

**Clay Excavation  
Lots 7, 20, 60, 63, and 64 (previously part lot 1  
and lots 222, 27, 26, 25, 28 and 7) Hallett and  
Copley Roads, Upper Swan  
Change to Environmental Conditions**

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**Midland Brick Company Pty Ltd**

**Section 46 Report and recommendations  
of the Environmental Protection Authority**

**Environmental Protection Authority  
Perth, Western Australia  
Bulletin 1157  
December 2004**

### **Environmental Impact Assessment Process Timelines**

<b>Date</b>	<b>Progress stages</b>	<b>Time (weeks)</b>
<b>10/06/2002</b>	<b>Level of Assessment set</b>	<b>2</b>
<b>05/10/2004</b>	<b>Assessment re-commenced</b>	<b>9</b>
<b>09/12/2004</b>	<b>EPA report to the Minister for the Environment/ Proponent Document Released for Targeted Stakeholder Comment</b>	<b>2</b>
<b>23/12/2004</b>	<b>Targeted Stakeholder Comment Period Closed</b>	<b>2</b>

## Summary and recommendations

Midland Brick Company Pty Ltd (Midland Brick) referred a proposal to the Environmental Protection Authority (EPA) on 3 May 2002 to indefinitely extend the time limit of its environmental approval for its clay excavation operation at Hallet and Copley Roads, Upper Swan and to expand the environmental approval to include Lot 19 Copley Road, Lots 19, 45 and 46 St Albans Road and Lot 100 Great Northern Highway, Upper Swan for further clay excavation operations. The new areas to be included in the clay excavation operation include a portion of Coondaree Swamp classified as a resource enhancement wetland.

The existing clay excavation operation was assessed by the EPA at Consultative Environmental Review (CER) level in December 1991. The Minister for the Environment issued approval for the existing operation on 23 April 1992 subject to conditions and commitments as described in Ministerial Statement 251.

In accordance with Section 46(3) of the *Environmental Protection Act 1986* (EP Act), this report provides the EPA's advice to the Minister for the Environment on proposed changes to conditions for the project.

### Relevant environmental factors

It is the EPA's opinion that the following are the environmental factors relevant to the proposed change to conditions, which require detailed evaluation in the report:

- (a) extension to the duration of the approval;
- (b) Coondaree Swamp - resource enhancement wetland; and
- (c) acid sulfate soils.

### Conclusion

The EPA has considered the change to conditions proposed by Midland Brick and has concluded that it can be managed to meet the EPA's objectives for the relevant environmental factors.

The EPA believes that the 14-year period since the original proposal was assessed has given rise to three relevant environmental issues that cause the EPA to reconsider its previous recommendations as to the environmental acceptability of the project and provide advice on the mitigation of these issues. In particular the EPA has concluded that the proposed excavation of Coondaree Swamp (a resource enhancement wetland) is acceptable in view of the proposed rehabilitation of the area to form an artificial wetland and the environmental offset proposed by the proponent, namely donation of land to be added to Ellen Brook Nature Reserve to provide additional protected habitat for the endangered Western Swamp Tortoise.

In addition to the above, the EPA considers that conditions attached to the environmental approval should be updated. It has therefore also reported on the updating of conditions.

### Recommendations

The EPA submits the following recommendations to the Minister for the Environment:

1. That the Minister notes that this report is pursuant to Section 46(3) of the *Environmental Protection Act 1986*.
2. That the Minister notes that the proposed change includes extending the time limit for the existing approved Lots of the excavation and expanding the project to include Lot

19 Copley Road, Lots 19, 45 and 46 St Albans Road and Lot 100 Great Northern Highway, Upper Swan.

3. The EPA recommends that the Minister considers the report on the relevant environmental factors as set out in Section 3.
4. That the Minister notes that the EPA has concluded that the proposed change to conditions can be managed to meet the EPA's objectives, and thus not impose an unacceptable impact on the environment provided there is satisfactory implementation by the proponent of the amended conditions and commitments, as set out in Section 4.
5. The Minister imposes the amended conditions, commitments and procedures recommended in Appendix 4 of this report.

### **Conditions**

The EPA recommends that, if the proposed change to conditions by Midland Brick Company Pty Ltd is approved for implementation, the existing Environmental Conditions applied to the project (Ministerial Statement 251 published in April 1992), be subject to modifications necessary to:

- indefinitely extend the time limit of environmental approval, subject to a 5-yearly environmental review;
- allow for the expansion of the existing location approvals to include the new locations, Lot 19, 45 and 46 St Albans road, Lot 19 Copley Road and Lot 100 Great Northern Highway;
- update the statement into the current format;
- require the production of a wetland rehabilitation program for Coondaree Swamp and surrounding areas;
- require an acid sulfate soil (ASS) investigation and (if necessary) production of an ASS Management Plan on areas deemed "high risk" before the commencement of excavation works within the high risk areas; and
- provide for the transfer to the Crown of approximately half of Lot 12 Lexia Avenue to be added to Ellen Dale Nature Reserve to provide additional protected habitat for the endangered Western Swamp Tortoise;

The proposed changes to conditions are set out in detail in Appendix 4.

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# **1. Introduction and background**

The Minister for the Environment has requested the Environmental Protection Authority (EPA) to consider and provide advice under Section 46(3) of the *Environmental Protection Act 1986* on Midland Brick's proposed change to conditions to extend the time limit for its existing approved clay excavation operation at Hallett and Copley Roads, Upper Swan, and to expand the project to include Lot 19 Copley Road, Lots 19, 45 and 46 St Albans Road and Lot 100 Great Northern Highway, Upper Swan.

The current operations were originally assessed by way of a Consultative Environmental Review (CER) in December 1991 (Bulletin 599) after an application for Renewal of Excavation Licence was referred to the EPA in August 1990 by the Shire of Swan (now City of Swan).

Condition 3 of the Minister's statement (251) of approval set a time limit for the proposal of 10 years. After that time the EPA would need to review the proposal in light of the proponent's environmental performance on the site. The original time of approval expired in April 2002 and the proponent referred a proposed change to conditions to the EPA for an extension of the time limit approval as well as an expansion of the excavation area.

Further details of the proposed change to conditions are presented in Section 2 of this Report. Section 3 discusses environmental factors relevant to the proposed change to conditions. The Conditions and procedures to which the project should be subject, if the Minister determines that it may be implemented, are set out in Section 4. Section 5 presents the EPA's conclusions and Section 6, the EPA's Recommendations.

A list of stakeholders who were consulted during preparation of the proponent's Section 46 report is in Appendix 1 and References are listed in Appendix 2. Environmental Condition Statement No 251, published on 23 April 1992, is presented in Appendix 3. The recommended conditions and procedures and proponent's commitments are provided in Appendix 4. The proponent's section 46 report is attached to this bulletin in CD-ROM form.

## **2. Proposed Change to Conditions**

Midland Brick Company Pty Ltd proposes to extend the time limit of approval for its existing clay excavation in Upper Swan, 30km north-east of Perth. The project currently spans Lots 60, 63, 64, 20 and 7 Hallett and Copley Roads and Midland Brick proposes to expand the project area to include Lot 19 Copley Road, Lot 100 Great Northern Highway and Lots 19, 45 and 46 St Albans Road (Figure 1).

Clay excavation is a relatively simple mining process and involves the removing and stockpiling of the topsoil which can later be used for rehabilitation and then the removal of overburden for boundary bunding. The excavated clay is then taken to a manufacturing process. The clay excavation in this project is a relatively small scale, low impact activity which results in little disturbance to the surrounding areas. The operation does not involve dewatering.

