# Clearing Assessment Report – CPS 818

We're working for Western Australia.

## Material Pit Access Road – Great Northern Highway

July 2022

EOS #1495



D22#735245

# Contents

# Amendments

| Report Compilation & Review | Name and Position | Document Revision | Date |
|---|---|---|---|
| Author: | Environment Officer | Draft v1 | 12/07/2022 |
| Reviewer: | Senior Environment Officer | Rev 0 | 19/07/2022 |

# 1 PURPOSE

The purpose of this Clearing Assessment Report (CAR) is to provide a report detailing the assessment of native vegetation clearing that is proposed to be undertaken using the Statewide Clearing Permit CPS 818 issued to Main Roads Western Australia (Main Roads).

The CAR outlines the key activities associated with the project, the existing environment and an assessment of native vegetation clearing. This assessment provides an evaluation of the vegetation clearing impacts associated with the project using the ten Clearing Principles, and the strategies used to manage vegetation clearing.

# 2 SCOPE

## 2.1 Project Scope

**Project Name:** Material Pit Access Track – Great Northern Highway SLK [Redacted]

**Project Purpose / Components:** This project comprises one access track of 0.07ha clearing identified as the safest location to access the existing material pit at SLK [Redacted] on Great Northern Highway.

**The proposed clearing under CPS 818 is:** 0.07ha

**The proposed temporary clearing under CPS 818 is:** None.

**Project Location(s):** The project area is located on Great Northern Highway SLK [Redacted] in the Shire of East Pilbara, as shown in Figure 1.

- MGA reference: 50
- Latitude: [Redacted]S
- Longitude: [Redacted] E

The location of the proposed works is at Figure 1 and Figure 2.

## 2.2 Desktop Assessment Scope

The assessment area is confined to a local area of a 40 km radius, as shown in Figure 3

[REDACTED]

Figure 1. Access track location to the Material Pit at SLK [Redacted] Great Northern Highway

[REDACTED]

**Figure 3. Project Location and Study Area**

## 2.3 Alternatives to Clearing

Due to safety considerations this access track is required at this location. The alignment of the access track will be selected to minimise clearing of trees and large shrubs.

## 2.4 Measures to Avoid, Minimise, Mitigate and Manage Project Clearing Impacts

The design and management measures implemented to avoid and minimise the project clearing impacts are provided in Table 1. The site location has been selected as the safest option to access the SLK [Redacted] pit, and the clearing within the assessed envelope will be selected to a minimise clearing of large trees. As it is a small disturbance envelope (0.07ha) there are minimal opportunities to further minimise impacts.

**Table 1. Justification of Avoiding, Minimising, Mitigating and Managing Project Clearing Impacts**

| Design or Management Measure | Discussion and Justification |
|---|---|
| **Preferential use of existing cleared areas for access tracks, construction storage and stockpiling** | Due to safety considerations this access track is required at this location. The alignment of the access track will be selected to minimise clearing of trees and large shrubs. The design and management measures implemented to avoid and minimise the project clearing impacts are provided in Table 1. The site location has been selected as the safest option to access the SLK [Redacted] pit, and the clearing within the assessed envelope will be selected to a minimise clearing of large trees. As it is a small disturbance envelope (0.07ha) there are minimal opportunities to further minimise impacts. |

## 2.5 Approved Policies and Planning Instruments

The clearing of native vegetation in Western Australia is regulated under the EP Act and the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.3), Main Roads has also had regard to

**Other Legislation of relevance for assessment of clearing and planning/other matters**

- Biodiversity Conservation Act 2016 (WA) (BC Act)
- Conservation and Land Management Act 1984 (WA) (CALM Act)
- Country Areas Water Supply Act 1947 (WA) (CAWS Act)
- Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)
- Planning and Development Act 2005 (WA) (P&D Act)
- Soil and Land Conservation Act 1945 (WA)
- Rights in Water and Irrigation Act 1914
- Aboriginal Heritage Act 1972 (WA)
- Town Planning and Development Act 1928

