Attachment 1A: Proof of occupier status

WESTERN AUSTRALIA

REGISTER NUMBER	
1/D17998	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
N/A	N/A

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

VOLUME 1246 FOLIO 537

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

[redacted]

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 1 ON DIAGRAM 17998

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

COMSE NOMINEES PTY LTD OF 1 WATERLOO STREET, JOONDANNA
(T C786457) REGISTERED 6 JUNE 1984

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. THE LAND THE SUBJECT OF THIS CERTIFICATE OF TITLE EXCLUDES ALL PORTIONS OF THE LOT DESCRIBED ABOVE EXCEPT THAT PORTION SHOWN IN THE SKETCH OF THE SUPERSEDED PAPER VERSION OF THIS TITLE. VOL 1246 FOL 537.
2. D625390 MORTGAGE TO NATIONAL AUSTRALIA BANK LTD REGISTERED 10.12.1987.

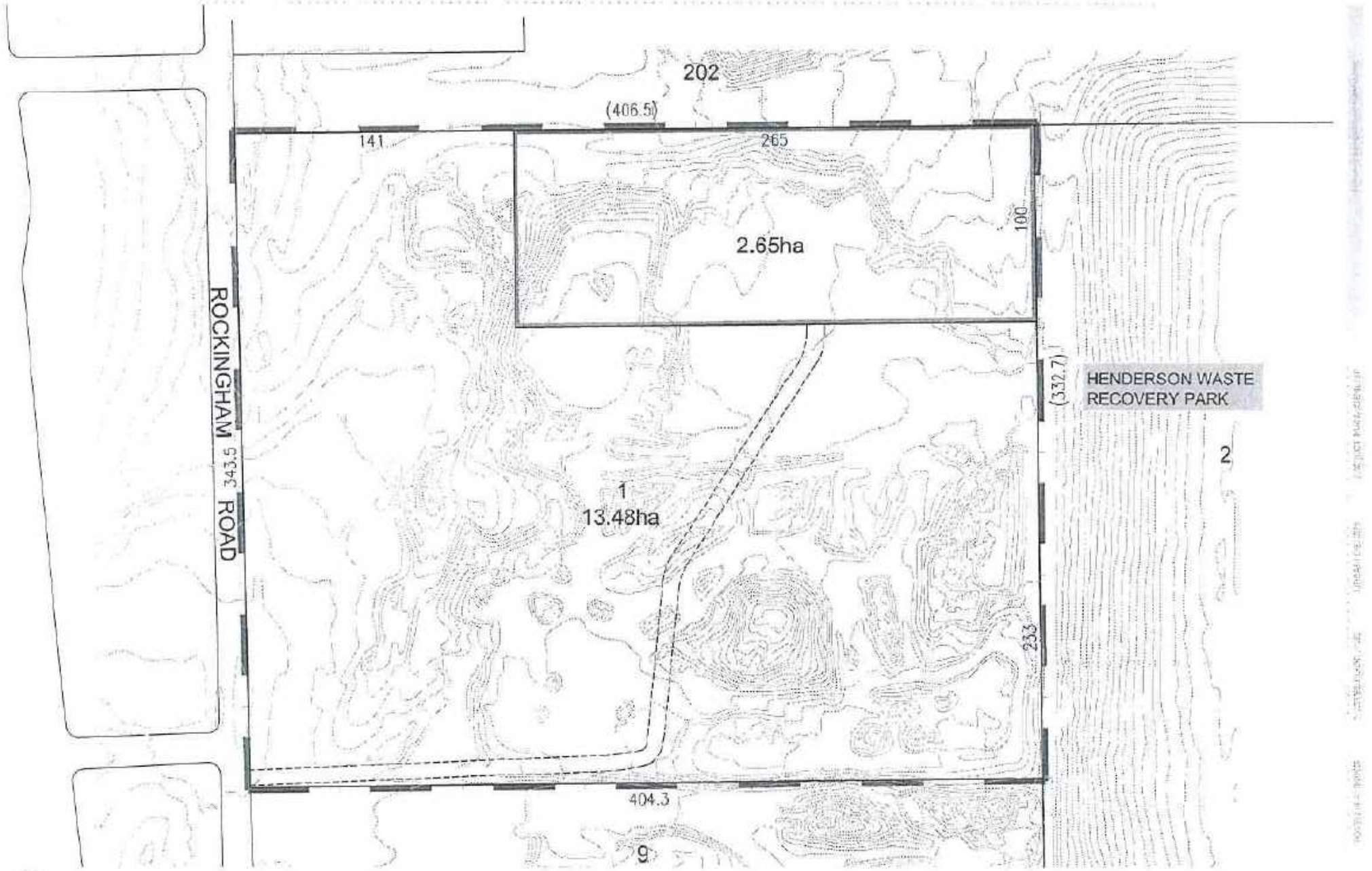
Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:	1246-537 (1/D17998).
PREVIOUS TITLE:	1163-818.
PROPERTY STREET ADDRESS:	LOT 1 ROCKINGHAM RD, HENDERSON.
LOCAL GOVERNMENT AREA:	CITY OF COCKBURN.


202
(406.5)
141
265
100
2.65ha
ROCKINGHAM ROAD
(332.7)
HENDERSON WASTE RECOVERY PARK
2
1
13.48ha
233
404.3
9
SUBJECT SITE
DEVELOPMENT AREA
CONTOURS
PROPOSED ACCESS ALIGNMENT
existing site contours
lot 1 rockingham road

Attachment 1B: ASIC company extract

ASIC
Australian Securities & Investments Commission

Australian Company

BRAJKOVICH DEMOLITION & SALVAGE (WA) PTY LTD
ACN 142 956 296

Extracted from ASIC's database at AEST 11:06:45 on 22/06/2017

Company Summary	
Name:	BRAJKOVICH DEMOLITION & SALVAGE (WA) PTY LTD
ACN:	142 956 296
ABN:	85 142 956 296
Registration Date:	06/04/2010
Next Review Date:	06/04/2018
Status:	Registered
Type:	Australian Proprietary Company, Limited By Shares
Locality of Registered Office:	OSBORNE PARK WA 6017
Regulator:	Australian Securities & Investments Commission

Further information relating to this organisation may be purchased from ASIC.

Attachment 1C: Authorisation to act as representative of the occupier

LETTER OF AUTHORITY

Dear Sir/Madam,

RE: AUTHORITY TO SUBMIT LICENCE RENEWAL APPLICATION FOR L9158/2018/1

The undersigned, as licence holder of L9158/2018/1 and director of company Brajkovich Demolition and Salvage Pty Ltd, hereby authorises Site Environmental and Remediation Services (SERS) to submit the aforementioned application.

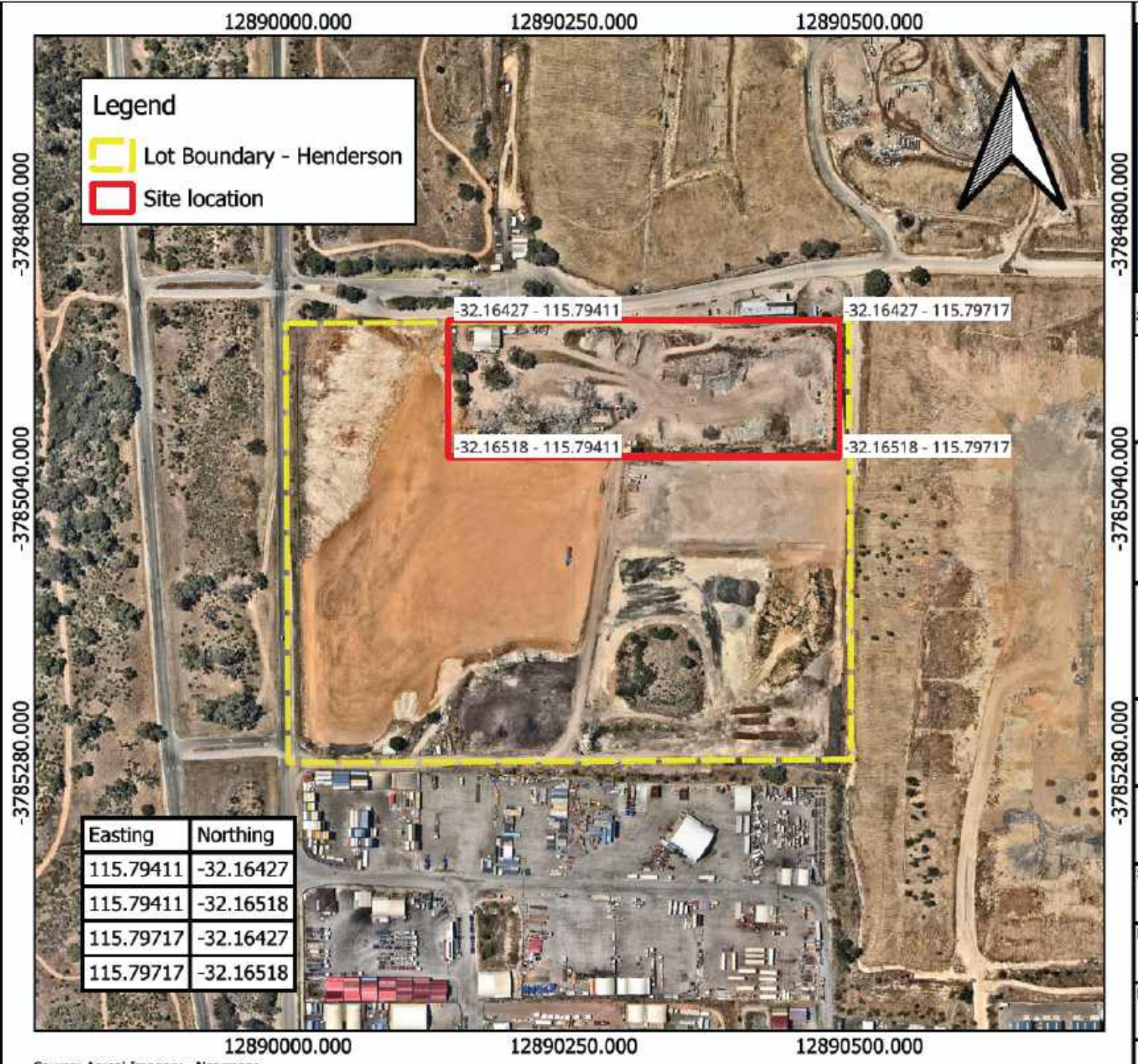
Yours Sincerely,

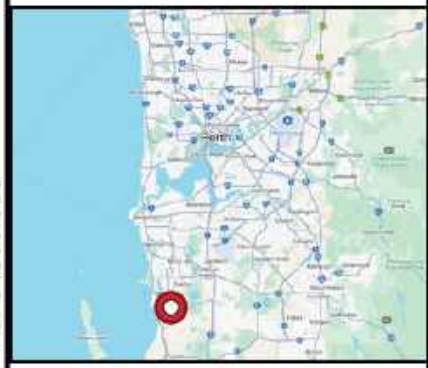
[redacted]

Brajkovich Landfill & Recycling (Malaga) Pty Ltd
ACN 658 651 337
DIRECTOR

Date: 14TH MAY 2025

Attachment 2: Premises map





Source: Aerial Imagery Google Maps

Scale bar:

0 50 100 150 m

Prepared for

SERS
Site Environmental & Remediation Services

CLIENT:

Brajkovich Demolition & Salvage Pty Ltd

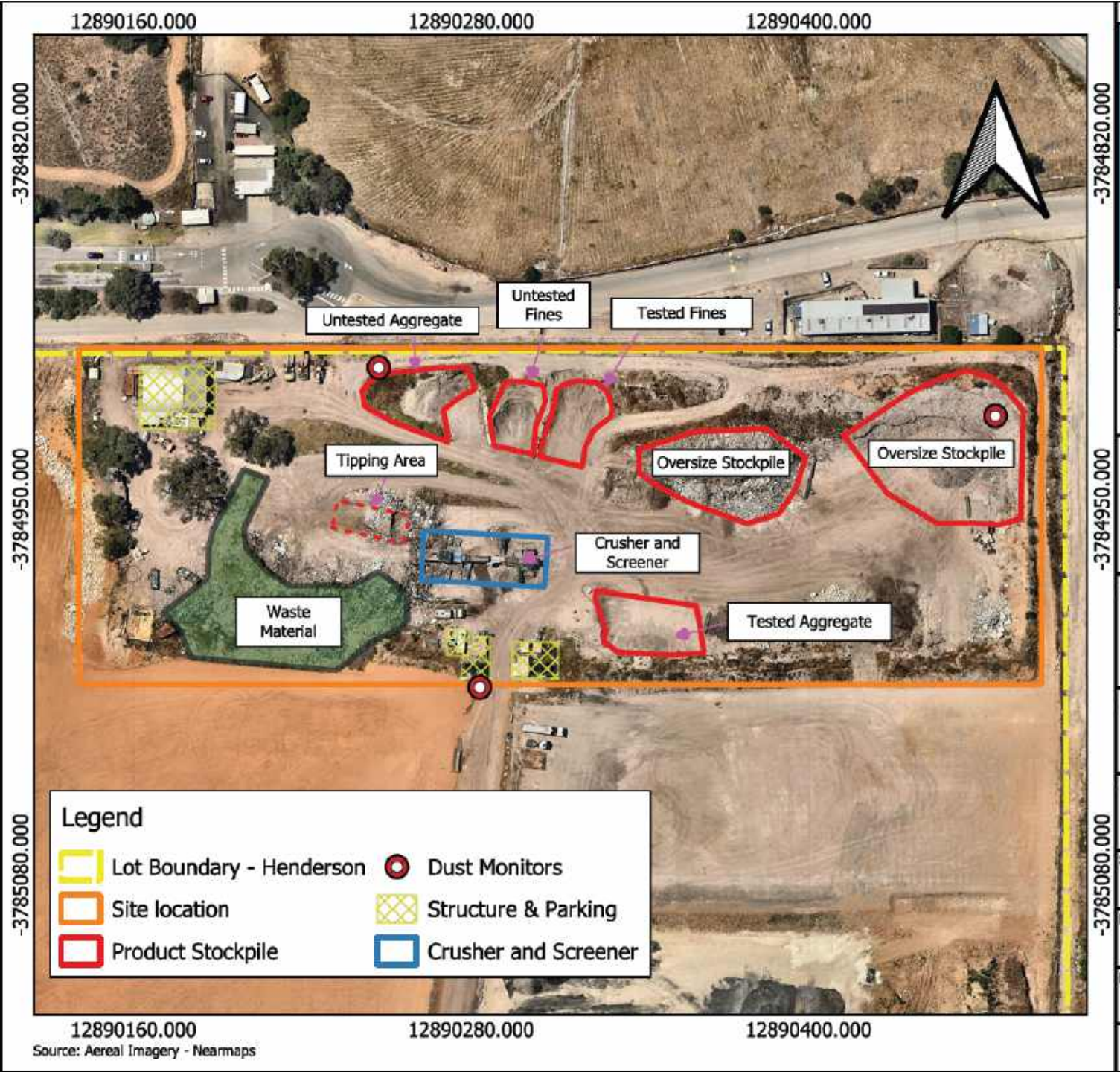
PROJECT:

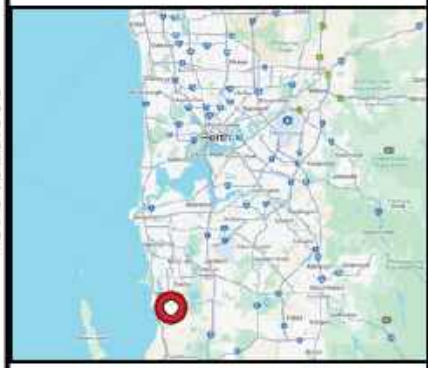
Lot 1 Rockingham Road, Henderson

TITLE:

Figure 1. General Site Location

SCALE@SIZE:	ISSUE:
1:3800	FINAL
DESIGN/DRAWN:	DATE
	13/02/2025
PROJECT No:	DRAWING No:
004 - 01	1





Source: Aerial Imagery Google Maps

Scale bar:

0 20 40 60 m

Prepared for

SERS
Site Environmental & Remediation Services

CLIENT:

Brajkovich Demolition & Salvage Pty Ltd

PROJECT:

Lot 1 Rockingham Road, Henderson

TITLE:

Figure 2. Site Layout

SCALE@SIZE:	ISSUE:
1:2000	FINAL
DESIGN/DRAWN:	DATE
	14/02/2025
PROJECT No:	DRAWING No:
004 - 01	2

Attachment 8A: Dust Management Plan

Dust Management Plan

Lot 1 (958) Rockingham Road,
Henderson, Western Australia, 6166

PREPARED FOR:

Brajkovich Demolition & Salvage Pty. Ltd.,
1686 Great Northern Highway,
Upper Swan WA 6069

PREPARED BY:

Site Environmental & Remediation Services Pty Ltd (SERS)
281 Newcastle St Northbridge WA 6003
PO Box 377 Northbridge WA 6865
T: +61 8 9220 2000
F: +61 8 9220 2010
E: www.sers.net.au

Document Control Sheet

Issued by:	Site Environmental & Remediation Services Pty Ltd 281 Newcastle Street Northbridge WA 6003 +61 8 9220 2000 www.sers.net.au
Client:	Brajkovich Demolition & Salvage Pty Ltd
Project:	Dust Management Plan
Title:	Dust Management Plan Lot 1 (958) Rockingham Road, Henderson, Western Australia, 6166
Reference:	004-01
Status:	Final
Report Date:	20th February 2025

Document Production Record

Issue Number	3	Name	Signature
Prepared By		[redacted]	[redacted]
Checked By			
Approved By			

Document Revision Record

Issue Number	Date	Revision Details
1	18th October 2022	Updated with proposed licence amendment
2	17th April 2022	Updated report format
3	20th February 2025	Updated report format

Contents

Executive Summary

A Dust Management Plan (DMP) has been developed for the prescribed premises licence issued by the Department of Water and Environmental Regulation (DWER). This licence authorizes the operation of crushing and screening activities at Lot 1 (958) Rockingham Road, Henderson. The licence was granted by DWER in November 2018. This document has been prepared to accompany the application for the renewal of the licence with the Department of Water and Environmental Regulation.