Of the lots that are part of the proposed extension, Lots 19 Copley Road and 100 Great Northern Highway (which form part of Coondaree Swamp) have been partly excavated in the past by another company. These lots now contain a series of un-rehabilitated steep-sided pits varying in depth from around 3m – 15m deep which cover approximately half of the swamp's original extent, (Midland Brick, 2004). The rest of the swamp falls on the already approved Lot 7 Copley Road.

Table 1 summarises the key characteristics of the approved project and proposed extension. A detailed description of the proposed change to conditions is provided in Sections 4 and 6 of the Section 46 review document (Midland Brick, 2004).

**Table 1: Summary of proposed project extension.**

<b>Project characteristic</b>	<b>Current project</b>	<b>Proposed extension</b>
Location	Lots 60, 63, 64, 20 and 7 Hallett and Copley Roads	Lots 19 Copley Road, Lot 100 Great Northern Highway and lots 19, 45 and 46 St Albans Road
Offset	-	The Proponent has committed to donating approximately 4.7ha of Lot 12 Lexia Avenue (eastern side) to the State.
	<b>Total for Expanded Project</b>	
*Size of Clay Body	Approximately 4 million tonnes	
*#Total Area of Disturbance	Approximately 109 ha	
*Rate of Extraction	Approximately 180,000 tonnes per year	
Major Infrastructure	nil	
Overburden	Between 1 and 6 million tonnes	

# will also be rehabilitated.

\* estimated at present usage.

### **3. Relevant environmental factors**

Section 46(3) of the *Environmental Protection Act 1986* requires the EPA to report to the Minister for the Environment on whether or not the proposed changes to conditions or procedures should be allowed. In addition, the EPA may make recommendations as it sees fit.

The relevant environmental factors identified in the EPA's previous assessment (April 1991) of the proposal were the:

- (a) proximity to Ellenbrook Nature Reserve the habitat of the declared rare Western Swamp Tortoise;
- (b) local environmental impacts;
- (c) drainage impacts on Ellen Brook Nature Reserve;
- (d) Aboriginal sites; and
- (e) regional development, drainage and rehabilitation.

The EPA's assessment of these factors has not changed as a result of the proponent's current proposal to extend the duration of approval and to expand the location of excavation works.

However, it is the EPA's opinion that the following issues should be considered in relation to the proposed change to conditions:

- (a) extension to the duration of the approval;

- (b) Coondaree Swamp – resource enhancement wetland; and
- (c) acid sulfate soils.

These matters are considered below.

### **3.1 Extension to the Duration of the Approval**

#### **Description**

Approval for this project was initially for a maximum period of ten years with subsequent applications to be reviewed in light of the proponent's environmental performance at the site. This time period was set to allow for changes in environmental regulations, standards guidelines and accepted practices.

The area considered for assessment of this factor are the lots originally approved in Bulletin 599, Lots 60, 63, 64, 20 and 7 Hallett and Copley Roads and the proposed new excavation areas Lot 19 Copley Road, Lot 19, 45 and 46 St Albans Road and Lot 100 Great Northern Highway.

#### **Assessment**

The EPA sought advice from the Department of Environment regarding whether the proposed extension of the time limit on the approval should be granted and any new environmental issues which should be considered if the time extension was granted.

Issues in relation to excavation of Coondaree Swamp and acid sulfate soils are considered in sections 3.2 and 3.3 below and it is considered that these issues can be managed so as to meet the EPA's environmental objectives.

Changes in environmental standards can be addressed through amendments to the conditions and procedures of environmental approval.

The EPA's assessment of the proposed change to conditions has not given rise to any other matters relevant to the acceptability of the proposal.

It is therefore the EPA's opinion that the proposed extension to the duration of approval can be managed to meet the EPA's environmental objectives and should be allowed.

#### **Conclusion**

Having particular regard to:

- (a) the fact that issues in relation to excavation of Coondaree Swamp and acid sulfate soils can be managed so as to meet the EPA's environmental objectives;
- (b) the fact that changes in environmental standards that can be addressed through amendments to the conditions and procedures of environmental approval; and that,
- (c) the EPA's assessment of the proposed change to conditions has not given rise to any other matters relevant to the acceptability of the proposal.

it is the EPA's opinion that the proposed extension to the duration of approval can be managed to meet the EPA's environmental objectives and should be allowed.

### **3.2 Coondaree Swamp – Resource Enhancement Wetland**

#### **Description**



Coondaree Swamp covers part of Lots 7 and 19 Copley Road and Lot 100 Great Northern Highway (Figure 2).

The proponent now proposes to excavate on the western half of the swamp, on Lot 19 Copley road and Lot 100 Great Northern Highway. The *Geomorphic Wetlands Swan Coastal Plain Classification* (Department of Environment, 2004) identifies that portion of the swamp as a Resource Enhancement Wetland. That portion of the swamp has been previously partly excavated by another company and now consists of a series of un-rehabilitated steep-sided pits varying in depth from 3m –15m.

The remainder of the swamp (the eastern part) is identified under the *Environmental Protection (Swan Coastal Plain) Policy 1992* and the *Environmental Protection (Swan Coastal Plain Wetlands) Policy and Regulations 2004*. However, that remaining portion of the swamp has already been approved for excavation under the existing Ministerial Statement. It therefore falls outside the area to be considered under the proposed change to environmental conditions.

### **Stakeholder and proponent comments**

The proponent's Section 46 report (Midland Brick, 2004) contends that, since the original clearing 25 years ago, a monoculture of vegetation has regrown at the site, and is now limited to relatively mature specimens of *Melaleuca terretifolia*. Through the uniform height and size of the specimens, all plants appear to be of very similar age and are most likely to be regrowth from root stock left at the time of clearing. A site inspection carried out by the consultants and the EPA in September 2003 identified very few, if any, juvenile specimens of the species, and it is logical to assume that (in the absence of rehabilitation) once these specimens expire the vegetation of the swamp will be significantly and permanently reduced.

The Resource Management Branch of the DoE has advised that the rehabilitation of Coondaree Swamp should be undertaken by Midland Brick in accordance with an approved Wetland Rehabilitation Plan with the aim of restoring the original (pre-disturbance) water regime and habitats. The Resource Management Branch has further advised that revegetation of the wetland area should utilise plant species of local provenance appropriate to sumplands and palusplains in the local vicinity and suitable for the soil type.

### ***Policy Framework***

The primary documents applicable to this relevant environmental factor are:

- Position Statement No. 4 *Environmental Protection of Wetlands* (EPA, 2004); and,
- Preliminary Position Statement No. 9 *Environmental Offsets* (EPA, 2004).

As noted above the *Environmental Protection (Swan Coastal Plain Lakes) Policy* and the Draft *Environmental Protection (Swan Coastal Plain Wetlands) Policy* are not relevant to the proposed change to conditions and are therefore not considered further here.

### ***Position Statement No. 4***

Position Statement No. 4 provides the EPA's principles for environmental protection of wetlands which include an overarching statement of goals as follows:

- to protect the environmental values and functions of wetlands in Western Australia;
- to protect, sustain and, where possible, restore the biological diversity of wetland habitats in Western Australia;

- to protect the environmental quality of the wetland ecosystems of Western Australia through sound management in accordance with the concept of "wise use", as described in the Ramsar Convention, and ecologically sustainable development principles, regardless of land use or activity; and
- to have as an aspirational goal no net loss of wetland values and functions.

This statement of goals relates directly to the significant environmental values of wetlands established by Position Statement No. 4 including:

- primary production;
- recreational and landscape amenity;
- hydrological balance;
- water quality protection; and
- wildlife habitat.

