

4-1 The proponent shall submit to the CEO environmental compliance reports annually reporting on the previous twelve-month period, unless required by the CEO to report at a frequency other than 12 months.

4-2 The environmental compliance reports shall address each element of an audit program approved by the CEO and shall be prepared and submitted in a format acceptable to the CEO.

4-3 The environmental compliance reports shall:

1. be endorsed by signature of the proponent's chief executive officer or a person, approved in writing by the CEO, delegated to sign on behalf of the proponent's chief executive officer;
2. state whether the proponent has complied with each condition and procedure contained in this statement;
3. provide verifiable evidence of compliance with each condition and procedure contained in this statement;
4. state whether the proponent has complied with each key action contained in any environmental management plan or program required by this statement;
5. provide verifiable evidence of conformance with each key action contained in any environmental management plan or program required by this statement;
6. identify all non-compliances and non-conformances and describe the corrective and preventative actions taken in relation to each non-compliance or non-conformance;

7. provide an assessment of the effectiveness of all corrective and preventative actions taken; and
 8. describe the state of implementation of the proposal.
- 4-4 The proponent shall make the environmental compliance reports required by condition 4-1 publicly available in a manner approved by the CEO.

5 Soil Remediation Criteria

- 5-1 Within the areas without “heritage constraints”, the proponent shall remediate the land to the “appropriate remediation criteria” for the land use zones.

Note:

1. “Heritage constraints” in the Helena East Precinct refers to an area within a notional two metre buffer zone from heritage structures within which a certified practicing engineer has determined that excavation be limited to preserve the fabric of those structures. Beyond the buffer zone, the wall of the excavation will be excavated on a slope to be determined by a certified practicing engineer to either the maximum depth of contamination or the maximum depth possible given the presence of other heritage structures.
2. “Appropriate remediation criteria” are to be derived for the different land use zonings in accordance with the guideline, *The Use of Risk Assessment in Contaminated Site Assessment*, Department of Environment and Conservation (2006) and other relevant guidelines in the Department of Environment and Conservation’s Contaminated Sites Management Series, to the requirements of the Minister for the Environment on the advice of the CEO.

6 Site Validation

- 6-1 Following the development of remediation criteria under condition 5-1, the proponent shall develop a site excavation plan using the results of soil investigations to the requirements of the Minister for the Environment on the advice of the CEO.
- 6-2 The proponent shall prepare a Validation Sampling Program to the requirements of the Minister for the Environment on the advice of the CEO.
- 6-3 Within one month following the completion of remediation works, the proponent shall carry out validation investigations of the soil in the Helena East Precinct and the Southern Embankment and prepare a Site Validation Report.
- 6-4 Prior to the issuing of land titles, the proponent shall have obtained the CEO’s approval of the Site Validation Report referred to in condition 6-3.
- 6-5 The proponent shall make the Site Validation Report required by condition 6-3 publicly available in a manner approved by the CEO.

7 Remediation Work on the Southern Embankment

7-1 Prior to commencing remediation works on the Southern Embankment, the proponent shall revise the *Site Environmental Management Plans: Remediation of Helena East Precinct Former Railway Workshops, Midland* (March 2006, Version 2) included in Appendix 12 of the Public Environmental Review document (March 2006, Version 3) and include management methods for the remediation and recontouring works on the Southern Embankment to the requirements of the Minister for the Environment on the advice of the CEO.

The management methods shall be consistent with the Environmental Protection Authority's Guidance Statement 33, *Environmental Guidance for Planning and Development* and shall address:

1. risk of erosion and siltation during works on the Southern Embankment;
2. measures to minimise these risks;
3. rehabilitation of the area by planting with local native species of vegetation; and
4. monitoring of the final surface of the recontoured area for stability and erosion.

7-2 The proponent shall make the revised Site Environmental Management Plans required by condition 7-1 publicly available in a manner approved by the CEO.

8 Onsite Containment of Residual Contamination

8-1 For areas where soil does not meet the "appropriate remediation criteria" required by condition 5-1, the proponent shall cover the residual waste fill with a geotextile visual warning barrier, which shall be either A12 Bidim cloth or Max 30 Enkagrid or a similar material approved by the CEO.