The site is in an area zoned for rural use. The Properties surrounding the site are used for waste recovery, inert landfill, market gardening, storage, office, transport, residential use, and regional parkland.

Nearby residential properties are considered the main sensitive receptor with respect to dust emissions. Dust-mitigating measures proposed for use on-site are designed to address dust at its source and are expected to prevent dust from leaving site boundaries. This DMP outlines airborne-particulate criteria level for the nearest sensitive receptors to the site.

Distances to sensitive receptors were measured as if crushing and screening activities were occurring at the boundaries of the leased area within Lot 1 Rockingham Road, Henderson, and from the predicted location of the crusher at the centre of the site.

As there is a significant area of uncovered, quarried ground surrounding the site. An ongoing dust monitoring has been carried out (on the eastern site boundary during the morning and on the south-western boundary during the afternoon) to illustrate dust impacts entering the site.

Due to barriers in the form of constructed bunds up- and down-gradient of operations, it is predicted that airborne dust shall not leave site boundaries.

Dust-suppression strategies incorporating Industry Best Practice procedures and controls will apply to all dust- generating activity on the site, the objectives of these procedures and controls are to ensure that all work is carried out to minimise occupational dust emissions as best as can be reasonably practiced to reduce the level of impact on the amenity of the surrounding area and negate any risk to human or environmental health.

With appropriate management measures in place, dust levels are not anticipated to exceed guideline criteria for premises surrounding the site.

1. Introduction

1.1 Background

Site Environmental & Remediation Services Pty Ltd (SERS) were engaged by Brajkovich Demolition & Salvage Pty Ltd (BDS) to prepare a Dust Management Plan in accordance with current legislation and guidelines.

Operations are conducted on part of Lot 1 Rockingham Road, Henderson, displayed in **Figure 1 and** herein referred to as 'the site'. Lot 1 is located east of Rockingham Road, between Russell Road and Musson Road. It currently does not host any built structures and is a disused quarry.

BDS is a licensed demolition company based in the Swan Valley, operating in Perth and across regional centres throughout Western Australia. Brajkovich Demolition Pty Ltd (BDPL) is a related company of BDS, which is an established Western Australian business that has been operating a C&D Waste Crushing Recycling Facility in the Henderson locality since April 2004. A previous C&D Crushing Recycling facility, operated by BDPL, was located on portion of Lot 20, Rockingham Road and portion of Lot 4, Musson Road, Henderson, Western Australia.

Dust-sensitive receptors are present surrounding the site, in the form of residential premises.

This dust management plan has been prepared for in support of licence renewal application.

1.2 Definition of C&D waste

C&D material can be defined as excess or waste material arising from the construction and demolition of buildings and structures or pavements. It includes 'concrete, brick, rubble, asphalt, metals (ferrous and non-ferrous), timber, wallboard, glass, plastics, asbestos, soil and other building materials and products' (DEC 2009). It excludes toxic materials.

This crushing and screening operation will accept a mixture of concrete, bricks, rubble, timber, metals, and large tree stumps for processing and mechanical/ manual segregation into material type, prior to being grading and transport to an alternate destination for further treatment/ uses.

Facilities of this nature require licencing by the DEC and only accept inert C&D material in accordance with a valid DEC licence.

The clean, inert, C&D waste materials are processed and recovered as recyclable building products such as road bases and aggregates. Material that cannot be recovered is separated and contained on-site before being transported to an appropriate inert (Class I) and putrescible (Class II and III) licenced landfill sites for disposal.

Crushing and screening activities have the following characteristics:

- Activities are carried out in the open;
- The crusher is operated for short durations over the course of the working day, dependant on the supply of raw material.
- Dust arises from many different kinds of activities i.e. transport of material, off-loading of material; and the composition can vary.
- Some of the processes have the potential to impact receptors.

1.3 Purpose and scope of this Dust Management Plan

This DMP identifies key issues related to Dust Management and proposes to implement appropriate control measures. This DMP will apply for the duration of the activities at the site.

The purpose of this management plan is to:

- Outline proposed best management strategies to minimise the generation of dust associated with crushing and screening works on this site.
- Contain dust emissions to within site boundaries;
- Establish a process for the minimisation of dust on the site;
- Establish a process for the provision of an effective communication link between adjoining residents and the processing site for the management of complaints regarding dust; and,
- Establish a process for the use of relevant guidelines for dust emissions from the site.

1.4 Objectives of this Dust Management Plan

The objective of this DMP is to outline management strategies that will curtail dust emissions arising from crushing and screening activities and achieve compliance with site-specific dust level criteria, thereby:

- minimising adverse impacts on the environment, and,
- protecting human health and amenity.

Management strategies have been selected specific to the site in question to address the above priorities. National standards based on those provided by the National Environment Protection Council (NEPC) have been selected as benchmarks used to monitor performance, particularly levels agreed upon by all involved parties during State Administrative Tribunal (SAT) proceedings throughout 2011.

2. SAT conditions

The matter of stockpiling material on the site was resolved at the State Administrative Tribunal. Conclusions are provided as **Appendix A**.

SAT conditions relating to dust management are as follows:

5. All activities on the subject land, with the exception of dust suppression, shall only occur between 7am and 6pm Monday to Saturday and not at all on public holidays.

12. A Dust Management Plan being prepared (prior to operations commencing) and implemented for the subject land and haul roads to the satisfaction of the WAPC on advice from the DEC, DOH and City of Cockburn. The Dust Management Plan shall, *inter alia*, require that all activities cease (apart from those activities associated with dust suppression) in the event of water supply failure).

15. The total non-hydro mulched area shall not at any time exceed the maximum area capable of being adequately watered to address dust lift off during hot, dry and windy periods referred to in the Sprinkler Reticulation Plan.

16. 24-hour 7 day a week dust monitoring for PM_{10} shall be undertaken at the locations specified by the WAPC on advice from the City of Cockburn, DEC and DOH. The dust monitoring shall commence prior to the commencement of operations and continue for the duration of the planning approval.

17. The dust monitoring system required by Condition 16 shall be maintained and calibrated to the satisfaction of the WAPC on advice from the DEC.

18. The dust monitoring system shall automatically activate the sprinkler system provided for in the Sprinkler Reticulation Plan at a level of PM_{10} of 450µg/m^3 average over a 15 minute period and continue to operate until dust levels are below a 450µg/m^3 average over a 15-minute period.

3. Legislation and guidelines

SERS has been informed by BDS that it requires its employees and contractors to comply with all relevant Commonwealth and State legislation that applies to the operation of the storage facility for C&D materials by means of toolbox talks. Legislation, Policy and Guidelines relevant to the Dust Management Plan can be viewed below.

3.1 Work Health and Safety Act 2020

Sets out requirements and standards for building healthy and safe workplaces. The main object of the *Work Health and Safety Act 2020* is to provide for a balanced and nationally consistent framework to secure the health and safety of workers and workplaces by protecting workers and other persons against harm to their health, safety and welfare through the elimination or minimisation of risks arising from work.

The Work Health and Safety (General) Regulations 2022

Sets out requirements and standards for building healthy and safe workplaces. The main object of the *Work Health and Safety (General) Regulations 2022* is to provide for a balanced and statewide consistent framework to secure the health and safety of workers and workplaces by protecting workers and other persons against harm to their health, safety and welfare through the elimination or minimisation of risks arising from work.

3.2 National Environment Protection Measures (NEPM)

The *National Environment Protection (Ambient Air Quality) Measure (2003)* and the *National Environment Protection (Air Toxics) Measure (2004)* are the National Environment Protection Councils (NEPC) broad framework setting statutory instruments as defined in the *National Environment Protection (Western Australia) Council Act 1996*. The Ambient Air NEPM includes primary indicators of air quality.

- Nitrogen dioxide (NO_2)
- Ozone (O_3)
- Carbon monoxide (CO)
- Sulphur dioxide (SO_2)
- Particles (as PM_{10})
- Lead (Pb)

Standards and goals for these air pollutants are specified, as well as an advisory standard for particles as $PM_{2.5}$.

The Air Toxics NEPM includes:

- Benzene
- Formaldehyde
- Benzo(a)pyrene as a marker for PAHs
- Toluene
- Xylenes (as ortho-, meta- and para-isomers)

Monitoring Investigation Levels (MILs) for these air toxics are also specified and are based on the protection of human health.

3.3 Environmental Protection Act 1986 (EP Act)

Development proposals and activities that are likely to generate dust may be subject to the provisions of the *Environmental Protection (EP) Act 1986* and policies developed pursuant to the Act.

Part II of the EP Act

Part II of the Act enables the development of State Environmental Policies (SEPs). SEPs are a non-statutory government policy position on a particular aspect of the environment that can include ambient air. SEPs are enabled under Part II Section 17(3) of the EP Act and are developed by the Environmental Protection Authority (EPA). Following a public consultation process, SEPs are approved by the Minister for the Environment and adopted by Cabinet on a whole-of-government basis.

SEPs can include the scope to develop Environmental Quality Objectives and can identify a framework for the implementation using existing statutory mechanisms such as Environmental Protection Policies (EPPs), Environmental Impact Assessment (EIA), licensing and regulation.

Part III of the EP Act

Part III of the *EP Act* authorises the EPA to prepare and publish Environmental Protection Policies (EPPs) which, following Parliamentary approval and gazetting, have the force of law.

EPPs set environmental values, objectives, standards and/or targets that Natural Resource Management agencies must adopt when carrying out their environmental responsibilities.

The *Environmental Protection (Kwinana) (Atmospheric Wastes) Policy 1999* (EPA, 1999), known as the Kwinana EPP, refers to standards and limits for sulphur dioxide and suspended particulates. The policy applies to the local government areas of Cockburn, Kwinana and Rockingham. The subject site falls within the jurisdiction of the City of Cockburn.

Part IV of the EP Act

Under Part IV of the *EP Act*, a proposal that, if implemented, appears likely to have significant effect on the environment, must be referred to the Environmental Protection Authority (EPA) for a decision on whether or not it should be subject to the Environmental Impact Assessment (EIA) process.

In assessing a proposal, the EPA may make recommendations to the Minister for the Environment concerning what conditions, if any, should be imposed on the project in the event that it is approved. Ministerial conditions commonly include a requirement to prepare and implement an environmental management plan (EMP) to control and monitor the environmental impacts of the project. For example, where an approved proposal includes activities that may result in the generation of significant quantities of dust, the Minister may require the proponent to prepare and implement a DMP. Conditions imposed under Part IV of the *EP Act* are legally enforceable, as are commitments by proponents that appear in Ministerial Statements.

Part V of the EP Act

Where pollution or environmental harm arising from dust generation has occurred or is likely to occur, the general pollution prevention provisions of Part V of the *EP Act* may apply. These provisions refer to compliance with emission standards and taking all practical measures to prevent or minimise emissions.

3.4 EPA Guidance Statements

In pursuing its objectives to protect the environment and to prevent, control and abate pollution, the EPA also publishes Guidance Statements for the environmental impact assessments of proposals. These Guidance Statements set out the minimum requirements for the protection of the environment.

The *EPA Guidance Statement No. 18: Prevention of air quality impacts from land development sites* (EPA, 2000) should be considered for activities that can generate dust, particularly when the activities form part of a project requiring formal impact assessment. The EPA Guidance Statement provides general direction on the control of dust and smoke from land development sites. This 2000 dust guideline is specifically aimed at providing practical advice for the development and documentation of management strategies, plans and programs aimed at controlling impacts of dust.

The *EPA Guidance Statement No 33: Environmental Guidance for Planning and Development* (EPA, 2005), provides advice on protecting the environment for land use planning and development, and describes the environmental impact assessment process applied by the EPA to such schemes. The guidance is intended as a significant resource document for local government, State Government agencies, consultants, proponents, and the public.

3.5 Environmental Protection Regulations

Other Environmental Protection Regulations of the *EP Act* may also be relevant. Under the *Environmental Protection (Unauthorised Discharges) Regulations 2004,* materials listed as prohibited in Schedule 1 of the Unauthorised Discharges Regulation include dust produced by a mechanical process including cutting, grinding, sawing, sanding, or polishing a material.

3.6 Department of Environment and Conservation (DEC)

DEC Dust Guidelines

In 1996, the (then) Department of Environmental Protection (DEP) published *Land development sites and impacts on air quality: A guideline for the prevention of dust and smoke pollution from land development sites in Western Australia* (1996 Guideline). The Guideline provides procedures to assess the dust generating potential of a development site and identifies measures and contingency arrangements to manage dust and smoke from land development sites.

The 2011 dust guideline provides an updated and expanded document for the management and monitoring of dust for all projects and land use sizes.

Contaminated Sites Management

DEC has also produced a series of guidelines on contaminated sites, addressing their identification, assessment, remediation, reporting and community consultation during development and implementation of Environmental Management Plans.

DEC Selection of Ambient Air Quality Guidelines

As of December 2000, DEC has articulated an interim approach to adopting ambient air quality guideline values. This approach is to adopt the NEPM standards for Ambient Air Quality. In the absence of a NEPM Standard, DEC will adopt the WHO Guidelines for Air Quality (2000), with consideration for applicability to the WA context; and, in the absence of a NEPM Standard or a WHO guideline, DEC will adopt criteria

from another jurisdiction, once it has been assessed and determined to be applicable to the WA context (DoE, 2004).

Perth Air Quality Management Plan

The Perth Air Quality Management Plan (AQMP) was developed to ensure that the clean air is achieved and maintained in the Perth metropolitan area and meets the Ambient Air NEPM goals. The Perth AQMP was launched in 2000 and details 126 actions to ensure that clean air is achieved and maintained throughout the Perth metropolitan region over a 30-year period.

3.7 Hope Valley-Wattleup Redevelopment Project- Master Plan

The Hope Valley-Wattleup Redevelopment Project Master Plan follows on from the *Hope Valley-Wattleup Redevelopment Act 2000,* which divides the Redevelopment Area into precincts to identify areas for particular uses and identifies land reserved for public purposes. As this area falls within the Redevelopment Area, the site is subject to the *Hope Valley-Wattleup Redevelopment Act 2000* and the aforementioned Master Plan. The most important aspect of the Master Plan is the control over the type of uses permitted and the types of development allowed in each of the various precincts. The site falls within Precinct 7 of the Master Plan (termed Northern Transport).