### ***Preliminary Position Statement No. 9 Environmental Offsets***

The recently released Preliminary Position Statement No. 9 has been developed to provide overarching guidance and to establish a consistent policy approach to the issue of environmental offsets.

Section 5. Scope, states that this Position Statement applies to all environmental issues, matters and advice for which the EPA has jurisdiction. However it must be recognised that this is a preliminary document.

In considering the Preliminary Position Statement, because Coondaree Swamp has already been extensively modified and degraded, it is not considered to meet the criteria for a Critical Asset for which the EPA is unlikely to approve a proposal.

An evaluation of the mitigation sequence established by Preliminary Position Statement No. 9 is therefore considered appropriate for this assessment.

### **Assessment**

The area considered for assessment of this factor is Coondaree Swamp, including Lots 7 and 19 Copley Road and Lot 100 Great Northern Highway.

The EPA's environmental objective for this factor is to maintain the integrity, ecological functions and environmental values of wetlands.

### ***Position Statement No. 4***

The proposed operation is for extraction of clay. It is therefore unrealistic to try to restore the original re-disturbance landforms, habitats and hydrology of Coondaree Swamp. Rather, the aim should be to ensure that rehabilitation is carried out in a planned and sequential manner so as to provide a range of habitat types to maximize the values of the area for biodiversity.

While modification of the wetland is proposed, it is not considered inconsistent with the EPA's Position Statement No.4 for the following reasons:

- the swamp has been extensively degraded by previous excavation and human disturbance and the present vegetation is a mono-culture of *Melaleuca terretifolia*. Through planned and progressive rehabilitation this can be replaced with a range of vegetation endemic to the area and provision of an array of habitats for wildlife;

- rehabilitation to create an artificial wetland will enhance primary production and can be carried out in such a way as to protect water quality (see discussion under section 3.3); and
- the proposal will result in improved landscape amenity through creation of a planned artificial wetland system in place of the existing un-rehabilitated steep sided pits.

***Preliminary Position Statement No. 9***

The proposed offset package of the transfer to the State of Western Australia, at no charge, of approximately 4.7ha of the eastern side of Lot 12 Lexia Avenue (Figure 1) for addition to Ellen Brook Nature Reserve will provide additional protected habitat for the endangered Western Swamp Tortoise. This initiative has been developed through extensive consultation with the Department of Conservation and Land Management (CALM) and is fully supported by CALM. The EPA is of the view that proposed environmental offset is commendable and will provide a valuable addition to the conservation estate.

**Conclusion**

It is the EPA’s view that the proposed change to conditions can be managed to meet the EPA’s environmental objective for this factor provided that:

- a condition is imposed requiring the preparation of a progressive wetland rehabilitation plan before the excavation of Coondaree Swamp occurs; and that,
- the proposed donation of land for addition to Ellen Brook Nature Reserve proceeds.

**3.3 Acid Sulfate Soils**

**Description**

Acid sulfate soils are naturally occurring soils and sediments containing sulfide minerals, predominantly pyrite (an iron sulfide). In an undisturbed state below the watertable, these soils are benign and not acidic. However if the soils are drained, excavated or exposed by lowering of the water table, the sulfides will react with oxygen to form sulphuric acid (Department of Environment, 2004).

One section of the proposed extension to the excavation area includes Coondaree Swamp, Lot 19 Copley Road and Lot 100 Great Northern Highway. This area as detailed in the West Australian Planning Commission Bulletin No. 64 is classified as having a “high risk of actual acid sulfate soil and potential acid sulfate soil < 3m from surface,” (WAPC, 2003).

**Stakeholder comments**

The Department of Environment’s Land and Water Quality Branch recommended that the requirements of WAPC Planning Bulletin No 64 should be enforced. That is, that an acid sulfate soil investigation is required when land disturbance is planned in high risk areas.

The proponent has indicated its intention that, before excavations proceed in high risk areas, there will be a full ASS investigation with results notified to the EPA.

**Assessment**

The area considered for assessment of this factor is those areas classed as high risk for ASS, namely Coondaree Swamp (Lots 7 and 19 Copley Road and Lot 100 Great Northern Highway).

The EPA's environmental objective for this factor is to ensure that the environment is protected from pollution from disturbed acid sulfate soils.

Acid sulfate soils can generate sulphuric acid if they are exposed to the air. The risk of ASS pollution can be managed in this case since the operation will not involve dewatering. Furthermore the proposed closure strategy is to create an artificial wetland system thereby providing the opportunity to place any potentially acid-forming materials so that they will be permanently submerged underwater. However it must be emphasised that it will be critical to ensure that any potential ASS material is identified, segregated and placed to ensure that it will remain submerged. In particular it must not be placed on the upper parts of bund walls or in other areas where it will be exposed to air.

The EPA also notes the advice of the Department of Environment that the proposed areas to be excavated are not hydrologically linked to the Ellen Brook Nature Reserve and that there is therefore no possibility of acid impacts on the nature reserve or on the habitat of the Western Swamp Tortoise.

### **Conclusion**

It is the EPA's opinion that the proposed change to conditions can be managed to meet the EPA's environmental objective for this factor provided that:

- a condition is imposed to require the appropriate identification and management of acid sulfate soils.

## **4. Conditions and commitments**

Section 46(3) of the *Environmental Protection Act 1986* requires the EPA to report to the Minister for the Environment on whether or not the proposed changes to conditions or procedures should be allowed. In addition, the EPA may make recommendations as it sees fit.

In developing recommended conditions for each project, the EPA's preferred course of action is to have the proponent provide an array of commitments to ameliorate the impacts of the proposed change to conditions on the environment. The commitment made by Midland Brick is considered by the EPA as part of its assessment of the proposal.

### **4.1 Recommended commitments**

Midland Brick has made changes its commitment to reflect discussions with the Department of Environment which have been part of the assessment process. The proponent's commitments as set out in the Section 46 document (Midland Brick, 2004) and subsequently modified, as shown below (Table 2), should be made enforceable conditions.

**Table 2: Summary of proponent’s commitments**

No.	Topic	Objective	Action	Timing	Advice
1.	Transfer of land	To increase the size of Ellen Brook Nature Reserve and provide additional protected habitat for the Western Swamp Tortoise	The proponent will transfer approximately 4.7ha of the eastern side of Lot 12 Lexia Avenue to the Crown.  The area includes Bush Forever site 301B	Transfer should commence within 6 months following the issue of the Section 45(7) notice to the Decision - Making Authorities.  Transfer should be finalised as soon as possible after the process begins	CALM  DPI

## 4.2 Changes to other Environmental Conditions

Assessment of the proposed changes to conditions under Section 46 of the *Environmental Protection Act 1986* allows the EPA the opportunity to amend other environmental conditions in addition to the time limit condition (Condition 3, Appendix 4)

The EPA has reviewed the existing environmental conditions with a view to:

- (a) updating the statement into the current format;
- (b) ensuring compatibility with current environmental protection regulations; and
- (c) applying conditions which are now routinely applied to proposals of this type.

The EPA’s proposed changes to the environmental conditions are set out in Appendix 4. These conditions should be examined in conjunction with the original environmental conditions in Appendix 3.

## 4.3 Recommended conditions

The EPA recommends that, if the proposed change to conditions by Midland Brick Company Pty Ltd is approved for implementation, the existing Environmental Conditions applied to the project (Ministerial Statement 251 published in April 1992), be subject to modifications necessary to:

- indefinitely extend the time limit of environmental approval, subject to a 5-yearly environmental review;
- allow for the expansion of the existing location approvals to include the new locations, Lot 19, 45 and 46 St Albans road, Lot 19 Copley Road and Lot 100 Great Northern Highway;
- update the statement into the current format;
- require the production of a wetland rehabilitation program for Coondaree Swamp and surrounding areas;
- require an acid sulfate soil (ASS) investigation and (if necessary) production of an ASS Management Plan on areas deemed “high risk” before the commencement of excavation works within the high risk areas; and
- provide for the transfer to the Crown of approximately half of Lot 12 Lexia Avenue to be added to Ellen Dale Nature Reserve to provide additional protected habitat for the endangered Western Swamp Tortoise.