8-2 For areas zoned "residential", the proponent shall provide a cover of not less than one metre of "clean fill" over the geotextile visual warning barrier.

Note:

1. "Clean fill" is defined as soil meeting the Ecological Investigation Levels criteria defined in the document *Assessment Levels for Soil, Sediment and Water*, Department of Environment (2003).

8-3 Where there are "heritage constraints", described in condition 5 (See note 1), and one metre of clean fill is not possible, the proponent shall manage the area to minimise erosion using treatment, such as hard stand or equivalent, as approved by the CEO.

8-4 For areas zoned other than residential, the proponent shall provide a cover of not less than 0.5 metres of clean fill over the geotextile visual warning barrier.

8-5 Where there are “heritage constraints”, described in condition 5 (See note 1), and 0.5 metres of clean fill is not possible, the proponent shall manage the area to minimise erosion using treatment, such as hard stand or equivalent, as approved by the CEO.

9 Dense Non-Aqueous Phase Liquid Delineation and Management

9-1 Prior to the issuing of land titles in any area affected or potentially affected by the dense non-aqueous phase liquid (DNAPL) in groundwater, the proponent shall carry out investigations to fully delineate the DNAPL contamination in the Helena East Precinct and shall report results of the investigations to the Environmental Protection Authority at the completion of these investigations.

This report shall:

1. delineate the nature and extent of the DNAPL contamination laterally and vertically; and
2. provide a risk-based assessment of the contamination to the Leederville Aquifer, the Helena River and offsite groundwater.

9-2 Prior to the issuing of land titles in any area affected or potentially affected by the DNAPL in groundwater, the proponent shall develop a DNAPL Management Plan with the objective of mitigating the risk of the DNAPL contamination to the Leederville Aquifer, the Helena River and offsite groundwater to the requirements of the Minister for the Environment on the advice of the CEO.

This Plan shall address:

1. remediation strategy and actions and validation program;
2. monitoring requirements;
3. long-term management measures for the DNAPL contamination;
4. reporting requirements; and
5. contingency plans.

9-3 The proponent shall implement the DNAPL Management Plan required by condition 9-2.

9-4 The proponent shall make the DNAPL investigation report and the DNAPL Management Plan required by conditions 9-1 and 9-2 respectively, publicly available in a manner approved by the CEO.

10 Dust and Air Quality

- 10-1 Prior to ground-disturbing activity, the proponent shall revise the *Dust and Air Quality Management Plan* (March 2006, Version 2) included in Appendix 11 of the Public Environmental Review document (March 2006, Version 3) to the requirements of the Minister for the Environment on the advice of the CEO and the Department of Health.
- 10-2 Prior to ground-disturbing activity, the proponent shall implement the revised Dust and Air Quality Management Plan required by condition 10-1.
- 10-3 The proponent shall make the revised Dust and Air Quality Management Plan required by condition 10-1 publicly available in a manner approved by the CEO.

11 Meat Industry Association Containment Cell

- 11-1 Prior to ground-disturbing works in connection with the Meat Industry Association Containment Cell, the proponent shall prepare a Meat Industry Association Containment Cell Construction and Management Plan to the requirements of the Minister for the Environment on the advice of the CEO.

This Plan shall address:

1. Design of the cell;
 2. Detailed construction plan of the cell;
 3. Criteria for materials placed in the cell;
 4. Erosion monitoring and management of the cap;
 5. Rehabilitation of the cell with shallow-rooted native vegetation;
 6. Long-term management and ownership of the cell, including ownership of the land, responsibility for post-closure management and monitoring, and annotations on the land title.
- 11-2 The proponent shall restrict the materials placed in the Meat Industry Association Containment Cell to those which comply with the following criteria:
- The average plus standard deviation of concentration results is less than twice the Concentration Limit Criteria for a Class 1 Landfill or 95% Upper Confidence Limit is less than twice the concentration limits for a Class 1 Landfill; and
 - The average plus standard deviation of Australian Standard Leachability Potential results is less than the Australian Standard Leachability Potential criteria for a Class 1 Landfill or 95% Upper Confidence Limit is less than the Australian Standard Leachability Potential criteria for a Class 1 Landfill.