From an environmental perspective, the Master Plan addresses specific environmental objectives for the Redevelopment Area and states how the Redevelopment Area should be developed and managed. These are as follows:

(a) to prevent any adverse environmental impacts, including those related to human and ecological health and the amenity of the local area, extending beyond the Redevelopment Area;
(b) to facilitate the establishment of a transitional buffer between the relevant residential and heavy industrial uses;
(c) to support the protection of sensitive environments and areas of environmental significance within and outside the Redevelopment Area, including the Beeliar Wetlands, Cockburn Sound, Long Swamp and Bush Forever sites;
(d) to allow the aquifer to be managed in a sustainable manner and in a way that groundwater quality is protected and improved;
(e) to provide for on-site retention and infiltration of uncontaminated stormwater;
(f) to prevent accidental loss or release of effluent or waste from the premises;
(g) to appropriately store, transport and use all dangerous and hazardous goods in accordance with the manufacturer's recommendations and regulatory requirements;
(h) to protect the water quality of Cockburn Sound by ensuring that no inappropriate level of nutrient load or other contamination leaves the Redevelopment Area and enters the Sound;
(i) to dispose of sewage and compatible wastes by connecting to a comprehensive sewage system, or utilising an accepted alternative treatment system only when no comprehensive sewerage system is available;
(j) to ensure that no significant net increase of emissions, such as dust, noise, particulates, odour, other air emissions, litter or light, occur in or extend beyond the Redevelopment Area;
(k) to ensure that the generation or release of any emissions is kept within acceptable health levels;
(l) to maintain and or enhance linkages between fauna habitats and vegetation communities- such as remnant vegetation, reserves and wetlands- to facilitate connectivity, accessibility and interaction of species;

(m) to implement and support environmental best practice;
(n) to prevent the contamination of soil and water that exceeds allowable ecological or health levels;
(o) to prevent contaminated soil or water interacting with and entering surface or groundwater flows and extending beyond the Redevelopment Area boundary;
(p) to minimise the impact of surface runoff so as to protect and maintain the integrity, functions and environmental values of natural catchments, hydrological systems and wetlands, within and adjacent to the Redevelopment Area;
(q) to prevent unacceptable levels of individual, societal or environmental risk;
(r) to protect, maintain and enhance air quality;
(s) to promote energy efficient practices and processes;
(t) to minimise land use incompatibility; and
(u) to optimise development potential in an environmentally acceptable way.

3.8 Other Government Agencies

Local governments are responsible for works on subdivisional and development sites and may require the preparation of dust management plans before works can start as part of their approval processes.

The Department of Health (DoH) provides advice on public health assessment and criteria or standards for various air pollutants.

Legislation of mining and quarrying activities presided over by the Department of Industry and Resources (DIR) may also be relevant to dust management.

4. Site background

The leased area lies approximately 24 kilometres south of the Perth CBD.

The subject site has a total frontage to Rockingham Road of approximately 340 metres. Given the relative similarity of adjacent land uses surrounding the site (as discussed in later paragraphs) it is envisaged that with appropriate site management and controls, off-site impacts will be mitigated.

The site is affected by the Environmental Protection Policy (EPP) buffer of the Kwinana Air Shed. The Air Shed buffer, and the adjoining refuse site buffer limits the development potential of the site for other uses, however the proposed use is similar in nature to the Landfill operations, making it compatible. The refuse site buffer constrains the site only for the length of time that the City of Cockburn's Henderson Waste Recovery Park (HWRP) operates.

4.1 Physical environment

The subject site encompasses a total area of approximately 13.48 hectares. The vast majority of the site is not sealed and consists of a compacted limestone surface. An aerial photograph of the subject site, lease area and surrounding area is provided as **Figure 1** Site Location.

4.2 Site Identification

The current title details are provided in Table 1. Please see **Attachment 2** for Certificate of Title.

Table 1. Subject Site Identification Details

Lot No.	Plan No.	Street No.	Street Name	Suburb	Certificate of Title (Volume/Folio)
1	17998	958	Rockingham Road	Henderson	1246/537

4.3 Site Access

Access to the site is off Rockingham Road only. This provides the site with direct access to the regional road network, with excellent connectivity to the metropolitan area via Rockingham Road, Fremantle Road and the Kwinana Freeway via Wattleup and Russell Roads. Traffic volumes (expected to be in order of 40 vehicles per day from the proposed facility) will therefore not have any significant impacts on the road network at this location. Traffic will consist of semi-trailer tip-trucks and articulated tip-trucks.

BDS vehicles will utilise an existing crossover and access road located in the south-west corner of the subject site. Visibility along Rockingham Road is good, with the road comprising a dual carriageway on a straight stretch of road at this location. The site will be serviced by a profiled bitumen internal road network, illustrated in **Figure 2**.

4.4 Current and historical land use and surrounding land uses

The subject site and adjoining area have historically been used for a variety of quarrying, landfill and market garden activities. The City of Cockburn's Henderson Waste Recovery Park (HWRP) is located to the immediate north and east of the subject site. The land to the south comprises properties of varying sizes which are used for a range of purposes including a historic inert landfill site, market gardening, storage, office, transport and residential uses. Land to the west of the subject site hosts the Beeliar Regional Park.

The site was historically a limestone quarry in which the vast majority of the site was cleared for limestone extraction and quarrying. Historical data from Landgate shown in **Attachment 3** shows the quarry on the 19 June 1985. Since then, the vast majority of the site has remained cleared with some remnant vegetation remaining in the area. Currently a Green Waste Composting facility is operating on the southwest corner of the site (close to the access point to the site).

A Rough Fill and Green Waste Recycling Facility was approved for the site by the City of Cockburn on 8 March 2000. The Rough Fill component of this Approval comprised the crushing and screening of materials on the site (and the subsequent removal of the final product off-site) in a manner similar to that proposed by the application that accompanies this plan. It is noted that this previously approved operation was located closer to existing residences than the proposal comprising the subject of this Application.

The previous development approval for a rough fill and green waste recycling facility was limited to the operational lifespan of the HWRP.

4.5 Sensitive receptors

The nearest residential dwelling is approximately 450 metres from the north-eastern boundary of the proposed development lease area, abutting the existing limestone quarry to the south of the site.

Bush Forever

Bush Forever is a Western Australian Government initiative that identifies regionally significant bushland to be retained and protected forever. There are no Bush Forever sites located within or adjacent to the subject site. The nearest Bush Forever site (#346 Brownman Swamp, Mt Brown Lake and adjacent bushland, Henderson/Naval Base) is located across Rockingham Road, approximately 130 metres to the west of the subject site.

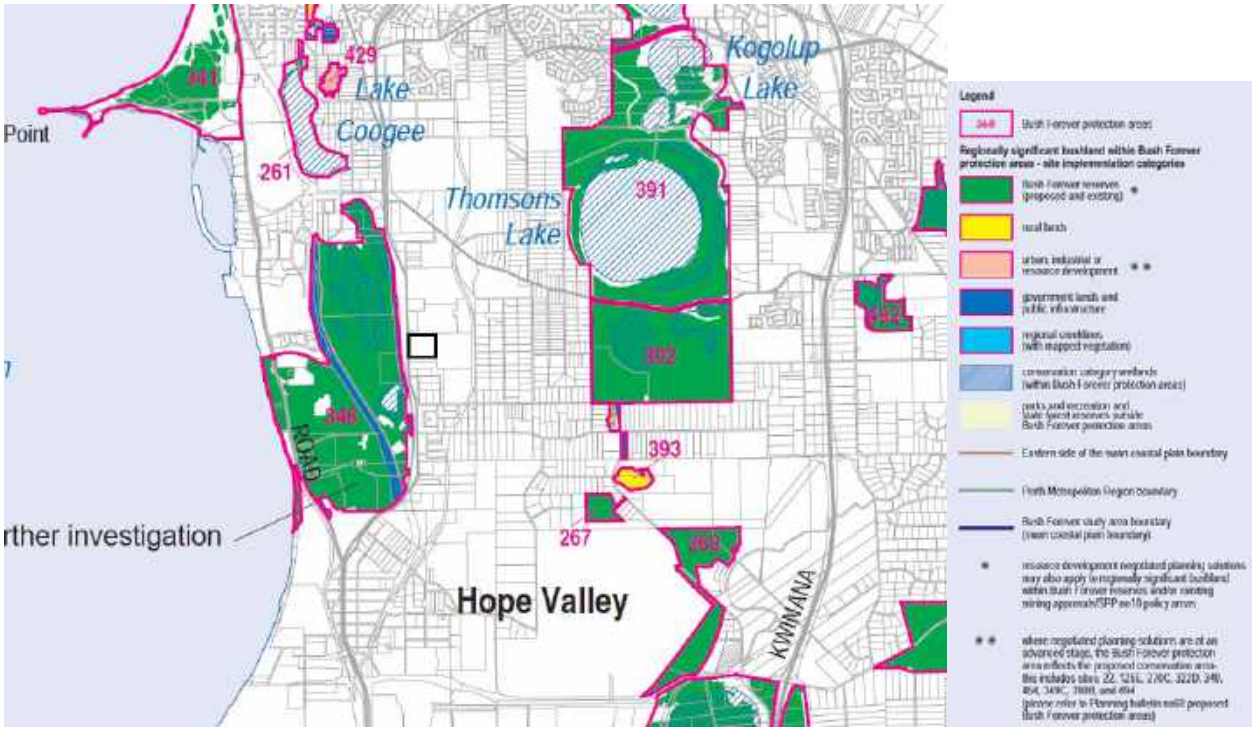


Plate 1. BushForever sites surrounding Lot 1 Rockingham Road, Henderson (WAPC, 2004), site boundary is depicted in black.

Other Bush Forever sites nearby include:

#261 Lake Coogee and adjacent bushland, Munster

#267 Mandogalup Road bushland, Hope Valley

#268 Mandogalup Road bushland, Mandogalup

#341 Woodman Point, Coogee/Munster

#391 Thompsons Lake Nature Reserve and adjacent bushland, Beeliar

#392 Harry Waring Marsupial Reserve, Wattleup

#393 Wattleup Lake and adjacent bushland, Wattleup/Mandogalup

4.6 Buffer distances

The subject site falls within the 1km recommended limit for separation distances between Industrial and Sensitive Land uses as per the EPA Guidance Policy Document '*Separation Distances between Industrial and Sensitive Land Uses' 2005*. The DEC and the City of Cockburn have confirmed that the site bares merit and will be considered for approval if off-site impacts can be successfully managed.

Pursuant to Part V of the *EP Act 1986,* the operations are classified as a Prescribed Premises (Category 13: Crushing of building material: premises on which waste building or demolition material (for example, bricks, stones or concrete) is crushed or cleaned). The EPA Guidance Statement No. 3 *Separation Distances between Industrial and Sensitive Land Uses* (June 2005), states that the minimum separation for a crushing plant is 1000 metres to the nearest sensitive receptor. Notwithstanding, technical officers from the DEC and the City of Cockburn have advised that a buffer distance of approximately 500 metres shall be considered by both regulatory bodies subject to an assessment of possible off-site impacts and the management thereof.

Nearest human receptors

Based on the information available at the time of writing, the nearest residential sensitive receptor is located approximately 450 metres to the north-east (**Figure 3)** from the boundary of the subject site (an earth bund). There will be a separation distance of >600m metres from the location of the Crusher and Screener to this receptor once the site is operational (**Figure 3**). This receptor is located immediately down-wind of the site during the afternoons, however, is screened from on-site operations by a bund. This bund is expected to contain all dust and nose emissions from site operations.

Other nearby receptors are located immediately to the south of the site at distances of approximately 480m from the site boundary. They will be located >500m from the location of the crusher and screener once the site is established.

It is worth noting that the nearest sensitive receptors (identified in **Figure 3**) are a number of single dwellings surrounding the subject site within the 'Latitude 32 Industry Zone'. This Zone reflects a long-term industrial project of significant importance to Western Australia and has been identified for development since the late 1990s in recognition of the increasing pressure being placed on Perth's industrial land supply. BDS is very mindful and concerned of the location of these receptors and has considered these dwellings as sensitive land uses for the purpose of this Environmental Management Plan.

4.7 Contamination status

Contaminated Sites Database

A search of the Contaminated Sites Database indicated that neither the subject site, nor the land in the vicinity of this subject site, has been reported to the DEC and considered as a contaminated site.

4.8 Site geology and soil description

Topography

Topographic contours provided by the Western Australian Land Information Authority (WALIA) indicate that the site is located in a land basin with all topographic gradients of the surrounding area sloping in a westerly direction. Ground surface elevation ranges between 26.0 metres Australian Height Datum (AHD) (east of the subject site - City of Cockburn Landfill capped cell) to 9.0 metres at the subject site and onto approximately 15.0 metres AHD (west of the subject site).

Topographic gradients from north to south on the site range from 16.0 metres AHD (north of the subject site) to 9.0 metres at site location to approximately 17.0 metres AHD (south of the subject site, see **Figure 4**). The fact that the site and especially the lease area is low lying is considered the major advantage of this site. It is not envisaged that activities will be seen from the Rockingham Road once the site is functional.

Geology

Geomorphic classification for the subject site reported in the Western Australia 1:50,000 Urban Geology Series published by the DIR (now Department of Mines and Petroleum) indicates that the subject site is underlain by Tamala Limestone and Sand derived from Tamala Limestone of the Pleistocene period of glaciation. Refer to **Figure 5**.

Soil

Soil types derived from Tamala limestone are characterised by pale, yellowish brown, fine to coarse-grained sub angular to well-rounded quartz with traces of feldspar and shell debris which is variably lithified and has a kankar surface of eolian origin (refer to Western Australia 1:50,000 Urban Geology Series Map- Fremantle, Part Sheets 2033 I & 2033 IV).

Acid sulphate soils

Acid Sulphate Soils are naturally occurring soils that contain iron sulphide (iron pyrite) minerals. If disturbed by dewatering, drainage or soil excavation, the pyrites can oxidise thereby release acidity, potentially causing environmental impacts to the surrounding environment. According to the WAPC Planning Bulletin Number 64 (WAPC, 2009), the soils underlying the study area are rated as having a low-to nil- risk Acid Sulphate Soils disturbance risk at depths greater than 3 metres. The Department of Water (DoW) have also illustrated that there is no known risk of Acid Sulphate Soils in the area (**Figure 6**).

4.9 Local prevailing meteorological conditions and physiographic factors

The site experiences a Mediterranean climate of hot, dry summers and cool, wet winters. It can be stated that the wind direction is predominantly from an easterly direction in the mornings and a south westerly direction in the afternoons. This is typically the case throughout summer, the period when dust generation is most likely.

5. Proposed works and potential impacts

5.1 Background dust sources

Dust and other air pollutants can arise from a range of natural and man-made sources causing various health effects, as well as nuisance and visibility impacts.

Sources of Dust

There are many man-made sources of dust, which include the following (those relevant highlighted in bold):

- **Wind-borne dust from exposed surfaces such as cleared land and construction sites;**
- Wind-borne dust resulting from remediation sites;
- Wind-borne dust from stockpiles of material such as sand, soils, mineral ores, sawdust, coal and fertiliser;
- **Vehicle movements on paved and unpaved roads;**
- Mines and quarries;
- Agriculture and forestry activities;
- Road works and road construction;
- Demolition and construction sites;
- **Municipal landfills and other waste handling facilities;**
- Explosive blasting of rock;
- Abrasive blasting;
- **Handling, crushing, grinding/pulverising, screening of mineral ores and other solid matter;**
- Numerous industrial operations, including grain and mineral ore transfer and storage, timber mills, stone masonry, mineral processing, cement handling and batching, and fertiliser storage and processing.

Airborne particles are characterised as fumes, smokes, mists or dusts depending on the nature of the particle and its size. Particles are commonly classified by the size expressed as equivalent aerodynamic diameter (EAD) in micrometres (µm) as follows:

- Total Suspended Particles (TSP) – diameter ≤ 50 µm
- PM_{10} – diameter ≤ 10µm
- $PM_{2.5}$ – diameter ≤2.5µm

Located in an area subject to historical quarrying, much of the original native vegetation that would naturally have retained topsoil and suppressed errant dust has been removed and not reinstated. As a result, dust levels in the area are naturally higher due to the area of exposed sand.

5.2 Dust-generating aspects of proposed works

Site layout is illustrated in **Figure 1**.

The following steps of the on-site waste recycling process have the potential to contribute to dust generation. Each step is expanded on below. Treatment of hazardous material is addressed within the

Asbestos Management Plan, issued together with this site-specific Dust Management Plan for Lot 1 Rockingham Road, Henderson.

Phase III- Transport

4. Loading of C&D material

Phase IV- On-site

5. Tipping of C&D material at Site
6. Stockpiling C&D material (movement of material to stockpiles)
7. Rock-breaking/Pulverising of Concrete
8. Crushing C&D material
9. Stockpiling of crushed material (movement of material to stockpiles)
10. Dispatch of material from Site
11. Green Waste Processing

5.2.1 Step 4 – Loading of C&D material for Transportation (off site)

Each bucket loaded into a semi- tipper is extensively inspected by the operator conducting the loading and the truck driver present. Additionally, once each load is lifted, the remaining pile is visually inspected by the operator and any other employee(s) present. The aim is to identify any hazardous material that may be uncovered during the loading process. Procedures for addressing hazardous materials identified at this step are provided within the Asbestos Management Plan for this site.