**Environmental Protection Policies**

- Environmental Protection (Peel Inlet - Harvey Estuary) Policy 1992;
- Environmental Protection (Western Swamp Tortoise Habitat) Policy 2011

**Other Relevant policies and guidance documents:**

- Environmental Offsets Policy (Government of Western Australia, 2011)
- A guide to the assessment of applications to clear native vegetation (DEC, December 2014)
- Procedure: Native vegetation clearing permits (DWER, October 2019)
- Environmental Offsets Guidelines (Government of Western Australia, August 2014)
- Technical guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016)
- Technical guidance – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA, 2020)
- Approved conservation advice under section 266B of the EPBC Act for threatened flora/fauna/vegetation communities
- Approved Recovery Plans for threatened species
- EPBC Act Referral guidelines for the three threatened black cockatoo species
- Strategic advice - EPA

# 3 Methodology

## 3.1 Desktop Study

A desktop assessment of the project area and an assessment of native vegetation clearing was undertaken by reviewing a number of government agency managed databases, viewing GIS shapefiles and consulting with relevant stakeholders where necessary. Results from searches can be found in the relevant Appendix.

GIS layer viewing and mapping is done using ArcMap and / or Main Roads Integrated Mapping System (IMS). Referencing of the GIS layers accessed is done under the relevant methodology section of each clearing principle. Government managed databases were searched to locate additional information, these are referenced in Section 7.

## 3.2 Biological Survey

The project area was surveyed by Woodman Environmental (Woodman 2018) between 16-19th April 2018 which involved a desktop study followed by a reconnaissance survey and targeted survey. The survey covered an area totalling 227.3ha and covered the project area. The survey identified one significant flora taxon *Isotropis parviflora* (P2) with the species occurring exclusively within recently burnt sections of the surveyed area. Woodman Environmental undertook targeted surveys outside the survey area with an additional 500 individuals recorded across these additional locations, all also occurring within recently burnt locations.

# 4 VEGETATION DETAILS

### 4.1.1 Project Site Vegetation Description

The project area occurs within the Hamersley Vegetation System Association and the Boolgeeda Land system. The vegetation units found within the project area consisted of one mapping units VU1 in excellent condition.

VU1 is low open woodland dominated by *Eucalyptus leucophloia* subsp. *leucophloia* over tall sparse shrubland of mixed species including *A. bivenosa* and *A. ancistrocarpa* over mid sparse shrubland of mixed species including *S. glutinosa* subsp. *x luerssenii*, *S. glutinosa* subsp. *pruinosa*, *S.artemisioides* subsp. *oligophylla*, *Ptilotus rotundifolius* and *Eremophila latrobei* subsp. *latrobei* over low sparse shrubland of mixed species including *Acacia hilliana*, *Gompholobium oreophilum*, *Indigofera monophylla*, *Dampiera candicans* and *Goodenia stobbsiana* over low hummock grassland dominated by *Triodia vanleeuwenii* and *T. pungens* on red clay loam with ironstone stones and occasional ironstone outcropping on mid and lower slopes of ranges. (Woodman, 2018)

Tables 2 and 3 provide details of the Pre-European Vegetation Associations with the project area and the remaining extents of these associations.

For a full description of the existing vegetation, refer to the Biological Survey at Appendix 1.