- 11-3 Within one month following the addition of the final load of contaminated soil to the Meat Industry Association Containment Cell, the proponent shall install a cap consisting of a layer of compacted clay of minimum thickness of 300 millimetres and with nominal permeability of less than 10^{-9} metres per second, followed by at least 500 millimetres of “clean fill” as defined in condition 8-2 (See note 1).
- 11-4 The proponent shall maintain the cap of the Meat Industry Association Containment Cell, referred to in condition 11-3, with shallow-rooted native vegetation local to the area.
- 11-5 The proponent shall implement the Meat Industry Association Containment Cell Construction and Management Plan required by condition 11-1.
- 11-6 The proponent shall make the Meat Industry Association Containment Cell Construction and Management Plan required by condition 11-1 publicly available in a manner approved by the CEO.
- 11-7 The proponent shall obtain approval from the CEO for any proposed disturbance to the Meat Industry Association Containment Cell which may require a referral to the Environmental Protection Authority.

12 Surface and Groundwater

- 12-1 Within six months following completion of remediation, the proponent shall prepare and submit a Post-remediation Surface and Groundwater Monitoring and Management Plan to the requirements of the Minister on the advice of the CEO.

This Plan shall address:

1. monitoring of groundwater at existing and any additional locations around the Helena East Precinct, the Southern Embankment and the Meat Industry Association Containment Cell, as determined by the CEO;
 2. water quality monitoring of the Helena River; and
 3. contingency plans.
- 12-2 The proponent shall develop groundwater and surface water monitoring targets for groundwater and surface water quality which shall be consistent with background groundwater and surface water quality established during baseline studies or, in decreasing order of preference, *Assessment Levels for Soil, Sediment and Water*, Department of Environment (2003) and any future versions of *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, Australian and New Zealand Environment and Conservation Council/Agriculture and Resource Management Council of Australia and New Zealand (October 2000).
- 12-3 In the event that the target levels referred to in condition 12-2 are exceeded, the proponent shall immediately modify activities on the project site to achieve levels below target levels as soon as possible.

If target levels are exceeded, the proponent shall take steps to:

1. identify the source of the contamination;
2. analyse significance of the contamination and need for remediation;
3. if feasible, remediate the source of contamination and implement a specific monitoring regime to demonstrate that groundwater impacts have been addressed;
4. install an impermeable barrier or use a technique such as a Permeable Reactive Barrier or other suitable technique if remediation is not feasible; and
5. submit a report to the CEO within 30 days of the date the exceedance is detected outlining actions taken to achieve levels below the target, including time to be taken.

12-4 The proponent shall monitor the groundwater around the Helena East Precinct, the Southern Embankment and the Meat Industry Association Containment Cell and the water of the Helena River in accordance with sampling locations and a schedule approved by the CEO.

12-5 After not less than three years of groundwater and surface water monitoring following the completion of remediation, the proponent shall consult with the CEO to determine when groundwater and surface water monitoring may cease.

12-6 The proponent shall make the Post-remediation Surface and Groundwater Monitoring and Management Plan, required by condition 12-1 publicly available in a manner approved by the CEO.

12-7 The proponent shall make monitoring reports required in the Post-remediation Surface and Groundwater Monitoring and Management Plan publicly available in a manner approved by the CEO.

13 Post-remediation Subsurface Activities

13-1 Within three months following completion of remediation works and prior to any subsurface activities, the proponent shall submit a Subsurface Management Plan to the CEO for approval.

13-2 The proponent shall implement the Subsurface Management Plan required by condition 13-1.

13-3 In the event that services or subsurface activities need to be located or to take place, respectively, below the clean fill cover, prior to the installation of such services or the conduct of such activities, the proponent shall carry out soil validation tests to demonstrate that the soil is not contaminated.