The proposed changes to conditions are set out in detail in Appendix 4.

## **5. Conclusions**

The EPA has considered the change to conditions proposed by Midland Brick and has concluded that it can be managed to meet the EPA's objectives for the relevant environmental factors.

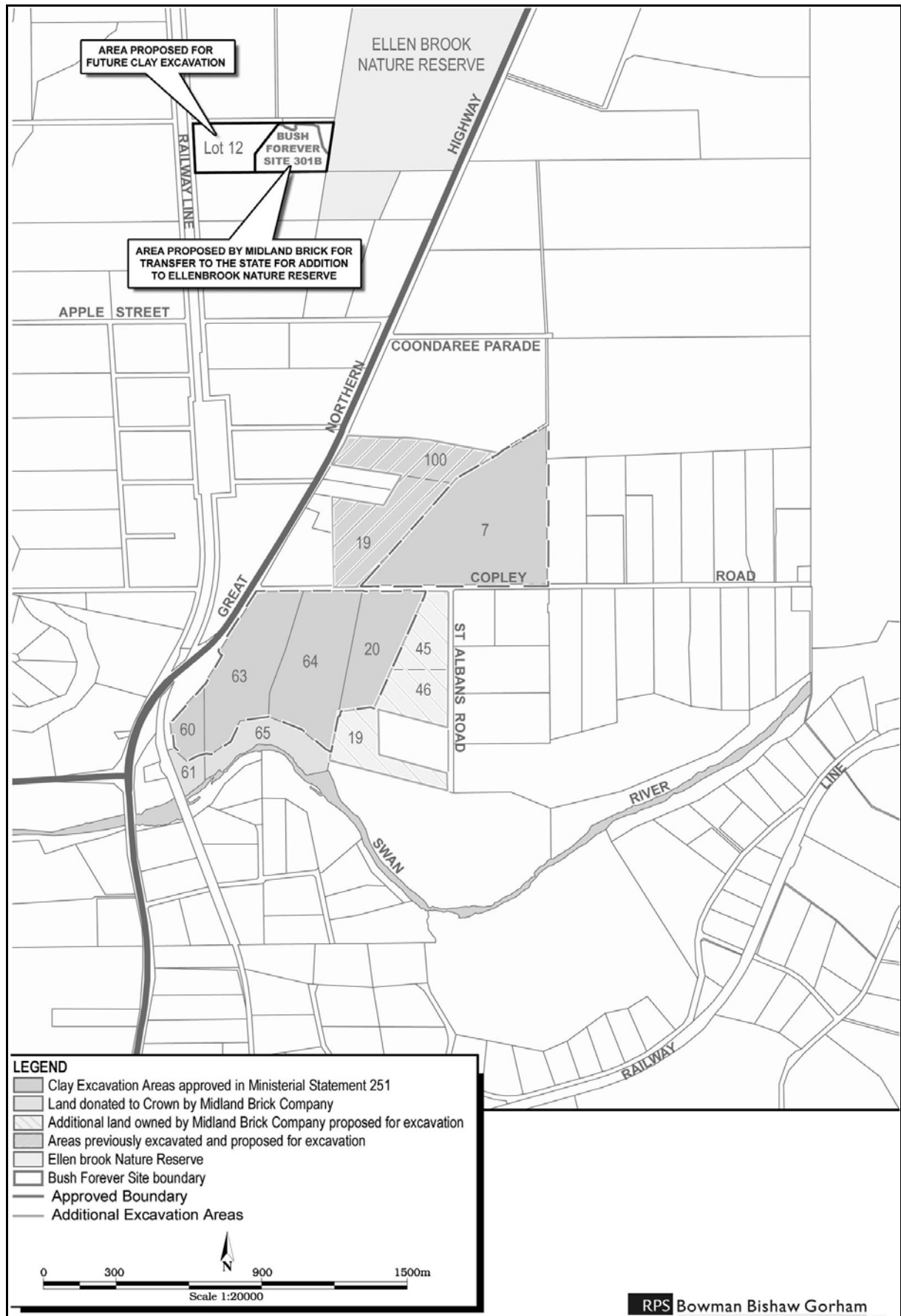
The EPA believes that the 14-year period since the original proposal was assessed has given rise to three relevant environmental issues that cause the EPA to reconsider its previous recommendations as to the environmental acceptability of the project and provide advice on the mitigation of these issues. In particular the EPA has concluded that the proposed excavation of Coondaree Swamp (a resource enhancement wetland) is acceptable in view of the proposed rehabilitation of the area to form an artificial wetland and the environmental offset proposed by the proponent, namely donation of land to be added to Ellen Brook Nature Reserve to provide additional protected habitat for the endangered Western Swamp Tortoise.

In addition to the above, the EPA considers that conditions attached to the environmental approval should be updated. It has therefore also reported on the updating of conditions.

## **6. Recommendations**

The EPA submits the following recommendations to the Minister for the Environment:

1. That the Minister notes that this report is pursuant to Section 46(3) of the *Environmental Protection Act 1986*.
2. That the Minister notes that the proposed change includes extending the time limit for the existing approved Lots of the excavation and expanding the project to include Lot 19 Copley Road, Lots 19, 45 and 46 St Albans Road and Lot 100 Great Northern Highway, Upper Swan.
3. The EPA recommends that the Minister considers the report on the relevant environmental factors as set out in Section 3.
4. That the Minister notes that the EPA has concluded that the proposed change to conditions can be managed to meet the EPA's objectives, and thus not impose an unacceptable impact on the environment provided there is satisfactory implementation by the proponent of the amended conditions and commitments, as set out in Section 4.
5. The Minister imposes the amended conditions, commitments and procedures recommended in Appendix 4 of this report.