**Table 2. Summary of Project Area's Mapped Pre-European Vegetation Associations**

| Pre-European Vegetation Association | Scale | Pre–European (ha) | Current Extent (ha) | % Remaining | % Remaining in DBCA reserves |
|---|---|---|---|---|---|
| | **IBRA Region**<br>Pilbara IBRA region | 17,808,657.06 | 17,733,583.90 | 99.58 | 10.16 |
| | **Statewide**<br>Veg Assoc No. 18 | 19,892,304.78 | 19,843,727.37 | 99.76 | 6.64 |
| | **IBRA region**<br>Veg Assoc No. 18 in the IBRA Pilbara region | 676,556.72 | 672,424.33 | 99.39 | 25.33 |
| | **Local Government Authority**<br>Shire of East Pilbara | 359,372.11 | 355,446.46 | 98.91 | 1.49 |

**Table 3. Pre-European Vegetation Representation**

| Pre-European Vegetation Association(s) | Clearing Description | Vegetation Condition | Comments |
|---|---|---|---|
| Vegetation Association 18. | Clearing of up to 0.07ha. | Excellent | Vegetation description and condition determined from Woodman biological survey conducted in June 2018. |

# 5 Assessment Against the Ten Clearing Principles

In assessing whether the project's proposed clearing is likely to have a significant impact on the environment, the project was assessed against the ten Clearing Principles (*Environmental Protection Act 1986* (EP Act), Schedule 5).

Each principle has been assessed in accordance with DWER's 'A Guide to the Assessment of Applications to Clear Native Vegetation' and other relevant CPS Decision Reports prepared by DWER.

The proposed clearing is not likely to be at variance with the 10 Clearing Principles.

**(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.**

**Proposed clearing is not at variance to this Principle**

**Vegetation types**

The project requires the clearing of a small 0.07ha area of Vegetation Association 18, which is widespread throughout the Pilbara and not restricted to the Study Area (see tables below). The project area lies adjacent to an undisturbed vegetation with extensive (220 ha) uncleared vegetation present. The identified vegetation unit is not associated with a Priority or Threatened Ecological Community.

**Table 2: Pre-European Vegetation Representation**

| Pre-European Vegetation Association(s) in: | Pre–European (ha) | Current Extent (ha) | % Remaining | % Remaining in DPaW reserves |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| **IBRA Region**<br>Pilbara IBRA region | 17,808,657.06 | 17,733,583.90 | 99.58 | 10.16 |
| **Statewide**<br>Veg Assoc No. 18 | 19,892,304.78 | 19,843,727.37 | 99.76 | 6.64 |
| **IBRA region**<br>Veg Assoc No. 18 in the IBRA Pilbara region | 676,556.72 | 672,424.33 | 99.39 | 25.33 |
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| Pre-European Vegetation Association(s) | Clearing Description | Vegetation Condition | Comments |
|---|---|---|---|
| Vegetation Association 18. | Clearing of up to 0.07ha. | Excellent | Vegetation description and condition determined fro Woodman biological survey conducted in June 2018. |

None of the flora species recorded at the project areas were considered to be Threatened. One EPBC Act listed flora species, Mt Augustus Foxglove is listed as likely to occur in the 40km desktop study area but was not recorded during the targeted flora survey (Woodman, 2018). A single priority species *Isotropis parviflora* (P2) is listed as occurring within the 40km desktop study area and is described as being widespread in the region and habitat in the area surrounding the project area (Woodman, 2018. No *Isotropis parviflora* individuals were recorded in project area during the targeted biological survey (Woodman 2018). Based on the desktop search results and the absence of priority flora species during the targeted biological survey, the removal of 0.07ha will not have significant impact on priority flora species.

NatureMap identified 846 fauna species within 40 km of the project area. The following conservation significant fauna were identified within the 40km study area:

**Fauna**
**Critically Endangered**
*Calidris ferruginea* – Curlew Sandpiper – known to occur in 40 km study area

**Endangered**
*Pexoporus occidentalis* – Night parrot – not likely to occur
*Rostratulaa australis* – Australian painted snipe – may occur
*Dasyurus hallucatus* – northern quoll – known to occur

**Vulnerable**
*Falco hypoleucos* – Gray Falcon – likely to occur
*Polytelis alexandrawe* – Princess Parrot – may occur in buffer zone
*Macroderma gigas* – Ghost bat – known to occur
*Macrotis lagotis* – Greater Bilby – likely to occur in buffer zone
*Rhinoniceteris aurantia* – Pilbara Leaf – nosed bat – known to occur
*LIasis oliveaceus barroni* – Olive Python – known to occur
*Liopholis kintorei* – Great Desert skink – may occur