Note:

1. It is preferable that all services such as power, drainage and telephone be installed within the clean fill cover material (See condition 8-2, note 1).
- 13-4 In the event that the soil is contaminated, the proponent shall advise the CEO and shall complete the works in accordance with the Subsurface Management Plan required by condition 13-1.
- 13-5 The proponent shall make the Subsurface Management Plan required by condition 13-1 publicly available in a manner approved by the CEO.

Notes

1. Where a condition states "on advice of the Environmental Protection Authority", the Environmental Protection Authority will provide that advice to the Department of Environment and Conservation for the preparation of written notice to the proponent.
2. The Environmental Protection Authority may seek advice from other agencies or organisations, as required, in order to provide its advice to the Department of Environment and Conservation.
3. The Minister for the Environment will determine any dispute between the proponent and the Environmental Protection Authority or the Department of Environment and Conservation over the fulfilment of the requirements of the conditions.
4. This approval does not obviate the proponent's responsibilities under the provisions of the *Contaminated Sites Act 2003*. An independent Contaminated Sites Auditor will be required to be engaged for this project.
5. Memorials on land titles and any restrictions on use will be dealt with under the *Contaminated Sites Act 2003*.
6. This approval does not obviate the proponent's responsibilities under the provisions of the *Aboriginal Heritage Act 1972*. The Midland Redevelopment Authority has previously been granted approvals under section 18 of the *Aboriginal Heritage Act 1972* subject to specific conditions.
7. All works undertaken at the Midland Railway Workshops site are required to be referred to the Heritage Council in accordance with the *Heritage of Western Australia Act 1990*. The Heritage Council has highlighted that conditions 5-1, 8-3 and 8-5 are of relevance in terms of heritage considerations.

David Templeman MLA
MINISTER FOR THE ENVIRONMENT; CLIMATE CHANGE; PEEL

Schedule 1

The Proposal (Assessment No. 1524)

General Description

The proposal is to remediate land in the Helena East Precinct and Southern Embankment of the former Midland Railway Workshop Site, shown in Figure 1 (attached). The land is to be prepared to a standard suitable for the land uses agreed in the Midland Redevelopment Scheme and *Midlandmetro Concept Plan 2010*.

The remediation activities are described in the following document - *Helena East Precinct Remediation and Redevelopment: Public Environmental Review*, Version 3 March 2006.

A summary of the key proposal characteristics are listed in Table 1.

Table 1 – Summary of the Key Proposal Characteristics

Element	Description
Location of site	Figure 1; Lot 9006 DP 44198; Lot 14241 on Plan 27672, Reserve 42712.
Nature of contaminants	<i>Waste Fill</i> Waste fill consisting of coal cinder, foundry slag, building rubble, sand, steel and occasional asbestos products over the Helena East Precinct and Southern Embankment. <i>Soil</i> Soil over the Helena East Precinct and Southern Embankment affected by metals, hydrocarbons and/or solvents and localised cyanide contamination. <i>Groundwater</i> Widespread low-level metal contamination. Localised hydrocarbon and solvent contamination within areas where extensive hydrocarbons and/or solvents were identified in soil.
Total volume of contaminated soil and waste fill	119,000 cubic metres

Element	Description
Remediation activities	<p>Excavate approximately 59,000 cubic metres of contaminated soil and waste fill and either:</p> <ul style="list-style-type: none"> - Subject to treatment and reuse; - Relocate to onsite containment cell; or - Direct offsite for disposal or treatment. <p>Residual contamination will be contained onsite using a geotextile warning barrier covered by clean fill.</p> <p>Contaminated groundwater encountered during excavation will be treated either onsite or offsite.</p>
Containment cell	<p>Construct containment cell with a clean clay base not less than 300 millimetres thick. Cap containment cell with a compacted clay layer with a permeability of not more than 10^{-9} metres per second and cover with a layer of clean free-draining soil not less than 500 millimetres thick, which is stabilised with shallow-rooted native vegetation.</p> <p>Containment cell will contain not more than 80,000 cubic metres of material. Height of the cell will be not more than 12 metres.</p>
End land uses	<p>In accordance with the Midland Redevelopment Scheme and the <i>Midlandmetro Concept Plan 2010</i>.</p>

Figure (attached)

Figure 1 - Location Plan.