**Figure 1: Location of Existing and Proposed Clay Excavation Areas**



**Figure 2: Aerial View of Clay Excavation Site showing the Location of Coondaree Swamp**



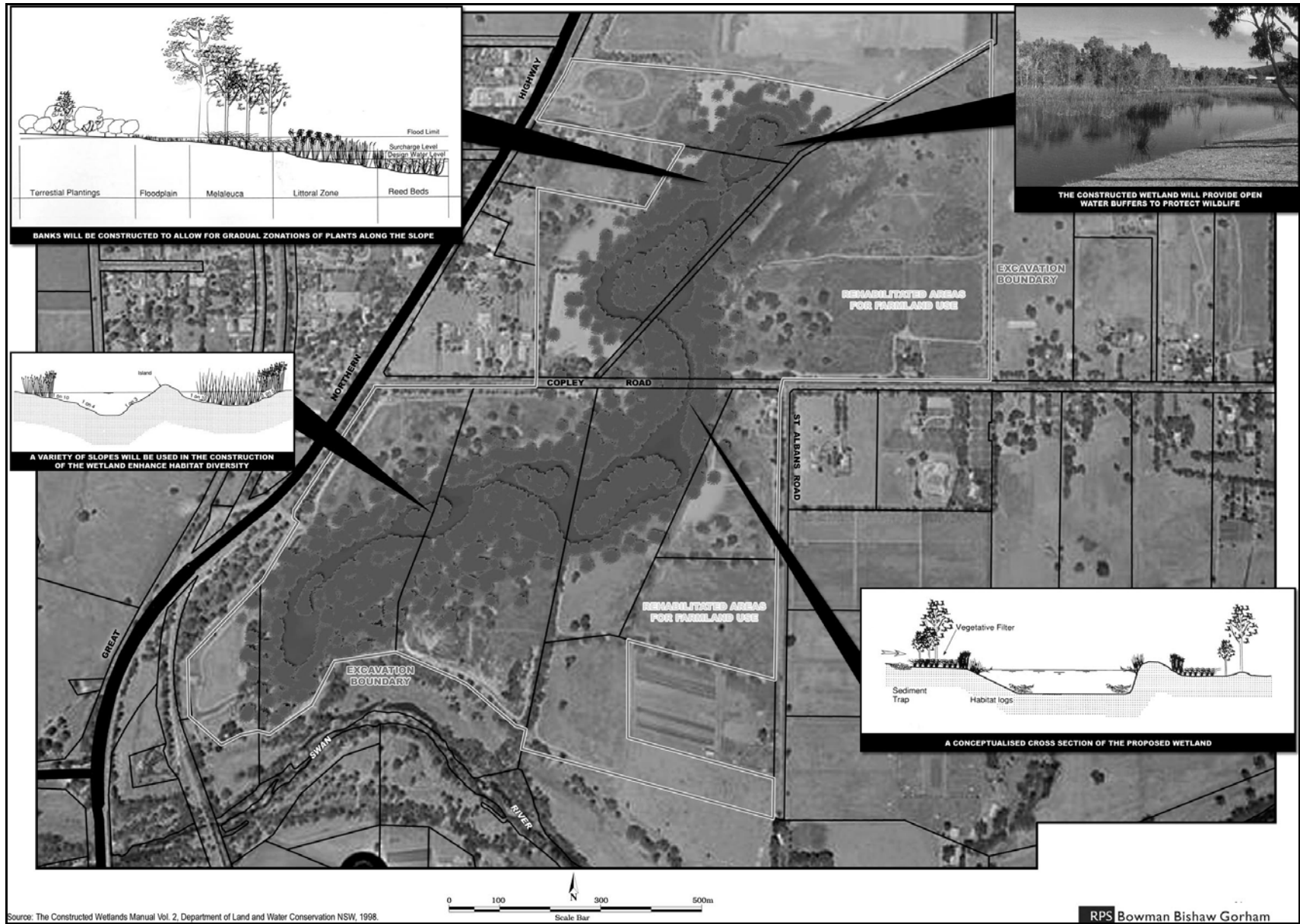


Figure 3: Diagram of Proposed Rehabilitation Landforms

## **Appendix 1**

### **List of Stakeholders**

- Department of Environment
- Department of Conservation and Land Management
- City of Swan
- Swan River Trust

## **Appendix 2**

### **References**

- Department of Environment (2003) *Guidance on Managing Acid Sulfate Soils*, Department of Environment, Perth, Western Australia.
- Environmental Protection Authority (1991) *Clay Excavation, part lot 1 and lots 222, 27, 26, 25, 28 and 7 Hallett and Copley Roads, Upper Swan*, Bulletin 599, Environmental Protection Authority, Perth, Western Australia
- Environmental Protection Authority (1992) *Environmental Protection (Swan Coastal Plain Lakes) Policy Approval Order 1992*, Environmental Protection Authority, Perth, Western Australia
- Environmental Protection Authority (2004) *Environmental Protection (Swan Coastal Plain Wetlands) Policy and Regulations 2004*, Environmental Protection Authority, Perth, Western Australia
- Environmental Protection Authority (2004) *Environmental Protection of Wetlands*, Environmental Protection Authority, Perth, Western Australia
- Environmental Protection Authority (2004) *Preliminary Positions Statement No. 9 Environmental Offsets*, Environmental Protection Authority, Perth, Western Australia
- Midland Brick Company Pty Ltd (2004) *Section 46 Review Midland Brick Clay Excavation Hallett and Copley Roads, Upper Swan*
- Western Australian Planning Commission (2003) *Acid Sulfate Soils* Western Australian Planning Commission, Perth, Western Australia

## **Appendix 3**

**Statement of Environmental Conditions of Approval (23 April 1992)**



WESTERN AUSTRALIA  
MINISTER FOR THE ENVIRONMENT

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

**CLAY EXCAVATION, PART LOT 1 & LOTS 222,27,26,25,28 & 7 HALLETT & COPLEY  
ROADS, UPPER SWAN (504)**

**MIDLAND BRICK COMPANY PTY LTD**

This proposal may be implemented subject to the following conditions:

**1. Commitments**

In implementing the proposal, the proponent shall fulfil the commitments (which are not inconsistent with the conditions or procedures contained in this statement) made in the Consultative Environmental Review and included in Environmental Protection Authority Bulletin 599 as Appendix 1. (A copy of the commitments is attached).

**2. Detailed Implementation**

Subject to these conditions, the manner of detailed implementation of the proposal shall conform in substance with that set out in any designs, specifications, plans or other technical material submitted by the proponent to the Environmental Protection Authority with the proposal. Where, in the course of that detailed implementation, the proponent seeks to change those designs, specifications, plans or other technical material in any way that the Minister for the Environment determines on the advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

**3. Length of Tenure**

Approval for the proposal shall be for a maximum of ten years from the date of this statement. Subsequent applications will be reviewed in the light of the proponent's environmental performance at the site.

**4. Environmental Management Programme**

A comprehensive environmental management programme should be prepared to enable the proponent to detect, report on and manage any impacts on the environment.

- 4-1 Prior to the start of quarrying activities, the proponent shall prepare an Environmental Management Programme, following consultation with the appropriate government departments, to the satisfaction of the Minister for the Environment on advice of the Environmental Protection Authority. Plans to be prepared as part of the Environmental Management Programme shall include, but not necessarily be limited to:

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- (1) a staged quarrying strategy;
- (2) drainage management;
- (3) lakewater management;
- (4) groundwater management and protection;
- (5) excavation and rehabilitation procedures;
- (6) end-use and progressive rehabilitation of the site;
- (7) procedures to minimise noise, dust and visual impacts associated with the quarrying and transportation operations;
- (8) periodic reporting of monitoring results; and
- (9) consequential changes to project management to remedy unacceptable environmental impacts.

4-2 The proponent shall implement the Environmental Management Programme required by condition 4-1 to the satisfaction of the Environmental Protection Authority.

4-3 The proponent shall periodically review the Environmental Management Programme required by condition 4-1 to the satisfaction of the Environmental Protection Authority.

## **5. Regional Development, Drainage and Rehabilitation**

The proponent shall contribute, to the satisfaction of the Environmental Protection Authority, to the preparation of a regional development, drainage and rehabilitation strategy for the Upper Swan locality in consultation with the appropriate government departments, including the Main Roads Department, the Department of Conservation and Land Management and the Department of Planning and Urban Development, the Shire of Swan and other current and known proposed clay producers in the area, such that the plan can be prepared within two years of the date of this statement.

## **6. Decommissioning**

The proponent shall be responsible for decommissioning and removal of the plant and installations and rehabilitating the site and its environs, to the satisfaction of the Environmental Protection Authority. At least six months prior to decommissioning, the proponent shall prepare and subsequently implement a decommissioning and rehabilitation plan, to the satisfaction of the Environmental Protection Authority.

## **7. Proponent**

No transfer of ownership, control or management of the project which would give rise to a need for the replacement of the proponent shall take place until the Minister for the Environment has advised the proponent that approval has been given for the nomination of a replacement proponent. Any request for the exercise of that power of the Minister shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the project in accordance with the conditions and procedures set out in the statement.