**Migratory**
*Apus pacificus* – Fork Tailed Swift – may occur
*Charadrius veredus* -Oriental Plover – unlikely to occur

**Priority 4**
*Pseudomys chapmani* Western Pebble -mound mouse – known to occur

*Sminthpsis longicaudata* Long Tailed Dunnart – may occur
*Dasycercus blythi* - Brush-tailed Mulgara - may occur

The project area is surrounded by 220ha of vegetation that provides habitat values to the local fauna. Removal of 0.07 hectares of vegetation will not have a significant impact on the fauna listed above or the biodiversity of the local area.

Given the above, clearing of 0.07ha is not likely to be at variance to this principle.

**Methodology**
DBCA shapefiles
MRWA GIS Shapefiles
DoEE Protected Matters Search Tool (2022)
Woodman (2018)

## (b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

**Proposed clearing is not at variance to this Principle**

**Comments**
Surveys conducted by Woodman identified the fauna habitat of 'low stony hills' within the project area, which accounted for 222 ha of the total 227.3ha surveyed. The fauna habitats in the project area is common in the Pilbara Bioregion. The project area is unlikely to be part of an important linkage ('wildlife corridor' or stepping stone') as the habitats are broad in extent and the Bioregion remains largely uncleared. In addition, due to the small area of clearing (0.07 ha), this is unlikely to have a significant impact on the fauna habitat of the area.

The Woodman 2018 biological field survey confirmed the occurrence of the Western Pebble-mound Mouse (*Pseudomys chapmani*) within the wider surveyed area however it was not recorded within the project area. Conservation significant fauna identified as likely to occur within the 40km study area (see Principal A) will not be significantly impacted noting the transients and mobile nature of the species And due to the extensive availability of suitable and continuous habitat immediately surround the project area (e.g., 220 ha).

The 0.07 ha of vegetation is not necessary for the maintenance of or deemed a significant habitat for fauna and as such is not at variance with this clearing Principal.

**Methodology**
Woodman (2018)
DBCA Shapefiles
DBCA website
EPA (2016, 2020)

## (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

**Proposal is not at variance to this Principle**

**Comments**
There are no known records of Threatened or rare flora within the project area (GIS Database). Flora surveys of the application area did not record any species of rare or Threatened flora (Woodman, 2018).

The vegetation associations within the application area are common and widespread within the region (GIS Database), and the 0.07ha of vegetation to be cleared is unlikely to be necessary for the continued existence of any species of Threatened (rare) flora.

Based on the above, the proposed clearing is not at variance to this Principle.

**Methodology**
DBCA shapefiles
Woodman 2018
MRWA GIS database

## (d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

**Proposed clearing is not at variance to this Principle**

**Comments**
The Biological survey identified two vegetation units within the survey boundary listed below, neither of these units are associated with Priority or Threatened Ecological Communities (PEC/TECs) (Woodman, 2018).

According to DBCA data, one threatened ecological community (TECs) occurs within the study area. The TEC is located approximately 33 km south east of the project area, which is most likely associated with the Ethel Gorge aquifer stygofauna community. Given the distance to the nearest TEC and the terrestrial nature of the clearing the project will not directly or indirectly impact on this TEC or any previously unmapped TECs.

No formally listed significant vegetation was recorded in the project area during the survey, with none of the VUs described and mapped in the project area considered to represent any formally listed vegetation.

Given the above, the project clearing is not likely to be at variance to this clearing principle.

**Methodology**
DBCA shapefiles
Woodman (2018)

## (e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

**Proposed clearing is not at variance to this Principle**

**Comments**
The project area occurs within the Pilbara IBRA region of which approximately 99.58% of the pre-European vegetation extent remains (Government of Western Australia, 2019). The vegetation of the project area has been broadly mapped as the following pre-European vegetation association.