Phase IV- Onsite

5.2.2 Step 5 – Tipping of C&D material (on site)

When tipped at the proposed facility, careful attention is paid by the driver and the supervisor as to not generate dust whilst tipping. Each load is inspected by the truck driver post-tipping. Appropriate procedures for dealing with hazardous material at this point are outlined in the Asbestos Management Plan.

5.2.3 Step 6 – Stockpiling of C&D material

During the off-loading of material to the stockpiles, the material usually needs to be further managed to form the stockpile. The operator of the loader/excavator does this by carefully displacing each bucket in a fashion as to not generate dust and, where possible, the operator inspects each bucket as it is moved. Asbestos management procedures are outlined in the Asbestos Management Plan for this site.

5.2.4 Step 7- Rock-breaking/ Pulverising of Concrete

Various grades of concrete are expected at the site due to the diverse applications that concrete is utilised in the construction industry. Due to the nature of demolition, large, sometimes reinforced pieces of concrete (rubble) that cannot undergo processing at the demolition site will be accepted at this proposed site. Rubble will be 'broken down' to smaller segments by means of an excavator fitted with rock-breaker or pulverising attachments to fit into the jaws of the crusher. All reinforced concrete (where viable) will have steel removed and segregated for further sale to scrap metal re-processors.

5.2.5 Step 8 – Feeding the Crusher

During the mechanical feeding of the crusher, wherever possible the operator should visually inspect the contents of the bucket where possible and the pile from which the material is being loaded. If at any point the operator visually identifies suspect material, the following should apply;

- Loading of the crusher is to cease, the crusher itself is to be stopped, and a further inspection of the contents of the loading stockpile and crusher is required, and
- A risk assessment is to be carried out.

Options for dealing with suspected hazardous material at this stage are outlined in the accompanying Asbestos Management Plan – Lot 1 Rockingham Rd, Henderson (SERS, 2012).

5.2.6 Step 9 – Stockpiling of Crushed material

After passing through the screener, aggregate of specified sizes collects in different piles. These materials are then transported by a loader to the appropriate stockpile, generally:

- Fines (≤10 mm)
- ≤40 mm aggregate
- ≤ 100 mm aggregate

Material is inspected by the loader operator throughout loading, transport and tipping.

5.2.7 Step 10 – Processing of Green-waste

While not specifically a part of the process of recycling rubble, residual green-waste in the form of tree trunks and branches that are delivered to sites as mixed demolition waste are also processed on-site using crushing machinery fitted with blades rather than jaws. Material is stockpiled temporarily prior to monthly chipping for mulch or for reprocessing as soil conditioner.

5.3 Environmental, human health and amenity impact analysis

The predicted impact of each of these activities is outlined below.

Table 2. Dust-generating activities and unmitigated impacts.

Activity	Duration/ Timing	Aspect	Unmitigated Impact
Transport onto the site	Periodically throughout the working day	Vehicle tyre movement on haul road raises errant dust. Dust may be generated if material is left uncovered during transport.	Inhibits vision on haul road. May impact on health of on-site operators. Dust may move off-site to impact health of off-site residents and workers.
Tipping	Periodically throughout the working day	Movement of fine material may release dust. Vehicle tyre movement on unsealed site surface raises errant dust.	May impact on health of on-site operators.

Stockpiling	Periodically throughout the working day	Movement of fine material may release dust. Vehicle tyre movement on unsealed site surface raises errant dust.	May impact on health of on-site operators.
Rock-breaking	Periodically throughout the working day	Reducing size of large concrete/rock pieces may generate dust.	Inhibits vision on site. May impact on health of on-site operators.
Crushing	On-going	Reducing size of large concrete/rock pieces may generate dust.	May impact on health of on-site operators.
Stockpiling	Periodically throughout the working day	Movement of fine material may release dust. Vehicle tyre movement on unsealed site surface raises errant dust.	May impact on health of on-site operators.
Dispatch from site	Periodically throughout the working day	Loading of material onto tipper tray may release dust. Vehicle tyre movement on haul road raises errant dust.	May impact on health of on-site operators. Inhibits vision on haul road. Dust may move off-site to impact health of off-site residents and workers.
Green waste processing	Periodically throughout year approx. quarterly	Chipping of dry wood material may generate wood-dust.	May impact on health of on-site operators.

Table 3. Indirect dust-generating activities and their unmitigated impacts.

Activity	Duration/ Timing	Aspect	Unmitigated Impact
Transport of material onto and off the site	Intermittent	Dust tracked onto the site from off-site	Dusty haul road
	Intermittent	Spillage of loaded material	Damage to haul road

5.4 Impacts of Dust on Health

The impacts of dust are influenced by particle size, chemical composition and concentration.

Particles with an aerodynamic diameter less than 50µm (usually referred to as TSP) are typically associated with adverse aesthetic effects rather than health effects. This is because they are trapped in the upper respiratory tract (just behind the nose and mouth) when inhaled. These larger particles are called inhalable particles and are often termed as 'nuisance dust', settling on surfaces, causing soiling and discolouration. They may, however, be associated with irritation of the mucosal membranes (eyes, nose and throat) and, if contaminated, may pose an increased health risk through ingestion.

Human health effects of dust tend to be associated with particles with an aerodynamic diameter of 10µm of less (≤10µm). These smaller particles tend to remain suspended in the air for longer periods and can penetrate into the lungs.

The $PM_{2.5}$ fraction (coarse fraction) is termed “thoracic particles”. These particles are inhaled into the upper part of the airways and lung. $PM_{2.5}$ particles that are inhaled more deeply and lodge in the gas exchange region (alveolar region) of the human lung and are termed “respirable dust”. Further, if contaminated, these fine particles may pose a further health risk through absorption of the chemicals on the particles in the blood stream.

Sensitive groups such as people with lung or heart diseases, children and older adults are the most likely to be affected by particle pollution exposure. However, even healthy people may experience temporary symptoms from exposure to elevated levels of particle pollution.

6. National and regional ambient air quality standards and limits

The subject site is located in an area in which industrial land use has increased over the years, and so to this effect the Kwinana air quality buffer zone was created and formalised in 1992 by the EPA under a Kwinana Environmental Protection Policy (EPP). This buffer assists industry and the State Government to manage the industrial emissions to maintain a healthy level of air quality for employees and surrounding communities. This was amended in 1999 to create the *Environmental Protection (Kwinana) (Atmospheric Wastes) Policy 1999*. The subject site is located in Area B of the EPP area.

The *Environmental Protection (Kwinana) (Atmospheric Wastes) Regulations 1992* for Ambient Air Quality sets criteria for fugitive dust emissions in the Environmental Protection Policy area (Kwinana) and is listed in Table 4.

Table 4. Ambient Air Quality NEPM Standards and Ambient Air Quality Limits- Total Suspended Particles

Total Suspended Particles	Standard	Maximum Concentration	Averaging Period
Policy Area	-	1000µg/m^3	15 minutes
Area A	150 µg/m^3	260 µg/m^3	24 hours
Area B	90 µg/m^3	260 µg/m^3	24 hours
Area C	90 µg/m^3	150 µg/m^3	24 hours

There are ambient air quality limits set for sulphur dioxide due to heavy industry generating particulate in the Kwinana Policy area. However, as the crushing and screening process produces negligible quantities of sulphur dioxide, it is deemed that the need for monitoring of sulphur dioxide can be negated.

The Ambient Air NEPM published in 1998 provides the following performance criteria for particulate matter:

Table 5. Ambient Air Quality NEPM criteria levels for particulate as PM10.

Pollutant	Averaging period	Maximum concentration	Goal within 10 years: maximum allowable exceedances
PM_{10}	1 day	50µm/m^3	5 days a year

7. Dust Management Controls

Owing to the processes involved and the nature of the material being crushed and stockpiled as part of the development, the potential for dust generation is a principal concern. The following sections outline the controls and measures that BDS will implement to ensure that no nuisance dust is generated off-site. If the following stringent dust control measures are implemented, dust generation is predicted to be successfully mitigated.

The steps and processes BDS will implement should a development application and a works approval be granted are outlined below:

7.1 Reticulated Water Dust Suppression System

A reticulated water network has been installed around the site and operational areas in order to keep processing areas, stockpiles and site perimeter damp. Water is being extracted from an installed groundwater bore located within the lease area and pumped to 2 x storage tanks. Surface Water and Reticulation Management options are summarised below and presented in detail in the site-specific Surface Water and Reticulation Management Plan – Lot 1 Rockingham Rd, Henderson (SERS, 2012). A sufficient capacity (50,000kL per annum) Water Licence exists for the site. A copy of the approved licence is attached as **Attachment 3**.

Water is being supplied around the water network by means of a pump as specified by an Irrigation Engineer. This water network will be fitted with high-angle sprinkler systems, each at 41 metre (main) and 15 metre (perimeter) intervals in order to maximise the effectiveness of the spraying system as a dust suppression measure on stockpiles and other areas. The reticulated water system will be utilised during operating hours and will be used at one-hour intervals outside of operation hours in order to mitigate errant dust generation (surface lift-off due to prevailing winds). Also, the reticulated water network can be activated if PM_{10} dust levels exceed 450µg/m^3 over any 15-minute period, in accordance with Condition 18 of the approved conditions of operation derived from SAT proceedings throughout 2011.

The duration of the rotation of the sprinklers will be such that one part of the site can receive more water as required should the need arise.

Should water not be available on the site for any reason, water shall be trucked to the site, or scheme water shall be utilised until a more appropriate, permanent supply can be re-established (please see

7.2 Site Perimeter Bunding

A high site boundary / screen has been created along the southern, western and northern boundary of the subject site to mitigate dust escaping beyond the operating area and to improve general site aesthetics, shown in **Figure 1**. Given the low-lying elevation of the subject site, the site is not visible from the adjoining HWRP. This screen/bund on the southern, western and northern perimeter of the operating area is at a height of 7.0 metres and has been seeded with grass. This bunding will be maintained at all times and will act as an effective deterrent and barrier to dust and noise escaping from the BDS processing area.

7.3 Hydro-mulching/ Seeding

As stated, hydro-mulch/ additional seeding shall be applied on the bunds and shall be maintained as necessary to prevent windblown dust emanating from the processing area. Hydro-mulching/ seeding of the bunds will also improve the aesthetics of the subject site as well as acting as an effective barrier to airborne dust. Hydro-mulch will also be applied to stockpiles and on other areas of the site that are deemed inactive in order to prevent dust being generated. Hydro-mulched areas will be regularly monitored for maintenance requirements as necessary.

7.4 Vehicle Speed Limit & One Way Traffic System

A speed restriction of 10 km/h will be implemented within the subject site for all BDS vehicles and visitors. All vehicles entering the site will be notified to reduce speed via a sign at the entrance. The site supervisor will be responsible for ensuring strict adherence to the assigned speed limit.

A one-way traffic system will be devised and implemented to better evaluate potential areas of dust generation and implement higher level of controls. An internal, profiled, haul road will be installed and maintained to prevent dust emanating from tracked surfaces.

7.5 Watering Cart

A watering cart will operate on a permanent basis during operational hours to dampen haul roads throughout the site. The watering cart will clean all haul roads at the end of each working day as to prevent out-of-hours dust generation from haul roads.

Wetting/ Crusting agents with polymer binders will be added to the dust suppression water to better bind surface materials and to reduce the volume of water required for dust suppression. Crusting agents improve the performance of the water in wetting the surface thoroughly and also bind the surface materials together to reduce the likelihood of particles becoming air borne. The addition of these crusting agents and binders also has the potential to reduce the frequency of application necessary.

The watering cart will also act as a pumper truck and will have a fire hose application fitted which will be utilised for additional dust control in areas not covered by the reticulated water network (if any) and in the event of a fire.

7.6 Purpose-designed Wheel-washing Facility

A custom-made wheel-washing system will be installed and maintained within the site. All trucks exiting the site in relation to BDS activities will be required to pass through it. This washing system will ensure that grit and fine material from BDS activities are not trafficked from the site and left on roads as a potential dust source. The wheel-washing system will remove residual particles that may be present on the wheels of the vehicle.

7.7 Truck Spillage

Dust emissions may be caused by the spillage of material from a truck either on-site or once the truck has exited the site. Spilled material could act as a further source of dust if it is crushed by traffic

movements. Any spilled material noted or reported to the site within the sealed area of the site or in the general vicinity of the site will be promptly cleaned up.

7.8 Off-loading of Material

Off-loading of BDS material at the site will be supervised at all times by appropriate site personnel. Water hoses will be readily available on all tipping loads to negate high-risk dust creation. Designated staff will water down the material while being off-loaded so as to suppress dust.

7.9 Vehicle Exhausts

BDS ensures that all its vehicles do not have downward-facing exhausts as these may act to raise dust in dry conditions. All BDS vehicles are regularly maintained to minimise emissions.

7.10 Water Supply

Water to be used for dust suppression at the site is sourced from the bore located within the subject site area and pumped to storage tanks of 250kL capacity. Water is then pumped from these tanks through an underground reticulation network to various sections of the site. When full, the storage tanks have enough capacity to sufficiently service the site for 8 hours. The bore has a licensed capacity of 50,000kL per annum which exceeds the peak demand for 43,800kL per annum as predicted by the engaged Groundwater Consultant at the SAT proceedings.

Contingency measures- measured and documented

BDS can, if necessary, utilise an existing bore on the area of the site utilised by Green Waste Services, which has the capacity of 5,000kL per annum. Throughout the DEC works approval process, BDS tapped into this supply to provide reticulated water to areas of the site that were undergoing bulk earthworks. This connection can be easily activated in the event of a BDS bore failure.

BDS also hold a lease on Lot 20 Rockingham Road and are the sole user of the groundwater bore located on this site. This bore has a capacity of 7,800kL per annum and can be utilised for dust suppression activities for this proposal in the event of a system failure on the proposed bore.

Should the proposed bore not be able to supply sufficient water for any period of time, other contingency measures such as using mains water (which is available at the entrance to Lot 1) or using a trucked (tankered) supply shall be instigated. These measures are deemed a “balancing” supply and an alternative temporary supply to the bore can generally be established at the site within 5 working days should the bore not be able to supply water.

7.11 Windsock

A Windsock has been erected on-site as an easy viewable indicator of strong winds and wind direction. This is only deemed as a wind indication tool but will be a helpful factor in determining whether conditions are inappropriate for work to proceed (i.e. in strong winds). This Windsock is identical to the Windsock supplied for the adjacent site (Lot 20) and is at an estimated 9 meters above site ground level.

7.12 Mitigating measures

Table 6. Level of impact of on-site processing activities after mitigating measures applied.

Activity	Aspect	Mitigating measure	Result of mitigating measures	Mitigated Impact
Transport onto the site	Vehicle tyre movement on haul road raises errant dust.	Water cart applies fine spray to road surface. Crusting agent applied to bind surface dust during periods of hot and windy weather. Implement and enforce strict speed limit of 10km/h. Road is routinely maintained to prevent potholes.	Dust does not become airborne.	None
	Dust may be generated if material is left uncovered during transport.	Material is covered during transport.	Dust is not generated. Material is contained within tipper tray.	None
Tipping	Movement of fine material may release dust.	Tipper tray angled as low as possible to transfer material to ground to minimise velocity of material movement.	Any dust generated is suppressed using sprinkler reticulation and/or hand-held hose.	None
	Vehicle tyre movement on unsealed site surface raises errant dust.	Water cart applies fine spray to unsealed site surface. Crusting agent applied to bind surface dust during periods of hot and windy weather. Implement and enforce strict speed limit of 10km/h.	Dust does not become airborne.	None
Stockpiling	Movement of fine material may release dust.	Application of water spray during hours of operation by sprinkler reticulation system and hand-held hose. Specifically applied to loader bucket.	Any dust generated is suppressed using sprinkler reticulation and/or hand-held hose.	None
	Vehicle tyre movement on unsealed site surface raises errant dust.	As for Tipping above.	Any dust generated is suppressed using sprinkler reticulation and/or hand-held hose.	None
Rock-breaking	Reducing size of large concrete/rock pieces may generate dust.	As for Stockpiling above: spray applied to rock-breaking area.	As for Stockpiling above.	None
Crushing	Reducing size of large concrete/rock pieces may generate dust.	Crusher sprinklers to be in operation whilst machinery in operation.	Dust does not become airborne. Material is contained	None

Activity	Aspect	Mitigating measure	Result of mitigating measures	Mitigated Impact
		Water spray trained on exit points of screener to limit dust generation by fine material.	within crushing and screening plant.	
Stockpiling	Movement of fine material may release dust.	As for Stockpiling above.	As for Stockpiling above.	None
	Vehicle tyre movement on unsealed site surface raises errant dust.	As for Tipping above.	As for Tipping above.	None
Dispatch from site	Loading of material onto tipper tray may release dust.	As for Stockpiling above.	As for Stockpiling above.	None
	Vehicle tyre movement on haul road raises errant dust.	As for Transport onto site above.	As for Transport onto site above.	None
Green waste processing	Chipping of dry wood material may generate wood-dust.	As for Stockpiling above: spray applied to chipping area.	As for Stockpiling above.	None

Table 7. Level of impact after mitigating measures for indirect on-site activities applied.