## **8. Time Limit on Approval**

If the proponent has not substantially commenced the project within five years of the date of this statement, then the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment shall determine any question as to whether the project has been substantially commenced. Any application to extend the period of five years referred to in this condition shall be made before the expiration of that period, to the Minister for the Environment by way of a request for a change in the condition under Section 46 of the Environmental Protection Act. (On expiration of the five year period, further consideration of the proposal can only occur following a new referral to the Environmental Protection Authority).

## **9. Compliance Auditing**

The proponent is responsible for complying with the environmental conditions and commitments.

- 9-1 The proponent shall prepare an "Audit Programme" in consultation with and to the satisfaction of the Environmental Protection Authority. The programme shall include, but not be limited to, the preparation of regular "Compliance Reports" to show the progress of the proposal, any changes to the original proposal, and how the proponent has complied with the environmental conditions.
- 9-2 Subsequent to condition 9-1, the proponent shall implement the approved Audit Programme to the satisfaction of the Environmental Protection Authority.

Bob Pearce, MLA  
MINISTER FOR THE ENVIRONMENT

22 APR 1992

## **Proponent's Environmental Management Commitments (504)**

In addition to the conditions of their existing approval, Midland Brick Company Pty Ltd agree to:

- (1) Consult with planning authorities to facilitate the derivation of a long term strategic plan for the Upper Swan locality which recognizes and accepts the interim priority land use of clay extraction.
- (2) Ensure that the company's present rehabilitation concept is consistent with the overall rehabilitation goal for the locality once this has been formally agreed by the parties concerned.
- (3) Comply with excavation licence conditions negotiated with the Shire of Swan and in consultation with the Environmental Protection Authority and the Swan River Trust.

## **Appendix 4**

### **Recommended Environmental Conditions and Proponent's Consolidated Commitments**

DRAFT RECOMMENDED ENVIRONMENTAL CONDITIONS

**STATEMENT TO AMEND CONDITIONS APPLYING TO A PROPOSAL  
(PURSUANT TO THE PROVISIONS OF SECTION 46 OF THE  
ENVIRONMENTAL PROTECTION ACT 1986)**

CLAY EXCAVATION

Part lot 1 and lots 222, 27, 26, 25, 28, and 7 Hallett and Copley Roads, Upper Swan.

**Proposal:** The operation of a clay excavation facility in Upper Swan, as documented in schedule 1 of this statement.

**Proponent:** Midland Brick Company Pty Ltd

**Proponent Address:** 102 Great Northern Highway, Middle Swan, WA, 6056

**Assessment Number:** 1432

**Previous Assessment Number:** 504

**Previous Statement Number:** 251 (Published on 23 April 1992)

**Report of the Environmental Protection Authority:** Bulletin 1157

**Previous Report of the Environmental Protection Authority:** Bulletin 599

The implementation of the proposal to which the above reports of the Environmental Protection Authority relate is subject to the following conditions and procedures, which replace all previous conditions and procedures:

**1 Implementation**

1.1 The proponent shall implement the proposal as documented in schedule 1 of this statement subject to the conditions of this statement.

**2 Proponent Commitments**

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

**3 Proponent Nomination and Contact Details**

3-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the *Environmental Protection Act 1986* 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 as the proponent for the proposal.

- 3-2 If the proponent wishes to relinquish the nomination, the proponent shall apply for the transfer of proponent and provide a letter with a copy of this statement endorsed by the proposed replacement proponent that the proposal will be carried out in accordance with this statement. Contact details and appropriate documentation on the capability of the proposed replacement proponent to carry out the proposal shall also be provided.
- 3-3 The nominated proponent shall notify the Department of Environment of any change of contact name and address within 60 days of such change.

#### **4 Commencement and Time Limit of Approval**

- 4-1 The proponent shall substantially commence the proposal within five years of the date of the statement published on 23 April 1992 or the approval granted in that statement shall lapse and be void.

Note: The Minister for the Environment will determine any dispute as to whether the proposal has been substantially commenced.

- 4-2 The proponent shall make application for any extension of approval for the substantial commencement of the proposal beyond five years from the date of the statement published on 23 April 1992 to the Minister for the Environment, prior to the expiration of the five-year period referred to in condition 4-1.

The application shall demonstrate that:

- 1 the environmental factors of the proposal have not changed significantly;
- 2 new, significant, environmental issues have not arisen; and
- 3 all relevant government authorities have been consulted.

Note: The Minister for the Environment may consider the grant of an extension of the time limit of approval not exceeding five years for the substantial commencement of the proposal.

#### **5 Compliance Audit and Performance Review**

- 5-1 The proponent shall prepare an audit program and submit annual compliance reports to the Department of Environment which address:
- 1 the status of implementation of the proposal as defined in schedule 1 of this statement;
  - 2 evidence of compliance with the conditions and commitments; and
  - 3 the performance of the environmental management plans and programs.

The next annual compliance report shall be submitted to the Department of Environment no later than the 1 June 2005.

Note: Under sections 48(1) and 47(2) of the *Environmental Protection Act 1986*, the Chief Executive Officer of the Department of Environment is empowered to monitor the compliance of the proponent with the statement and should directly receive the compliance documentation, including environmental management plans, related to the conditions, procedures and commitments contained in this statement.

- 5-2 The proponent may excavate clay indefinitely, subject to the acceptability of performance review reports which shall be submitted every five years after the start of the operations phase, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The performance review reports shall address the following:

- 1 the major environmental issues associated with the project; the targets for those issues; the methodologies used to achieve these; and the key indicators of environmental performance measured against those targets;
- 2 the level of progress in the achievement of sound environmental performance, including industry benchmarking, and the use of best available technology where practicable;
- 3 significant improvements gained in environmental management, including the use of external peer reviews;
- 4 stakeholder and community consultation about environmental performance and the outcomes of that consultation, including a report of any on-going concerns being expressed; and
- 5 the proposed environmental targets over the next five years, including improvements in technology and management processes.

## **6 Acid Sulfate Soils Investigation and Management Plan**

- 6-1 Prior to any ground-disturbing activities associated with the excavation and dewatering of areas classed as having a “high risk” of Acid Sulfate Soils according to the Western Australian Planning Commission Bulletin No. 64, the proponent shall prepare an Acid Sulfate Soils Investigation and Management Plan to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The objectives of the Plan are:

- to ensure that any ground-disturbing activities which may disturb acid sulfate soils and/or contaminated waters are planned and managed to avoid adverse effects on the natural and built environment, human activities and health.

The Plan shall address:

- 1 identification of acid sulfate soils in and near areas proposed to be disturbed,  
and,

in the event that the disturbance of acid sulfate soils is unavoidable, the plan shall also address:

- 2 potential on-site and off-site effects of the disturbance of the acid sulfate soils and/or groundwater levels;
- 3 how drainage or soil extraction will be undertaken to minimise environmental impacts;
- 4 how any acid leachate generated as a result of ground-disturbing activities will be managed;
- 5 management of areas, both on and off-site, used to store or treat extracted soil;
- 6 comprehensive surface and ground water quality monitoring both on and off-site, if applicable;
- 7 establishment of agreed performance criteria and objectives in relation to environmental and social impacts; and
- 8 contingency measures and procedures in the event that the agreed performance criteria may not be met.