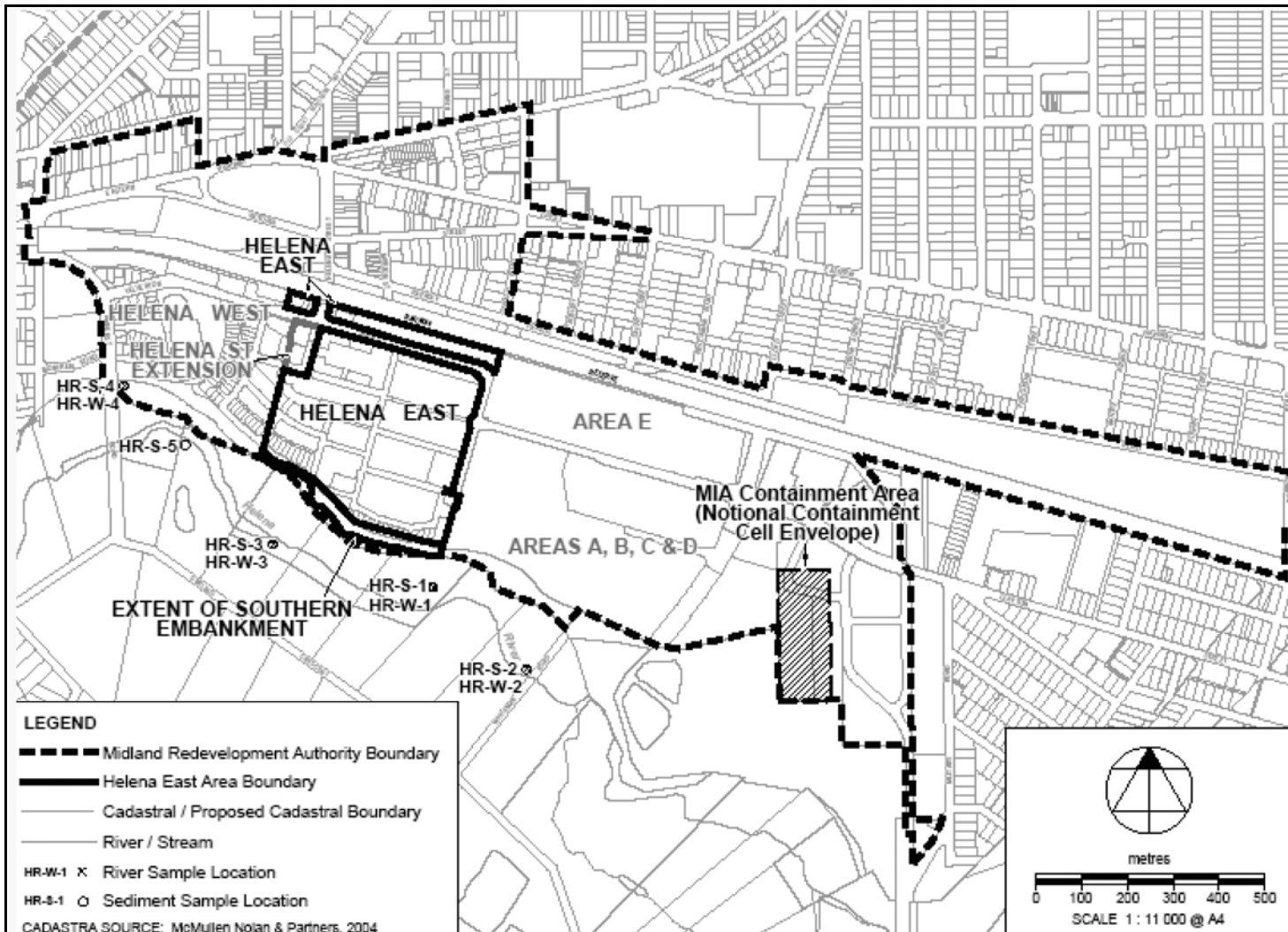


Figure 1: Location Plan