**Summary of Project Area's Mapped Pre-European Vegetation Associations**

| Pre-European Vegetation Association(s) | Clearing Description | Vegetation Condition | Comments |
|---|---|---|---|
| *Vegetation Association 18.* | *Clearing of up to 0.07ha.* | *Excellent* | *Vegetation description and condition determined from Woodman biological survey conducted in June 2018.* |

**Pre-European Vegetation Representation**

| Pre-European Vegetation Association | Scale | Pre–European (ha) | Current Extent (ha) | % Remaining | % Remaining in DBCA reserves |
|---|---|---|---|---|---|
| **Veg Assoc No. 18** | **IBRA Region** Pilbara IBRA region | 17,808,657.06 | 17,733,583.90 | 99.58 | 10.16 |
| | **Statewide** Veg Assoc No. 18 | 19,892,304.78 | 19,843,727.37 | 99.76 | 6.64 |
| | **IBRA region** Veg Assoc No. 18 in the IBRA Pilbara region | 676,556.72 | 672,424.33 | 99.39 | 25.33 |
| | **Local Government Authority** Shire of East Pilbara | 359,372.11 | 355,446.46 | 98.91 | 1.49 |

The project involves the clearing of 0.07ha of Vegetation Association 18 and does not represent native vegetation that has been extensively cleared. The vegetation to be cleared is not significant as a remnant as there is a large amount of well represented and highly connected vegetation within the study area and region. The removal of the small section (0.07ha) of vegetation from a highly vegetated area is will not reduce ecological function or ecological linkage. As such this proposal is not at variance to this Principle as the clearing does not represent an area that is significant as a remnant nor is it in an extensively cleared landscape.

**Methodology**
Woodman (2018)
Government of Western Australia (2019

## (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

**Proposed clearing is not variance to this Principle**

**Comments**
No water courses occur within the project area and there are no Proclaimed Surface Water areas. The nearest watercourse is located approximately 180 m south of the project area, the vegetation to be cleared is not associated with the watercourse and as such the clearing for the project is not expected to impact this watercourse.

Two lakes occur within the study area. No lakes occur within the project area; the nearest lakes to the project area are located approximately 32 km north east of the project area.

As no watercourse areas, wetlands or associated riparian vegetation occur within the project area, the clearing for the project is not at variance to this Principle.

**Methodology**
DWER and DBCA shapefiles
Woodman (2018)

## (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

**Proposed clearing is not at variance to this Principle**

**Comments**

The ASRIS Acid Sulfate Soils (ASS) database indicates that the project area occurs in areas classified as having an 'Extremely Low probability of occurrence' (ASRIS 2018).

A search of the Natural Resource Management (NRM) Shared Land Information Platform (SLIP) database shows no known flood, water logging or erosion, wind erosion or salinity risks within the project area. As such, the project area has a low risk of land degradation occurring.

As only a small area will be cleared within the project area, the risk of land degradation is low within the project area

Based on the above, the clearing for the project is not at variance with this principle.

**Methodology**
Woodman 2018

## (h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

**Proposed clearing is not at variance to this Principle**

**Comments**
*A* search of ArcGIS shapefiles indicates that no A Class Reserves, DBCA Managed Lands, conservation areas or Environmentally Sensitive Areas (as declared under the EP Act) located in or near the proposal areas.

The nearest DBCA managed land is the Karijini National Park which is located approximately 90 kilometres East of the application area (GIS Database). The proposed clearing will not impact on the environmental values of any conservation area.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology**
DBCA shapefiles
EPA (2016)
Woodman 2018

## (i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

**Proposed clearing is not at variance to this Principle**

There are no Public Drinking Water Source Areas (PDWSA) within or in close proximity to the application area (GIS Database). The nearest PDWSA is Newman Water Reserve approximately 12km east. There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database). Creek lines in the region are dry for most of the year, only flowing briefly immediately following significant rainfall. The proposed clearing of 0.07ha of vegetation is unlikely to result in significant changes to surface water flows or cause deterioration in the quality of underground water.