6-2 The proponent shall implement the Acid Sulfate Soils Investigation and Management Plan required by condition 6-1, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

6-3 The proponent shall make the Acid Sulfate Soils Investigation and Management Plan, required by condition 6-1, publicly available, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

## **7 Wetland Rehabilitation Plan**

7-1 Prior to the re-commencement of ground-disturbing activities, the proponent shall prepare a Wetland Rehabilitation Plan, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

This Plan shall include:

- 1 a report of a detailed vegetation and flora survey of the areas likely to be impacted by the proposal;
- 2 characterisation of the habitats likely to be impacted by the proposal;
- 3 an integrated and progressive mining and landscaping plan designed to optimise rehabilitation outcomes and provide a range of habitats in the final landform;
- 4 proposed final landforms and the identification of areas to be revegetated;
- 5 a rehabilitation and revegetation management plan for areas of vegetation to be disturbed during excavation;
- 6 agreed timelines and progressive performance criteria;

- 7 monitoring against the agreed progressive performance criteria;
- 8 contingency measures in the event that the rehabilitation or revegetation fails to meet agreed performance criteria; and
- 9 responsibilities for continued maintenance of rehabilitated and landscaped areas.

Note: In the preparation of advice to the Minister for the Environment, the Environmental Protection Authority expects to obtain advice of the Department of Environment and the Swan River Trust.

- 7-2 The proponent shall implement the Wetland Rehabilitation Plan, required by condition 7-1, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.
- 7-3 The proponent shall make the Wetland Rehabilitation Plan, required by condition 6-1, publicly available, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

## **8 Environmental Management Programme**

- 8-1 The proponent shall prepare, make publicly available and subsequently implement an updated Environmental Management Programme also addressing the requirements of conditions 6 and 7 and the new locations (see table 1), to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The plans, strategies or reports to be prepared as part of the Environmental Management Programme shall include the following:

- 1 a staged excavation strategy;
- 2 Acid Sulfate Investigation and Management Plan (see condition 6);
- 3 groundwater management and protection;
- 4 progressive rehabilitation of the site;
- 5 Wetland Rehabilitation Plan (see condition 7);
- 6 weed management;
- 7 identification, management and protection of archaeological material;
- 8 procedures to minimise noise, dust and visual impacts associated with the quarrying and transport operations;
- 9 public safety and mosquito control;
- 10 periodic reporting of monitoring results;



- 11 consequential changes to project management to remedy unacceptable impacts; and
- 12 clearly indicated timeframes for implementation of each stage.

## **9 Decommissioning Plans**

- 9-1 Within two years following the date of the statement published on 23 April 1992, the proponent shall prepare a Preliminary Decommissioning Plan, which provides the framework to ensure that the site is left in an environmentally acceptable condition to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The Preliminary Decommissioning Plan shall address:

- 1 rationale for the siting and design of plant and infrastructure as relevant to environmental protection, and conceptual plans for the removal or, if appropriate, retention of plant and infrastructure;
  - 2 long-term management of ground and surface water systems;
  - 3 a conceptual rehabilitation plan for all disturbed areas and a description of a process to agree on the end land use(s) with all stakeholders;
  - 4 a conceptual plan for a care and maintenance phase; and
  - 5 management of noxious materials to avoid the creation of contaminated areas.
- 9-2 At least 12 months prior to the anticipated date of decommissioning, or at a time agreed with the Environmental Protection Authority, the proponent shall prepare a Final Decommissioning Plan designed to ensure that the site is left in an environmentally acceptable condition to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The Final Decommissioning Plan shall address:

- 1 removal or, if appropriate, retention of plant and infrastructure in consultation with relevant stakeholders;
  - 2 long-term management of ground and surface water systems;
  - 3 rehabilitation of all disturbed areas to a standard suitable for the agreed new land use(s); and
  - 4 identification of contaminated areas, including provision of evidence of notification and proposed management measures to relevant statutory authorities.
- 9-3 The proponent shall implement the Final Decommissioning Plan required by condition 9-2 until such time as the Minister for the Environment determines, on advice of the

Environmental Protection Authority, that the proponent's decommissioning responsibilities have been fulfilled.

- 9-4 The proponent shall make publicly available the Final Decommissioning Plan required by condition 9-2 to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

### **Procedures**

- 1 Where a condition states "to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority", the Environmental Protection Authority will provide that advice to the Department of Environment 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.
- 3 The City of Swan will adjust the bond on the proponent, as appropriate, commensurate with the expanded area of the excavation.

### **Notes**

- 1 The Minister for the Environment will determine any dispute between the proponent and the Environmental Protection Authority or the Department of Environment over the fulfilment of the requirements of the conditions.

## Schedule 1

### The Proposal (Assessment No. 1432)

The proponent conducts clay excavation operations.

The Key Proposal Characteristics are shown in Table 1.

**Table 1 – Key Proposal Characteristics**

Element	Quantities/Description
Offset	Transfer to the State of Western Australia, at no charge, of approximately half of Lot 12 Lexia Avenue (eastern side) for addition to Ellen Brook Nature Reserve to provide additional habitat for the endangered Western Swamp Tortoise.
Existing extraction areas	A change to the numbering of the lots has occurred. The new numbers are Lots 7, 60, 63, 64 and 20 Hallett and Copley Roads, Upper Swan (Replacing Part lot 1 and lots 222, 27, 26, 25, 28, and 7 Hallett and Copley Roads, Upper Swan).
Areas for extension of clay extraction	Lot 19 Copley Road, Lot 100 Great Northern Highway and Lots 19, 45 and 46 St Albans Road, Upper Swan.
*Size of Clay Body	Approximately 4 million tonnes
*#Total Area of Disturbance	Approximately 109 hectares
*Rate of Extraction	Approximately 180,000 tonnes per year
Major Infrastructure	nil
Overburden	Between 1 and 6 million tonnes
Water Usage	nil

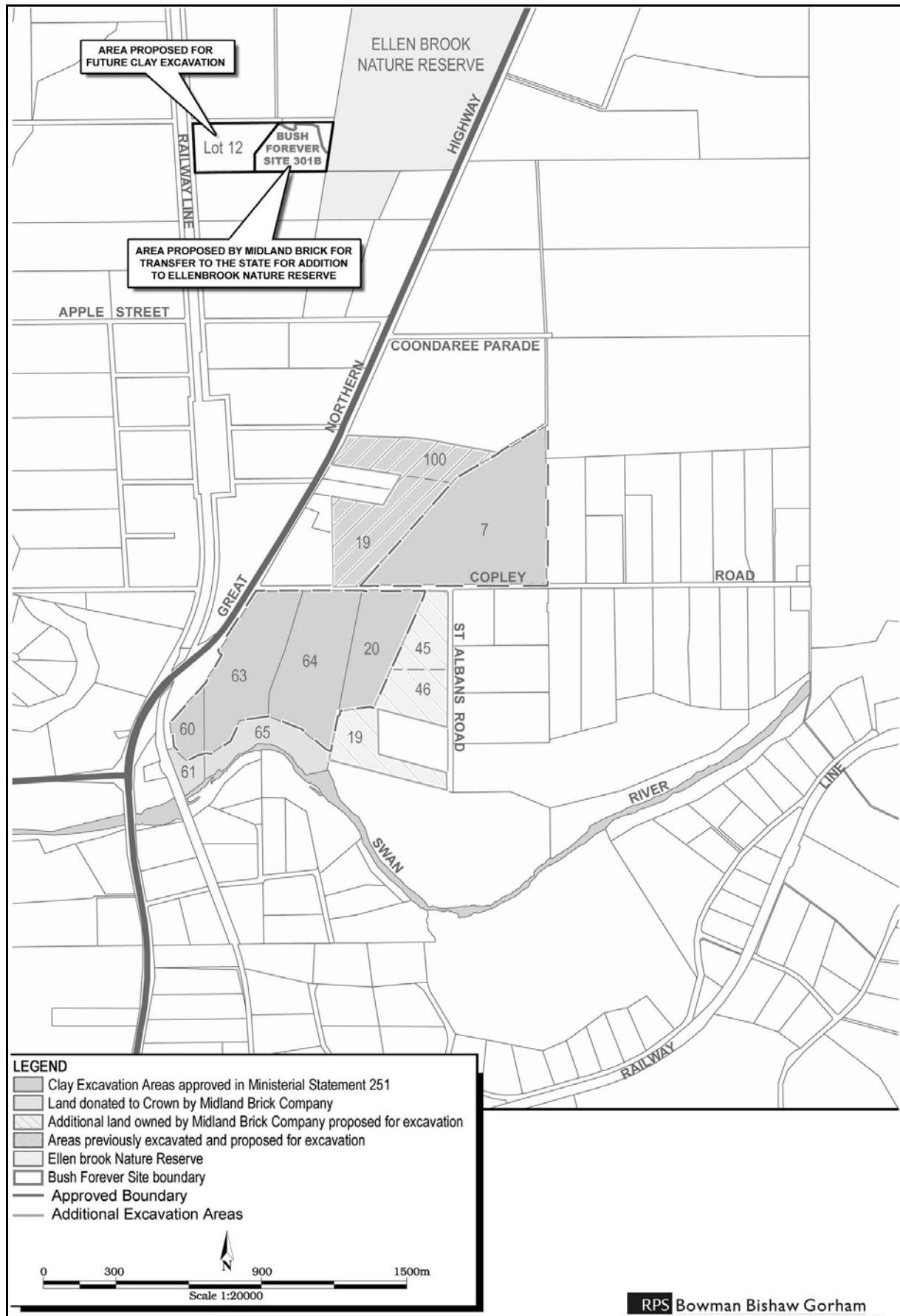
# will also be rehabilitated.