Activity	Aspect	Mitigating measure	Result of mitigating measures	Mitigated Impact
Transport of material onto and off the site	Dust tracked onto the site from off-site	Custom-made wheel-wash	Dust is removed from vehicle tyres. On-site dust is not tracked onto public access-ways.	None
	Spillage of loaded material	All truck trays covered. Any spilled material noted or reported to the site within the sealed area of the site or in the general vicinity of the site will be promptly cleaned up.	Potential for dust generation addressed as soon as possible.	Low

7.13 Site risk assessment

With mitigating measures in place, dust is not predicted to be generated by on-site activities in quantities that will pose a risk to human or environmental health or site amenity. Similarly, dust should not be produced in sufficient quantities to pass site boundaries. As such, as risk assessment was not deemed necessary.

7.14 Off-site impacts

With the dust-management controls detailed above in place, dust is not expected to leave site boundaries. As such, there are no predicted impacts to nearby residential or ecological receptors.

8. Monitoring Program

BDS have engaged the services of SERS to undertake continuous real-time dust monitoring on the site.

8.1 Purpose and objectives

Monitoring shall be conducted to provide baseline information on dust impacts to the site from surrounding land uses. During site-establishment activities and operations, monitoring results shall be used to illustrate the effectiveness of the mitigating measures being employed on the site.

8.2 Performance criteria and monitoring methods

Performance criteria to be utilised are those provided for PM_{10}, presented below in Table 8. The chosen limit is in compliance with a joint exert witness statement which was incorporated by the DEC in the matter of DR61 of 2011 and DR330 of 2010 of the State Administrative Tribunal.

Table 8. Stop-work criteria for PM_{10} levels measured by DustTrak's.

	Standard	Maximum Concentration	Averaging Period
PM_{10} (Particulate Matter <10µm)	450µg/m^3	-	15 minutes

Work will cease immediately if any of the monitors exceed a PM_{10} limit of 450µg/m^3 over any 15-minute time period, including the upwind monitor. A notification will be sent out from the monitors by text message to the site supervisor, company director and to this office. This notification will also trigger the water system to engage. At this point all site work will cease. During the cessation of works all preventative dust controls will be put in place before work continues. After a period of 15 minutes, if no limit is reached then work will recommence.

8.3 Number and location of monitoring sites

3 x particle counters (TSI DustTrak 8520), will be set up on the site for monitoring of dust levels and weather conditions at locations already agreed with the DEC. A handheld meter will be able to quantify wind speed and wind direction. The DustTrak's have the capability of monitoring all the mentioned parameters at one time but PM_{10} has been chosen as the parameter to be tested.

All siting of equipment and meteorological monitoring will be conducted in accordance with applicable standards AS 3580.1.1:2007 (August 2007) and AS 2923-1987 (April 1987; superseded May 2024) respectively. Monitoring locations can be viewed at **Figure 2** Site Layout.

8.4 Quality assurance and quality control requirements

All three proposed TSI DustTrak 8520 Aerosol Monitors will be calibrated against a respirable mass standard ISO 12103-1 A1 Test Dust (Arizona Dust) and shall detect mass concentrations of PM_{10}. Calibration of said units will take place as per manufacturers recommendations and records will be provided to the DEC upon request.

Monitors undergo regular servicing in which inlet heads are cleaned, filters are changed, volume of air is tested, and a zero filter is inserted to ensure readings accurately reflect PM_{10} concentrations.

8.5 Stakeholder consultation

Criteria values arose out of a joint witness statement signed by the WAPC, the City of Cockburn, the DEC and the DoH.

All monitoring data shall be retained and be made readily available to DEC upon request.

8.6 Roles and responsibilities

BDS is legally obliged to provide a safe working environment for its employees and seeks to ensure on-site activities do not result in off-site impacts. It is in this vein that mitigating measures are proposed to suppress dust, and that monitoring is conducted to underline their effectiveness.

The site supervisor is responsible for overseeing all on-site operations, as well as handling any complaints received and liaising with SERS on aspects of environmental concern. They are responsible for ensuring sufficient competent personnel are on-site to undertake the required amount of work, and also for ensuring staff members are adequately trained and any visitors to site are inducted prior to entering the site or undertaking any work.

8.7 Complaints management

All off-site complaints known to BDS are taken and treated very seriously. It is the aim of BDS to handle all these complaints without delay.

Complaints regarding environmental concerns (noise, dust, surface water management and reticulation, asbestos) should be made to the Site Supervisor for reference to SERS. Individual complaint forms and a complaints register will be compiled by SERS incorporating all complaints from this site. Complaints should be logged at the time of receipt and all relevant details recorded, as per the Feedback Form template provided in **Appendix A.**

Contact will be made with the complainant, and investigations will occur into the nature and cause of the complaint and a corrective action solution devised to mitigate a future similar occurrence.

8.8 Reporting

Monitoring results shall be compiled in an Annual Report, together with volumes of material accepted on-site, throughput and material exported (either scrap metal for reprocessing, chipped green-waste or crushed rubble for re-use in construction and landscaping). The report shall be made available to the DEC as part of the annual environmental report requested annually by the DEC.

References

AS 2923-1987 *Ambient air - Guide for measurement of horizontal wind for air quality applications* (April 1987)

AS 3580.1.1:2007 *Methods for sampling and analysis of ambient air – guide to siting air monitoring equipment* (August 2007)

Department of Environment, 2004. *Ambient Air Quality Guidelines,* Government of Western Australia, Western Australia.

Department of Environment and Conservation, 2009. *Environmental guidelines for construction and demolition waste recycling facilities*, Government of Western Australia, Western Australia.

Environmental Protection (Clearing of Native Vegetation) Regulations 2004

Environmental Protection (EP) Act 1986

Environmental Protection (Kwinana) (Atmospheric Wastes) Policy 1999

Environmental Protection (Kwinana) (Atmospheric Wastes) Regulations 1992

Environmental Protection (Unauthorised Discharges) Regulations 2004

EPA Guidance Statement No. 3: Separation Distances between Industrial and Sensitive Land Uses (June 2005)

EPA Guidance Statement No. 18: Prevention of air quality impacts from land development sites (March 2000)

EPA Guidance Statement No. 33: Environmental Guidance for Planning and Development (May 2008)

Hope Valley-Wattleup Redevelopment Act 2000

Land development sites and impacts on air quality: A guideline for the prevention of dust and smoke pollution from land development sites in Western Australia 1996 (updated 2011)

Landcorp, 2008. *Hope Valley-Wattleup Redevelopment Project Master Plan*, Western Australian Land Authority, Western Australia.

National Environment Protection (Ambient Air Quality) Measure (2003)

National Environment Protection (Air Toxics) Measure (2004)

National Environment Protection (Western Australia) Council Act 1996

National Environment Protection Council, 1998. National Environment Protection Measure for Ambient Air Quality, NEPC.

Department of Environmental Protection, 2000. *Perth Air Quality Management Plan*, Government of Western Australia.

Western Australian Planning Commission, 2004. Draft Bushland Policy for the Perth metropolitan region statement of planning policy 2.8 Map 1: Bush Forever protection areas.

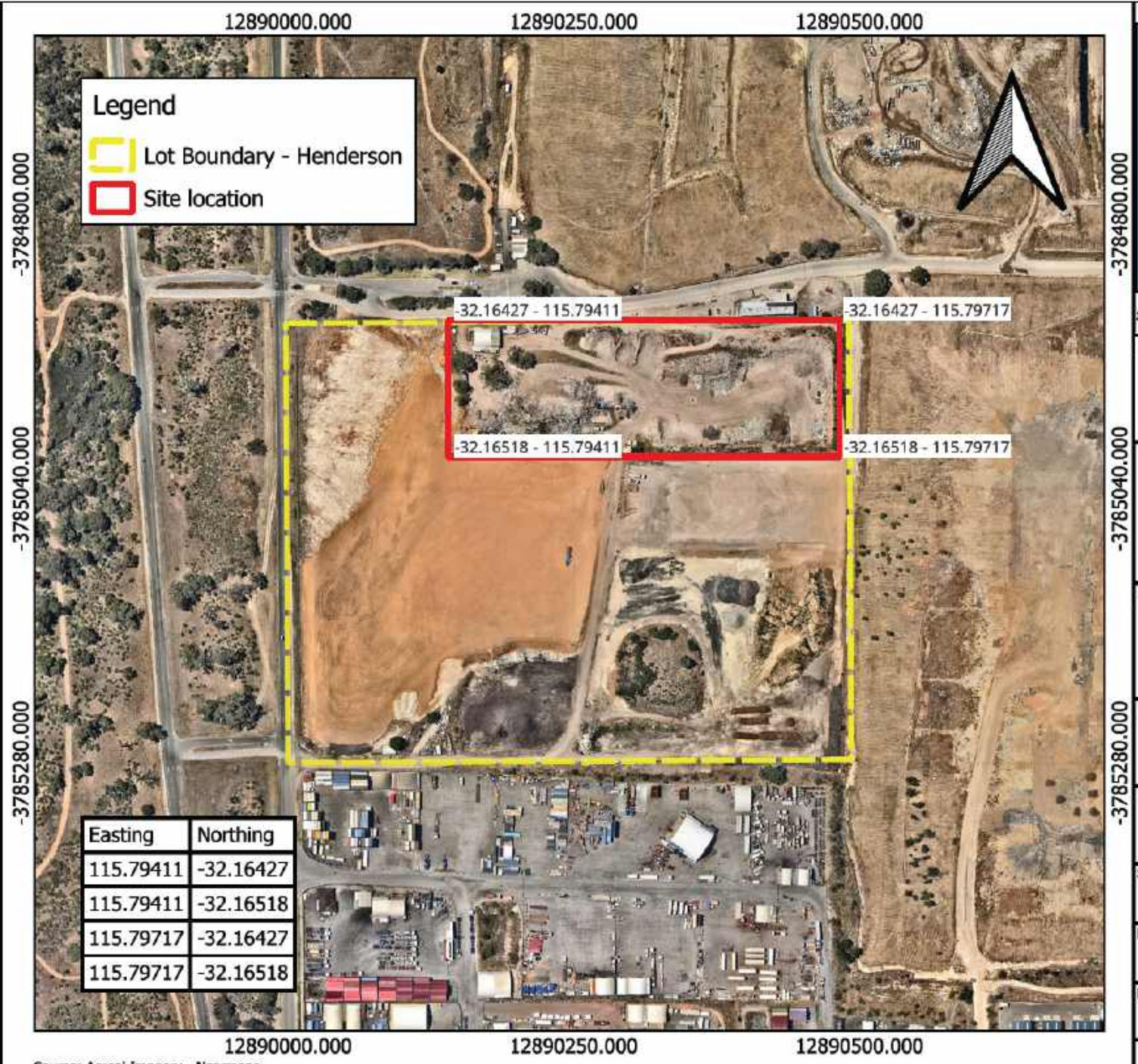
Western Australian Planning Commission, 2009. *Planning Bulletin 64/2009 - Acid Sulfate Soils,* Government of Western Australia, Western Australia.

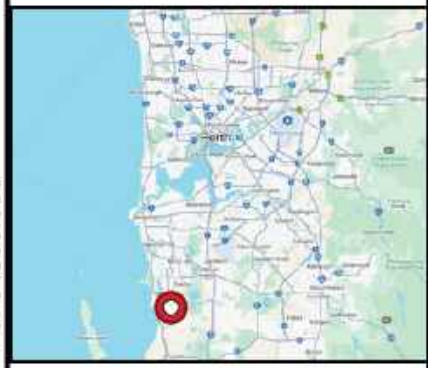
World Health Organisation, 2005. Air quality guidelines for particulate matter, ozone, nitrogen dioxide and sulphur dioxide, World Health Organisation.

Site Environmental and Remediation Services, 2012. *Asbestos Management Plan – Lot 1 Rockingham Rd, Henderson*, SERS, Western Australia.

Site Environmental and Remediation Services, 2012. *Surface Water and Reticulation Management Plan – Lot 1 Rockingham Rd, Henderson,* SERS, Western Australia.

Figures





Source: Aerial Imagery Google Maps

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Prepared for

SERS
Site Environmental & Remediation Services

CLIENT:

Brajkovich Demolition & Salvage Pty Ltd

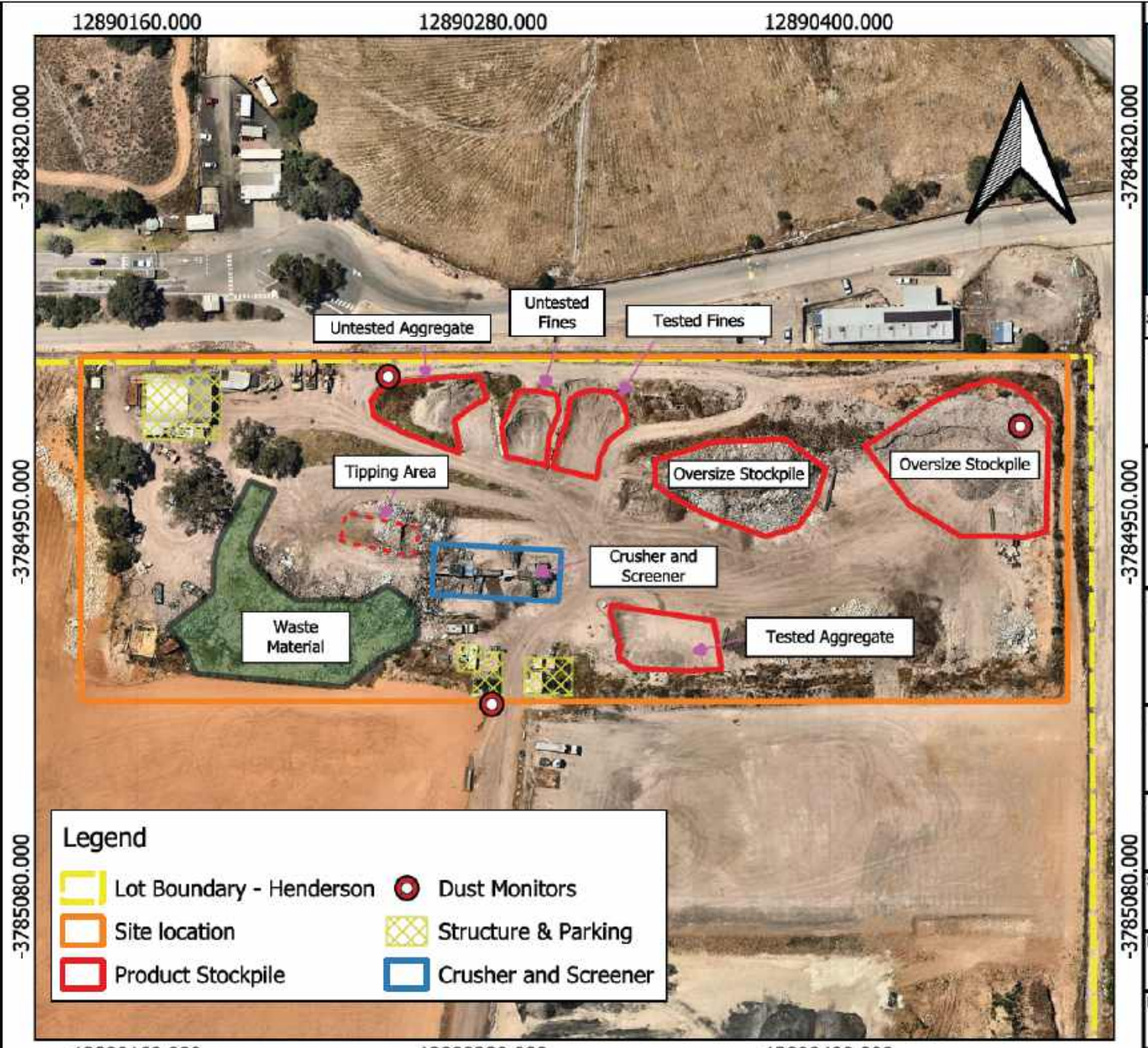
PROJECT:

Lot 1 Rockingham Road, Henderson

TITLE:

Figure 1. General Site Location

SCALE@SIZE:	ISSUE:
1:3800	FINAL
DESIGN/DRAWN:	DATE
	13/02/2025
PROJECT No:	DRAWING No:
004 - 01	1



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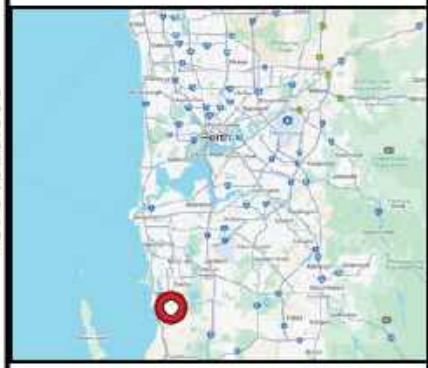

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Prepared for

SERS
Site Environmental & Remediation Services

CLIENT:

Brajkovich Demolition & Salvage Pty Ltd

PROJECT:

Lot 1 Rockingham Road, Henderson

TITLE:

Figure 2. Site Layout

SCALE@SIZE:	ISSUE:
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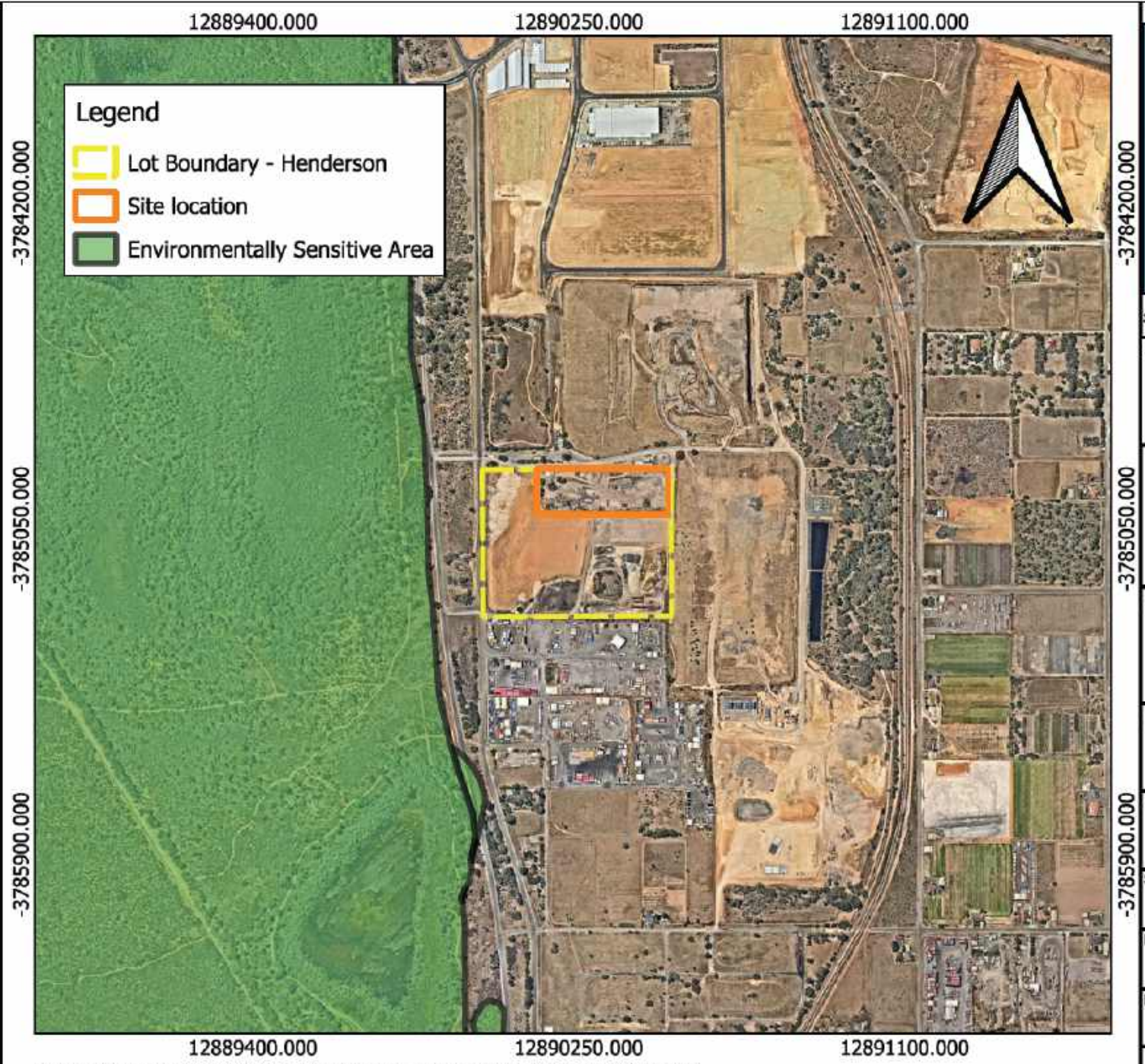
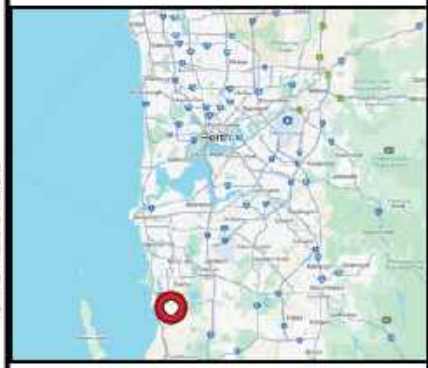
DESIGN/DRAWN:	DATE
	14/02/2025
PROJECT No:	DRAWING No:
004 - 01	2



Source: Aereal Imagery - Nearmaps / Clearing Regulations - Environmentally Sensitive Areas (DWER-046)



Source: Aerial Imagery Google Maps

Scale bar:

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Prepared for

SERS
Site Environmental & Remediation Services

CLIENT:

Brajkovich Demolition & Salvage Pty Ltd

PROJECT:

Lot 1 Rockingham Road, Henderson

TITLE:

Figure 3. Environmentally Sensitive Areas

SCALE@SIZE:	ISSUE:
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	14/02/2025
PROJECT No:	DRAWING No:
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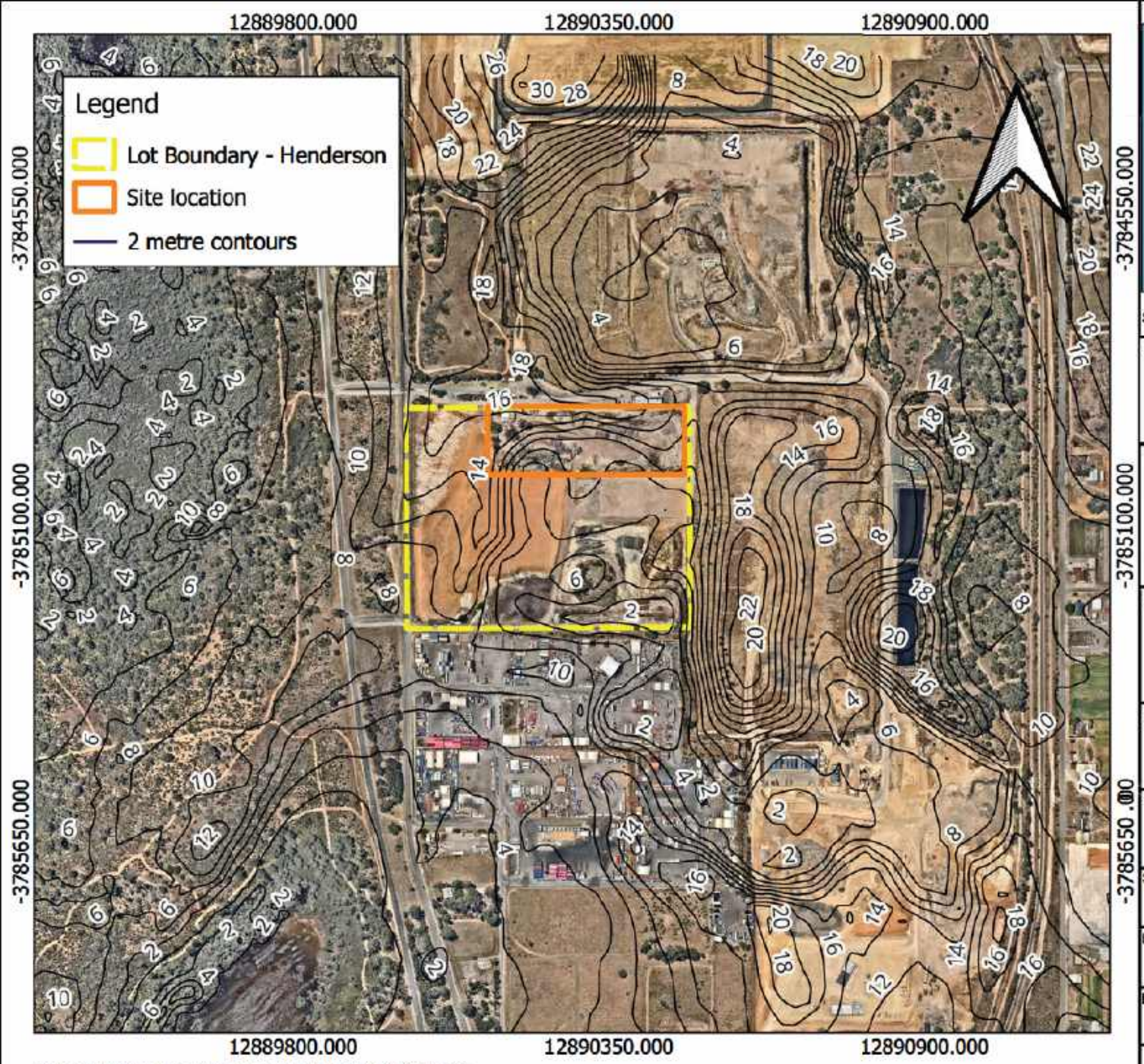

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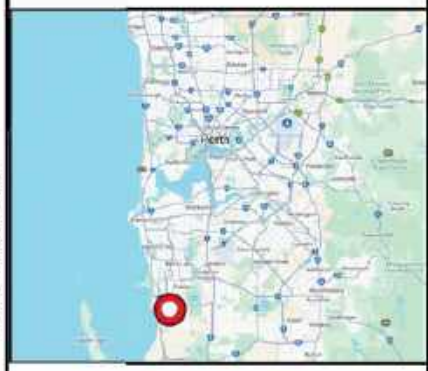

Source: Aerial Imagery Google Maps

Scale bar:

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Prepared for

SERS

Site Environmental & Remediation Services

CLIENT:

Brajkovich Demolition & Salvage Pty Ltd

PROJECT:

Lot 1 Rockingham Road, Henderson

TITLE:

Figure 4. Topography - 2 metre contours

SCALE@SIZE:	ISSUE:
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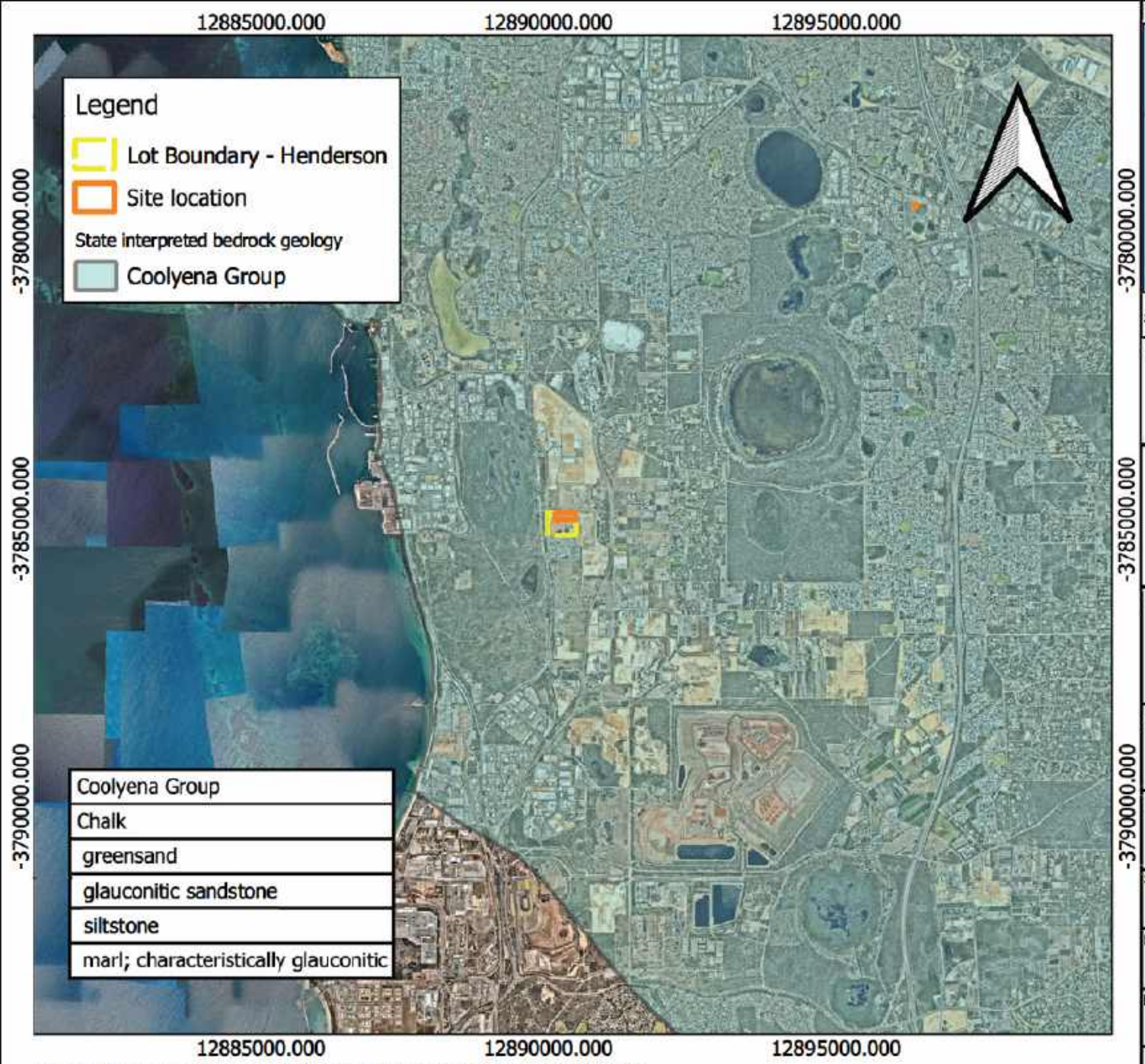
DESIGN/DRAWN: [redacted]	DATE: 14/02/2025
PROJE: 004 - 01	DRAWING No: 6



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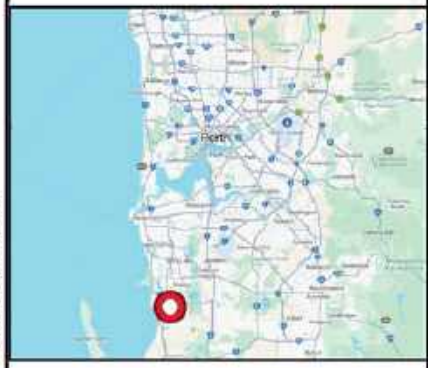

Source: Aerial Imagery Google Maps

Scale bar:

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Prepared for

SERS

CLIENT:

Brajkovich Demolition & Salvage Pty Ltd

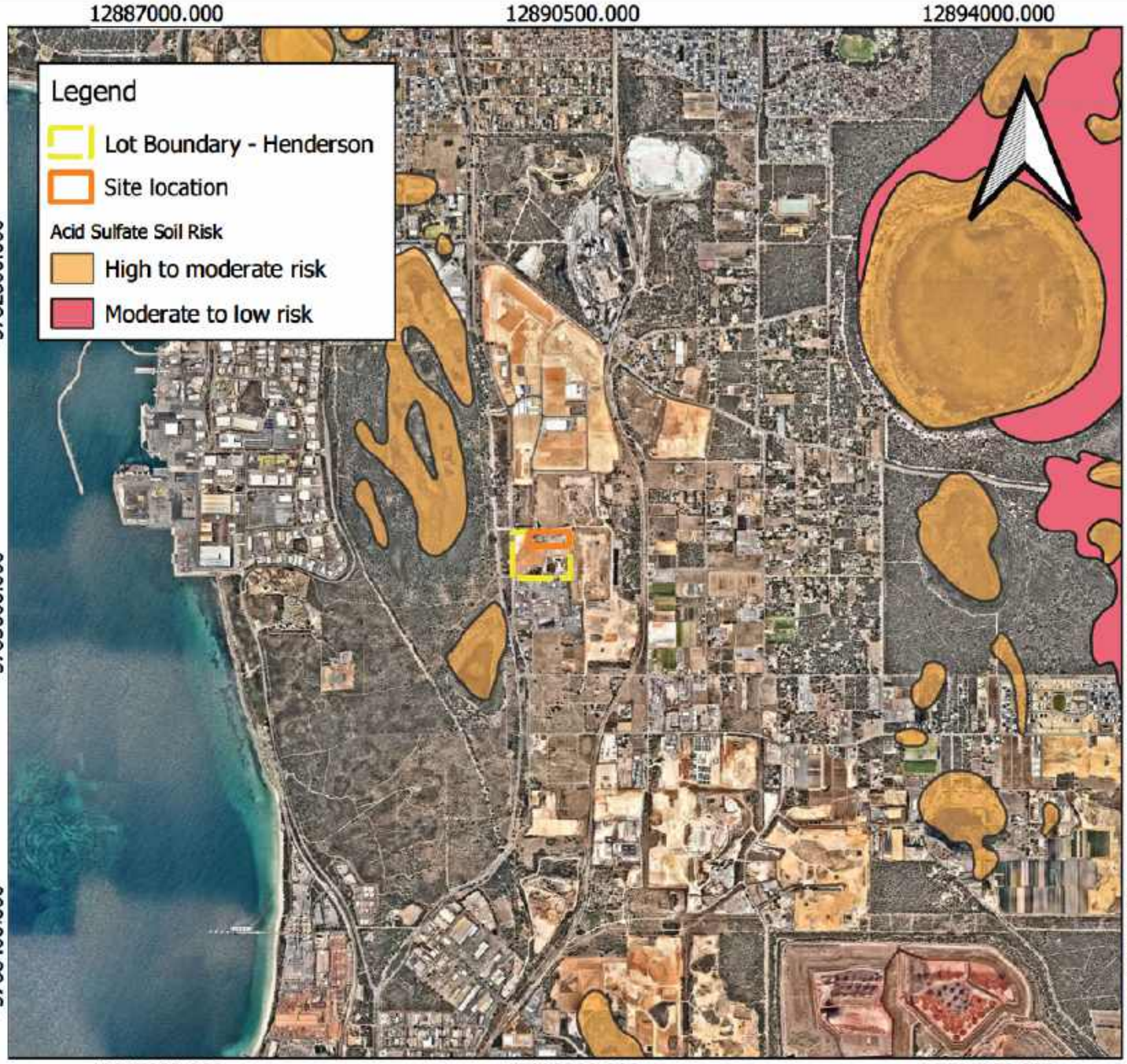
PROJECT:

Lot 1 Rockingham Road, Henderson

TITLE:

Figure 5. Geology

SCALE@SIZE:	ISSUE:
1:100000	FINAL
DESIGN/DRAWN:	DATE
	14/02/2025
PROJECT No:	DRAWING No:
004 - 01	7



Source: Aereal Imagery - Nearmaps / Acid Sulfate Soil Risk Map, Swan Coastal Plain (DWER-055)

Source: Aerial Imagery Google Maps

Scale bar:

0 500 1,000 1,500 m

Prepared for

SERS

CLIENT:

Brajkovich Demolition & Salvage Pty Ltd

PROJECT:

Lot 1 Rockingham Road, Henderson

TITLE:

Figure 6. Acid Sulfate Soil Risk Map

SCALE@SIZE:	ISSUE:
1:50000	FINAL
DESIGN/DRAWN:	DATE
	14/02/2025
PROJECT No:	DRAWING No:
004 - 01	5

Appendices

A Feedback Form

B SAT Conditions

Appendix A - SAT Conditions

Attachment: "A"

Conditions

1. This approval is to stockpile and crush solid waste materials from the demolition of buildings, roads and car parks and to stockpile and process green wastes (trees and plants) on Lot 1 Rockingham Road ("the subject land"). Other materials including building contents, white goods, furniture, or motor vehicles shall not be stockpiled or processed on the subject land. All stockpiling, crushing and processing ("Operations") is to be undertaken in accordance with Development Site Plan (Revision B) dated 15 June 2011 and Contour Plan dated 9 June 2011 (E Ref 061102B) (copies which are attached and marked "B").

2. The use and development referred to in Condition 1 is approved for a period of 5 years only from the date of this approval.

3. A Rehabilitation and Final Contour Plan shall be prepared and implemented to the satisfaction of the Western Australian Planning Commission ("WAPC") on advice from the Department of Environment and Conservation ("DEC"), Department of Health ("DOH"), City of Cockburn and LandCorp prior to the expiry of this planning approval unless a new approval is obtained prior to the expiry of this approval. The Rehabilitation and Final Contour Plan, *inter alia*, is to detail the manner in which all materials and infrastructure associated with the approved use and development will be removed without unduly impacting on the amenity of the locality or causing any health risk to the public.

4. The total quantity of materials received or processed on the subject land shall not exceed 100,000 tonnes for each year of approval commencing on the date of approval. The volume of material entering and leaving the subject land shall be recorded weekly and this data retained and made available for inspection by the DEC, DOH, and City of Cockburn. A feature survey shall be done on the subject land every 6 months and the survey shall be retained and made available for inspection by the DEC, DOH and City of Cockburn.

5. All activities on the subject land, with the exception of dust suppression, shall only occur between 7am and 6pm Monday to Saturday and not at all on public holidays.

6. An Asbestos Management Plan being prepared to the satisfaction of the WAPC on advice from the DEC, DOH and City of Cockburn prior to the commencement of Operations. The Asbestos Management Plan shall incorporate monthly auditing (including a visual inspection (which is videotaped) and sampling) by an independent (and not associated with the Applicant or its environmental consultant) occupational hygienist approved by the DOH at the cost of the Applicant. The Plan, *inter alia*, will require the following:
   (a) monthly audits for the first 6 months of Operations, during which the occupational hygienist will undertake a visual inspection (which will be video taped) and sampling of the material at the premises in accordance with the Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (May 2009) and provide a report to the WAPC, the DEC, DOH and the City of Cockburn within 3 weeks of completion of the audit and receipt of laboratory analysis results of the sampling done on the materials;
   (b) audits every 2 months and sampling of the materials and reporting by the occupational hygienist in the manner set out in sub-paragraph (a) above for the next 6 months; and

(c) quarterly audits, sampling of the material and reporting by the occupational hygienist in the manner set out in sub-paragraph (a) above for the remaining duration of the Operations.

7. Each truckload associated with the development (excepting 100% green waste) which enters the subject land shall be accompanied by a certificate certified by a person with adequate qualifications, training and experience in identification of asbestos containing materials and appointed in writing as such by Brajkovich Demolition & Salvage Pty Ltd that the materials have been inspected and that no visible asbestos is contained within the truckload. All certificates are to be retained and made available for inspection by DEC, DOH, City of Cockburn and the occupational hygienist (referred to in condition 6).

8. Material on the subject land shall contain no more than 0.001% weight for weight asbestos.

9. Field and laboratory sampling of every 70m³ throughput of material (not including green waste) on site less than 10mm in diameter is to occur and be conducted in accordance with the Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (May 2009). The volume of throughput shall be recorded weekly and this data be retained and made available for inspection by the DEC, DOH, City of Cockburn and the occupational hygienist. The sampling for laboratory analysis needs to be sent to a NATA accredited laboratory. All sampling results are to be retained and made available for inspection by DEC, DOH, City of Cockburn and the occupational hygienist (referred to in Condition 6).

10. From the start of Operations and the subsequent summer period after commencement of Operations, a campaign of 3 months monitoring each for asbestos by the membrane filter method (for 0.01 asbestos fibres per ml of air) is to be undertaken. The plan for the campaign is to be prepared by the occupational hygienist and approved by DOH. The campaign is to be audited monthly by the occupational hygienist.

11. The Asbestos Management Plan shall be implemented to the satisfaction of the WAPC on advice from the DEC, DOH and City of Cockburn.

12. A Dust Management Plan being prepared (prior to Operations commencing) and implemented for the subject land and haul roads to the satisfaction of the WAPC on advice from the DEC, DOH and City of Cockburn. The Dust Management Plan shall, inter alia, require that all activities cease (apart from those activities associated with dust suppression) in the event of water supply failure.

13. A Sprinkler Reticulation Plan being prepared prior to operations commencing to the satisfaction of the WAPC on advice from the DEC, DOH and City of Cockburn incorporating, inter alia, water pressure and availability calculations to define the maximum non-hydromulched areas that are capable of being adequately watered to address dust lift off during hot, dry and windy periods.

14. The Sprinkler Reticulation Plan being implemented to the satisfaction of the WAPC on advice from the DEC, DOH and City of Cockburn.

15. The total non-hydromulched area shall not at anytime exceed the maximum area capable of being adequately watered to address dust lift off during hot, dry and windy periods referred to in the Sprinkler Reticulation Plan.

16. 24 hour 7 day a week dust monitoring for PM_{10} shall be undertaken at the locations specified by the WAPC on advice from the City of Cockburn, DEC and DOH. The dust monitoring shall commence prior to the commencement of Operations and continue for the duration of the planning approval.

17. The dust monitoring system required by Condition 16 shall be maintained and calibrated to the satisfaction of the WAPC on advice from the DEC.

18. The dust monitoring system shall automatically activate the sprinkler system provided for in the Sprinkler Reticulation Plan at a level of PM_{10} of 450ug/m3 average over a 15 minute period and continue to operate until dust levels are below a 450 $\mu g/m^3$ average over a 15 minute period.

19. A Surface Water Management Plan shall be prepared to the satisfaction of the WAPC on advice from the City of Cockburn prior to the commencement of Operations.

20. The Surface Water Management Pan shall be implemented to the satisfaction of the WAPC on advice from the City of Cockburn.

21. A Noise Management Plan shall be prepared to the satisfaction of the WAPC on advice from the DEC prior to the commencement of Operations.

22. The Noise Management Plan shall be implemented to the satisfaction of the WAPC on advice from the DEC.

23. All green wastes shall be removed from the subject land within one month of being received to the satisfaction of the WAPC on advice from the DEC.

24. Access to and from Rockingham Road is to be left in and left out only.

Appendix B – Feedback Form

PERSONAL INFORMATION

Organisation:	
Name:	
Address:	
Suburb/Town:	
	State: Postcode:
Phone No:	Work: Mobile:

YOUR FEEDBACK

Location:	
Date & Time:	
Nature of Feedback:	
:	
:	

FEEDBACK DETAILS

Please sign here _____ Date _____

Post, fax or e-mail this form to Site Environmental & Remediation Services.

281 Newcastle Street Northbridge WA 6003
PO BOX 377 Northbridge WA 6865
T +61 8 9220 2000 **F** +61 8 9220 2010
E admin@sers.net.au **W** www.sers.net.au

Attachment 8B: Asbestos Management Plan

Asbestos Management Plan

Lot 1 (958) Rockingham Rd,

Henderson, Western Australia, 6166

PREPARED FOR:

Brajkovich Demolition & Salvage Pty Ltd
1686, Great Northern Highway,
Upper Swan, WA, 6069

PREPARED BY:

Site Environmental & Remediation Services Pty Ltd. (SERS)
281 Newcastle Street, Northbridge, WA, 6003
PO Box 377 Northbridge, WA, 6865
T: +61 8 9220 2000 **F:** +61 8 9220 2010 **E:** admin@sers.net.au

DOCUMENT CONTROL

Report : 1335/004/HC/190413

Report & Revision Issue

Status	Revision	Date	Prepared	Checked / Authorised
Issue	0	23 May 2012	[redacted]	[redacted]
Issue	1	29 November 2012		
Issue	2	4 April 2013		
Issue	3	August 2021		
Issue	4	19th October 2022		
Issue	5	30th October 2024		

Amendment Details

Revision	Date	Details	Section	Distribution
0	23/052012	Issue for Client Review	All	BDS
1	29/112012	Issue for Client Review	All	BDS
2	4/4/2013	Changes following DEC Audit	5.3; 5.8; 5.10; 6.1; 7.1; 7.3; 8.3	BDS
3	August 2021	Update to incorporate updated guidelines	All	BDS
4	October 2022	Update to incorporate updated legislature and guidelines	All	BDS
		Deleted sections	3.4,3.6,4, 4.1, 4.2, 4.3, 4.4, 5.4, 5.4.1, 5.9, 6, 6.1, 6.2, 6.3, 6.3.1, 6.3.2, 6.3.3, 6.3.4, 6.3.5, 6.4, 6.5, 8.4	
		Updated	Executive summary, 1.0, 3.2,3.3,3.4,3.5, 3.7, 5.1,5.2,5.3,5.10,7,7.1,7.3,7.3.1, 7.3.2,7.4,7.6,7.7,8.1,8.2,5.4,5.4.1	

Revision	Date	Details	Section	Distribution
5	October 2024	Biannual review of document	All	BDS
		Formatting	All	
		Removal of deleted sections	3.4,3.6,4, 4.1, 4.2, 4.3, 4.4, 5.4, 5.4.1, 5.9, 6, 6.1, 6.2, 6.3, 6.3.1, 6.3.2, 6.3.3, 6.3.4, 6.3.5, 6.4, 6.5, 8.4	

Table of Contents

Abbreviations

ACM	Asbestos Containing Material
BDS	Brajkovich Demolition and Salvage Pty. Ltd.
BDPL	Brajkovich Demolition Pty. Ltd.
C&D waste	Construction and Demolition waste
SERS	Site Environmental and Remediation Services (WA) Pty. Ltd.

Definitions

Category 13	Crushing of building material: premises on which waste building or demolition material (for example, bricks, stones or concrete) is crushed or cleaned (>1000t/year)
Category 63	Class 1 inert landfill site: premises on which waste (as determined by reference to the waste type set out in the document entitled *Landfill waste classification and waste definitions 1996* published by the Chief Executive Officer and as amended from time to time) is accepted for burial
Category 67A	Compost manufacturing and soil blending: premises on which organic material (excluding silage) or waste is stopped pending processing, mixing, drying or composting to produce commercial quantities of compost or blended soils
Category 70	Screening, etc. or material: premises on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated
Competent Person	A person with training, experience and qualifications in the identification of asbestos containing material.

Executive Summary

This Asbestos Management Plan (AMP) has been developed for crushing and screening operations at Lot 1 (958) Rockingham Road, Henderson. A works approval was granted by the Department of Environment in February 2012 for the establishment of the site to accommodate these activities. This document was prepared to satisfy a condition 11 of planning approval, requiring that an Asbestos Management Plan be prepared.

Crushing and screening operations are a form of waste processing, thus should be considered an industrial land use. The site is in an area zoned for rural use, and is surrounded by properties used for waste recovery, inert landfill, market gardening, storage, office, transport, residential use and regional parkland.

Crushing and screening activities have the potential to release asbestos fibres as a component of dust, if not adequately managed. Dust management is therefore integral to asbestos management. This AMP outlines strict management methods, procedures. This AMP is intended for use in conjunction with dust management methods and procedures outlined in the associated DMP (*Dust Management Plan – Lot 1 Rockingham Road, Henderson*, SERS, 2022).

Due to barriers in the form of constructed bunds up- and down-gradient of operations, it is predicted that airborne dust shall not leave site boundaries. A standard operating procedures flow chart has been developed which depicts the management procedures contained in this report.

Methods and procedures to identify, contain and dispose of suspected ACM are recommended for application throughout the unloading, crushing and re-use process. The objectives of these procedures and controls are to ensure that all work is carried out to minimise occupational emissions as best as can be reasonably practiced negating any risk to human or environmental health.

With appropriate management measures in place, airborne fibre levels are not anticipated to exceed guideline criteria for either the operating premises or premises surrounding the site.

1 Introduction

Site Environmental & Remediation Services Pty Ltd (SERS) were originally engaged by Brajkovich Demolition & Salvage Pty Ltd (BDS) to prepare an Environmental Assessment & Site Management Plan (EASMP) to accompany a Development Application to the Western Australian Planning Commission (WAPC) for the development of a Construction & Demolition (C&D) Waste Crushing Recycling Facility and Solid Waste Depot on part of Lot 1 Rockingham Road, Henderson, WA, 6166 (the site) as well as related applications to the Department of Water and Environmental Regulation (DWER), previously known as the Department of Environment and Conservation (DEC).

Conditions of both the planning and works approval required the preparation and presentation of an Asbestos Management Plan, detailing all manner of practices to be employed to manage asbestos on the site.