Based on the above, the proposed clearing is not at variance to this Principle.

**Methodology**
DWER and DBCA shapefiles
EPA (2016)
Woodman 2018

## (j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

| **Proposed clearing is not at variance to this Principle** |
|---|
| **Comments**<br>The climate of the region is semi-arid, with a low average rainfall of approximately 332.6 millimetres per year (BOM, 2018). Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall.<br><br>There are no permanent water courses or waterbodies within the application area (GIS Database). Seasonal drainage lines are common in the region and temporary localised flooding may occur briefly following heavy rainfall events. The removal of 0.07ha of vegetation is unlikely to result in excessive surface runoff levels that would increase the intensity or incidence of flooding above the current risk level<br><br>Based on the above, the proposed clearing is not at variance to this Principle |
| **Methodology**<br>Woodman 2018 |

# 6 ADDITIONAL ACTIONS REQUIRED

The clearing associated with the proposal is unlikely or not at variance with the Clearing Principles. Additional management actions under CPS 818 are detailed in Table 6.

**Table 6. Summary of Additional Management Actions Required by Permit CPS 818**

| Impact of Clearing | Yes/No or NA | *Further Action Required* |
|---|---|---|
| **1.** The CAR indicates that the clearing is 'At Variance' or 'May be at Variance' with one or more of the Clearing Principles.<br><br>Where the clearing is at variance or may be at variance to Clearing Principle (f) and no other Clearing Principle, and the area of the proposed clearing is less than 0.5 hectares in size and the Clearing Principle (f) impacts only relate to:<br>(i) a minor non-perennial watercourse(s);<br>(ii) a wetland(s) classed as a multiple use management category wetland(s); and/or<br>(iii) a wetland that is not a defined wetland;<br>the preparation of an Assessment Report, as required by condition 6(e), is not required. | **No** | No further action required |
| **2.** Clearing is at variance or may be at variance with Clearing Principle (g) land degradation, (i) surface or underground water quality or (j) the incidence of flooding. | **No** | No further action required. |
| **3.** The project involves clearing for temporary works (as defined by CPS 818). | **No** | No further action required. |
| **4 a.** Project is within Region that:<br>- Has rainfall greater than 400mm and<br>- Is South of the 26th parallel and<br>- Works are in 'Other than dry conditions' and | **No.** | No further action required. |

| Impact of Clearing | Yes/No or NA | *Further Action Required* |
|---|---|---|
| - Works have potential for **uninfested** areas to be impacted | | |
| **4b.** Does the proposed works require clearing within or adjacent to DBCA estate in non-dry conditions? | **No** | No further action required. |
| **5.** Main Roads has been notified by DWER or an environmental specialist that the area to be cleared is susceptible to a pathogen other than dieback | **No** | No further action required. |
| **6.** The vegetation within the area to be cleared and/or the surrounding vegetation in a good or better condition and weeds likely to spread to and result in environmental harm to adjacent areas of native vegetation that are in good or better condition | **No** | All works will adhere to the Main Roads Vehicle Hygiene protocols. |

# 7 VEGETATION MANAGEMENT

Main Roads will avoid clearing native vegetation where possible. Where clearing cannot be avoided then this clearing is kept to a minimum. Vegetation will be managed in accordance with the Principal Environmental Management Requirements (PEMR's).

# 8 REFERENCES

Environmental Protection Authority (2020). Technical Guidance – Terrestrial vertebrate fauna surveys for Environmental Impact Assessment. Perth, Western Australia.

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Government of Western Australia. (2018). Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions, Perth. Available online from: https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics

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Woodman Environmental (2018) Great Northern Highway [Redacted] SLK Material Pit and Marble Bar Road [Redacted] SLK Material Pits. Prepared for Main Roads Western Australia. Applecross Western Australia.