\* estimated at present usage.

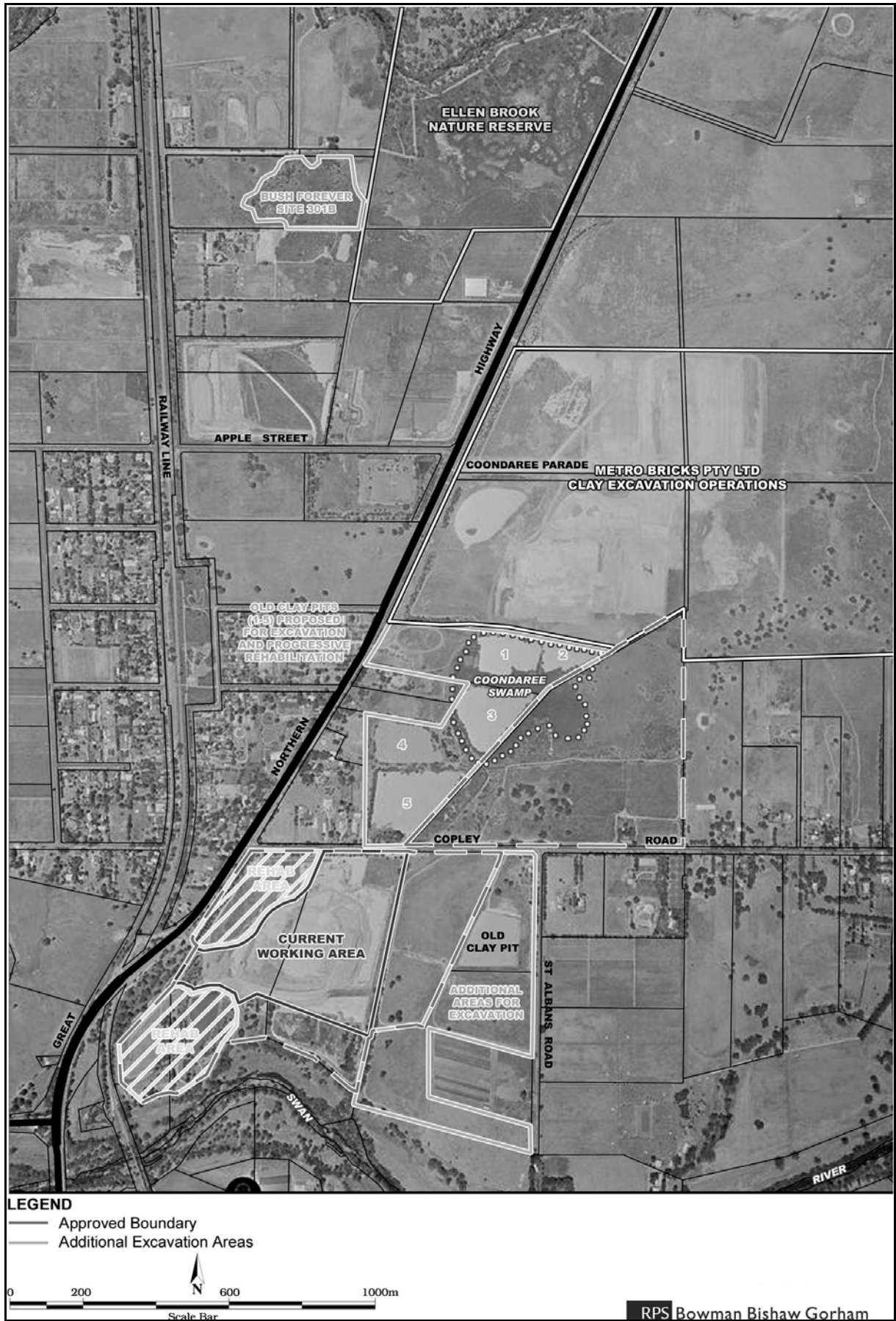
### Figures (attached).

Figure 1 – Location of current and proposed Midland Brick Clay excavation.

Figure 2 - Aerial Photo of Location and current works.



**Figure 1:** Location of current and proposed Midland Brick Clay excavation.



**Figure 2:** Aerial photo of current and proposed Midland Brick Clay excavation works and rehabilitation areas.

**Proponent's Environmental Management Commitments**

1992, as amended

**CLAY EXCAVATION**

**Lots 7, 20, 60, 63 and 64**

*(Previously Part Lot 1 and Lots 222, 27, 26, 25, 28 and 7)*

**Hallett and Copley Roads, Upper Swan**

(Assessment No. 1432)

**MIDLAND BRICK COMPANY PTY LTD**

## Proponent's Environmental Management Commitments (consistent with commitments detailed in 1992)

### CLAY EXCAVATION

LOTS 7, 20, 60, 63, AND 64 (PREVIOUSLY PART LOT 1 AND LOTS 222, 27, 26, 25, 28 AND 7) HALLETT AND COPLEY ROADS, UPPER SWAN

Note: The term "commitment" as used in this schedule includes the entire row of the table and its six separate parts as follows:

- commitment number;
- a commitment topic;
- the objective of the commitment;
- the 'action' to be undertaken by the proponent;
- the timing requirements of the commitment; and
- the body/agency to provide the technical advice to the Department of Environment.

### **MIDLAND BRICK CLAY EXCAVATION PROPONENT'S ENVIRONMENTAL MANAGEMENT COMMITMENTS**

No.	Topic	Objective	Action	Timing	Advice
1.	Transfer of land	To increase the size of the Ellen Brook Nature Reserve and provide additional protected habitat for the Western Swamp Tortoise.	The proponent will transfer approximately 4.7ha of the eastern side of Lot 12 Lexia Avenue to the Crown.  The area includes Bush Forever site number 301B.	Transfer should commence within 6 months following the issue of the Section 45(7) notice to the decision - making authorities.  Transfer should be finalised as soon as possible after the process begins.	CALM DPI