Operations shall be conducted on part of Lot 1 Rockingham Road, Henderson, displayed in **Figure 1 – Site location and surrounds** and herein referred to as 'the site'. Lot 1 is under the ownership of Comse Nominees. It is located within the municipality of the City of Cockburn. Lot 1 is located east of Rockingham Road, between Russell Road and Musson Road. It currently consists of several temporary structures as part of the recycling operation. No permanent structures are located on the site.

BDS is a licensed demolition company based in the Swan Valley, operating in Perth and across regional centres throughout Western Australia. Brajkovich Demolition Pty Ltd (BDPL) is a related company of BDS, which is an established Western Australian business that has been operating a C&D Waste Crushing Recycling Facility in the Henderson locality since April 2004. A previous C&D Crushing Recycling facility, operated by BDPL, was located on part of Lot 20, Rockingham Road and part of Lot 4, Musson Road, Henderson, Western Australia.

As mentioned previously, a condition of the planning and environmental approvals for Lot 1 required an Asbestos Management Plan (AMP) for the site and all related haul roads be prepared (prior to operations commencing), implemented and updated as necessary. It is in the interest of satisfying this condition that this management plan has been prepared for consideration by the DWER, DoH and the City of Cockburn.

1.1 C&D waste

C&D material can be defined as excess or waste material arising from the construction and demolition of buildings and structures or pavements. It includes 'concrete, brick, rubble, asphalt, metals (ferrous and non-ferrous), timber, wallboard, glass, plastics, asbestos, soil and other building materials and products' (DEC, 2009). It excludes toxic materials.

This crushing and screening operation will accept a mixture of concrete, bricks, rubble, timber, metals and large tree stumps for processing and mechanical/ manual segregation into material type, prior to being grading and transport to an alternate destination for further treatment/ uses.

Facilities of this nature require licensing by the DWER, and only accept inert C&D material in accordance with a valid DWER licence.

The clean, inert, C&D waste materials are processed and recovered as recyclable building products such as road bases and aggregates. Material that cannot be recovered is separated and contained on-site before being transported to appropriate inert (Class I) and putrescible (Class II and III) landfill sites for disposal.

The operational process schematic in **Attachment 1** outlines the various processes on-site (please note Asbestos Management has not been included in this operational process schematic but that is carried out as priority site practice).

1.1.1 Asbestos Containing Material

Asbestos has been used historically as an integral component of many structures in Western Australia due to its fire-proof properties. It exists in structures across a wide-ranging area in both friable and bound forms and is particularly commonly encountered as ceiling and wall panels, fascia's, eaves, veranda soffits, fencing, roof sheeting, kitchen tilux, vinyl floor tiles (DHW, 2008), as well as drainage and flue pipes, roofing shingles and flexible building boards (Villaboard, Hardiflex, Wundaboard, Flexiboard). A more comprehensive list of forms in which asbestos is found is provided in *Code of Practice for How to Manage and control Asbetsos in the Workplace (WHSC, 2022)*

As a demolition contractor, Brajkovich Demolition & Salvage Pty Ltd (BDS) encounter and successfully manage a vast quantity of asbestos cement products whilst undertaking demolition of a variety of structures. Construction and demolition waste often has the potential to contain asbestos-containing material (ACM). ACM is not always found in the more obvious forms listed above and can have been historically covered over with an impermeable layer such as concrete or can be hidden in interior walls that may be inaccessible during hazardous materials inspections conducted prior to demolition.

As a result, it is imperative that a system exists to ensure that any material brought on to the site for crushing contains no asbestos.

Where asbestos contained in waste loads is not managed sufficiently, it may pass through crushing operations, or persist in soil once stockpiled, thus contributing to air pollution and contamination of land. Asbestos management techniques will thus comply with the *Environmental Protection* (*Unauthorised Discharges) Regulations 2004*, *Health (Asbestos) Regulations 1992* Regulation 11 (the Asbestos Regulations), *Guidelines for the Assessment, Remediation and Management of Asbestos-contaminated Sites in Western Australia 2021*, *Contaminated Sites Act 2003*, *Contaminated Sites Regulations 2006*, and any relevant City of Cockburn by-laws.

The C&D waste at Lot 1 Rockingham Rd, Henderson will comprise of material from the demolition of sites across the metropolitan area.

1.2 Company profile

The Brajkovich family has been in the demolition and salvage business for approximately 45 years and currently employs approximately 300 full-time employees. BDS take pride in being an operationally diverse demolition company, in that they demolish structures ranging from small dwellings to large multi-storey buildings.

BDS aims to successfully manage the extended producer responsibility of waste material in Western Australia.

1.3 Objectives

Asbestos management methods are proposed with the objective of minimising the risk of harm to human and environmental health through preventing the exposure to airborne fibres. Operational methodologies thus ensure material is heavily scrutinised at every step of processing.

2 Applicable regulations

2.1 Health (Asbestos) Regulations 1992

The Asbestos Regulations govern the following areas of the Health Act: asbestos cement product; material containing asbestos; and disposal of material containing asbestos.

2.2 Work Health and Safety Act (2020)

The primary governing legislated instrument for Work Health and Safety in Western Australia. To make provision about, and in connection with

- the health and safety of workers; and
- health and safety at workplaces; and
- risks to health and safety arising from work.

2.3 Work Health and Safety Regulations (2022)

Provides guidance on legislation and regulations when working with or in buildings with asbestos in Western Australia.

2.4 Code of Practice for How to Manage and control Asbetsos in the Workplace (WHSC, 2022)

Developed to assist in the control of the risks of ACM in workplaces by setting out steps to be taken to eliminate or otherwise minimise the risks of exposure to airborne fibres including identification of ACM, risk assessments and the implementation of control measures with the aim of reducing incidences of mesothelioma, asbestosis and lung cancer.

2.5 Code of Practice for How to Safely Remove Asbestos (WHSC, 2022)

Advice is provided for the safe removal of asbestos and ACM from buildings and structures, equipment, machinery and other vehicles.

2.6 Guidelines for the Assessment, Remediation and Management of Asbestos-contaminated Sites in Western Australia 2021

Provides guidance on sampling requirements to verify that work practices are as effective as documented.

2.7 Guidelines for managing asbestos at construction and demolition waste recycling facilities (DWER, April 2021)

These guidelines provide a framework for C&D waste recycling facilities to work within in relation to the asbestos. The expectations of the DWER are laid out in relation to waste acceptance, testing and monitoring and management procedures and practices at the site.

3 Site Operations

The site is to be operated as an inert C&D waste recycling facility.

Mixed C&D waste is deemed inert, with C&D materials including concrete, tiles, bricks, sands, gravel, soils, timber and metals. Recycling these materials is done by reprocessing via screening, sorting and crushing to produce a range of building products including recycled sands, recycled road base, crushed bitumen road base, crushed concrete road base and drainage aggregates. This reduces the necessity for natural resource extraction as these recycled products can be blended with natural raw materials with no ill-effect on the quality of the product, and thus highly sustainable. Please see **Attachment 1** for an operational process schematic for the facility.

BDS envisage that the proposed site operations will create various products for re-sale or re-distribution free of charge. A <10mm screened product (fines), a <40mm aggregate and a <100mm product will be the primary out-feed constituents from the crushing and screening of material whilst metals and timber are also segregated at various stages throughout the processing operation. Metals shall be sent off-site for recycling, whilst wood that is segregated as part of the crushing process shall be re-directed off-site as landfill material.

A natural part of BDS demolition works is the contractual obligation to remove and dispose of unprocessed green waste (i.e. tree stumps, hedges). Green waste that may be accepted at the site as a constituent of a mixed C&D load and will be identified and segregated once tipped. Alternatively, green waste can come to the site as a source-segregated load. If this source-segregated load meets the acceptance criteria for an alternate facility, it will be diverted directly to that facility and not be brought to site. On-site processing of green waste involves cutting the green waste into ≤300mm pieces and then temporarily storing the processed waste on the site prior to it being transported off site to enable the material to be processed into mulch, compost or soil conditioner.

3.1 Description of Operations

This section will give a description of the operations and a conceptual outline of the operational processes under the following headings:

- Equipment and Machinery
- Site Facilities
- Site Management
- Waste Acceptance, Handling and Transportation
- Staffing
- Operational hours
- Stockpiles
- Site Preparation and Earthworks

C&D Recycling facility operations are relatively straightforward when compared to newer waste management technology and facilities. The primary purpose of the BDS Recycling facility is to allow for the consolidation of C&D waste at a strategically located facility close to their generation sources, and the reduction and segregation of various wastes into viable building products as previously mentioned.

3.2 Equipment and Machinery

The equipment and machinery that will be utilised to manage the processing of materials on Lot 1 Rockingham Rd as part of the proposed facility include.

PRIMARY EQUIPMENT	SECONDARY EQUIPMENT
• 2 x Crushers	Excavator attachments (Buckets, Rock-breaker, Pulveriser, Sheers)
• 1 x Screen	Refuelling Truck
• 3 x 360 Excavators	Maintenance Vehicle
• 2 x Wheeled Loader	
• 1 x Water Cart	

Due to the nature of the C&D Recycling process, equipment must undergo continual maintenance and/or repair. Ancillary equipment may be brought on-site from time to time as needed. Ancillary equipment shall include fuel tankers for refuelling operations, water carts, and occasionally excavators and wheeled loaders in the event of equipment malfunctions/breakdowns.

3.3 Site Management & Staffing

The day-to-day running of the site is overseen by the Site Supervisor. The Site Supervisor is directly responsible for management of all activities at the site, including:

- directing staff duties,
- co-ordinating all in-coming and out-going material,
- dust controls,
- noise controls, and
- documentation control.

The site has between 8 and 15 on-site employees. All staff will have adequate qualifications and be appropriately trained to undertake their relevant roles. **Table 1** provides details of the specific role's employee is expected to carry out.

Table 1 – Employee Roles for Asbestos Management

		Personnel				Machinery				
		Site supervisor	Machine operator	Truck Driver	Site worker	Excavator	Loader	Crusher	Screen	Watercart
1	**Tipping of C&D waste at processing facility**									
	• Inspection of asbestos free docket	o		o						o
	• Inspection of the load post tipping	o								o
2	**Stockpiling C&D waste at the processing facility** Inspection of material as it is stockpiled		o			o	o			
3	**ACM containment on site**									
	• If affected incoming load is deemed to be suitable for manual hand-picking of affected area	o	o		o					
	• If affected load is deemed to be heavily contaminated, or contaminants cannot be removed by manual labour.	o	o		o	o	o	o	o	
4	**Storage of ACM material on site** • Storage and removal of ACM from site	o								
5	**Feeding the crusher**		o		o		o	o		
6	**Stockpiling crush material**		o		o		o			
7	**Inspection of crushed material**	o								

The on-site training that they will undertake, (as part of induction formalities), will include detailed familiarisation with this Asbestos Management Plan. Each employee will be provided with a copy of these plans and will be required to agree to work within the methodologies detailed in each document. Records of this process shall be retained.

The site supervisor will be responsible for all on-site document control and management.

3.4 Reticulated Water Dust Suppression System

A reticulated water network is located around the site operational area to keep processing areas and stockpiles damp. Water will be extracted from an installed groundwater bore located within the lease area and pumped to a storage tank. Surface Water and Reticulation Management options are summarised below.

Water will be supplied around the reticulated network by means of a pump as specified by an Irrigation Engineer. This reticulated water network will be fitted with high-angle sprinkler systems, each at 15 to 20 metre intervals to maximise the effectiveness of the spraying system as a dust suppression measure on stockpiles and other areas. The reticulated water network is automatically activated if PM_{10} dust levels exceed 450µg/m^3 over any 15-minute period at any dust monitoring location.

Should water not be available on the site for any reason, water shall be trucked to the site, or scheme water shall be utilised until a more appropriate, permanent supply can be re-established.

3.5 Watering Cart

A watering cart will operate on a permanent basis during operational hours to dampen haul roads throughout the site. The watering cart will also act as a pumper truck and will have a fire hose application fitted which will be utilised for additional dust and asbestos control in areas not covered by the reticulated water network (if any) and in the event of a fire.

3.6 Complaints

All off-site complaints known to BDS are taken and treated very seriously. It is the aim of BDS to handle all these complaints without delay. Contact will be made with the complainant and an investigation will occur into the nature and cause of the complaint and a corrective action solution will be devised to mitigate a future similar occurrence. Individual complaint forms and a complaints register will be compiled by SERS incorporating all future known complaints from this site. A template complaint from can be seen in **Attachment 2.**

3.7 Possible locations of asbestos on site

The pre-acceptance and acceptance procedures which will be put in place on site are expected to ensure that asbestos and ACM do not enter the site. However, it is possible for asbestos to be present on site. The following locations have the potential to contain asbestos:

- The tipping area
- Uncrushed stockpiles

All members of staff will be trained in the identification of asbestos and will inspect the material at all stages of the recycling process. Should asbestos be identified on site it will be transferred to a quarantine area, pending its final disposal at an appropriately licence facility.

3.8 Records for Inspection

Records will be maintained on site for inspection should they be required by the DWER. The on-site records will include the following.

- For all rejected loads, the following will be recorded.
    - Waste producer.
    - Waste carrier.
    - Registration number of the carrier vehicle; and
    - Date of rejection.
- Complaints received and the management response (Sample attached form **Attachment 2**).
- Training records (sample form **Attachment 3**).
- Record of the visual inspections which are carried out on the processed stockpiles (sample form **Attachment 5**).
- Result of processed stockpile testing.
- Details of incidents of asbestos identification on site and the actions taken in response to the none-conformance (Sample form **Attachment 4**); and
- Details of audits which have been undertaken in relation to the implementation of procedures on site.

All records will be kept in electronic form for up to three years. All records will be made available for inspection by the DWER, DoH and WorkSafe upon request.

4 On-site Asbestos Management Procedures

The nature of historical ACM use means it is sometimes hidden within building facades constructed prior to 1987, leaving the potential for it to be found within C&D waste. All C&D waste will be subject to the rigorous management process detailed below, to ensure there is negligible risk to on-site employees and that any material used as fill meets stringent criteria set by the Department of Health

1. Guidelines for the Assessment, Remediation and Management of Asbestos-contaminated Sites in Western Australia, 2021 &
2. Guidelines for managing asbestos at construction and demolition waste recycling facilities (DWER, April 2021)

Asbestos management is thus required as part of the remainder of the crushing process:

Arrival and storage

1. Tipping of C&D waste at processing facility
2. Stockpiling C&D waste at processing facility

Identification

3. ACM Containment.
    a. Storage of ACM on-site
    b. The Transport and Disposal of ACM

Processing and storage

4. Feeding Crusher
5. Stockpiling crushed (processed) rubble

Inspection

6. Daily visual inspection
7. Remedial action (if required)

BDS have created an On-Site Management Plan below for crushing and screening activities that will occur onsite. The management methods contained in this AMP have been summarised in a standard operation flow-chart.

4.1 Step 1 – Tipping of C&D material (on site)

Acceptance of material to the facility shall be arranged prior with the tipper of the material giving a written notice to the facility that all loads from the company or individual into the facility are asbestos free. Written notices shall cover all intended loads into the facility and have no expiry date. Records of such written notices shall be placed on record and available for relevant authorities to inspect.

Upon arrival at the site the truck will be directed to the tipping area for off-loading. As the load it tipped it will not be permitted to mix with other wastes which are present on site.

Each load shall then be inspected by the truck driver and the Site Supervisor post tipping. if hazardous materials are found within the load the following actions shall be taken:

- The Site Supervisor shall alert and instruct the excavator operator that hazardous materials have been suspected/ identified in the load that has been tipped.

- The load shall be isolated and will be clearly marked with the words “CAUTION ASBESTOS”. The site Supervisor shall make an assessment on whether the load can be accepted or rejected. i.e. whether or not the level of hazardous materials present is quite low or highly visible.

- The likelihood is that the presence of hazardous materials shall be low as the load has undergone previous asbestos management measures but if ACM is detected measure Option 1/ Option 2 of Step 3 shall be initiated. During this process, if the removal uncovers more hazardous materials than expected, then the entire load shall be treated as contaminated and the load shall be mechanically loaded onto semi-tipper trailers which will be clearly marked with the words “CAUTION ASBESTOS”, for disposal at a licensed Landfill facility that accepts asbestos. Prior to the asbestos waste being removed from site, the site supervisor will contact the asbestos landfill facility to inform the landfill that the load contains asbestos. Whilst loading, the proposed semi-tipper trailer shall be suitably wet down and once loading is complete, the trailer should be covered with a membrane prior to transportation off-site . This membrane shall cover the entire load as to prevent any dust fragments leaving the vessel during transportation.

- If asbestos material is found that is fibrous, friable or asbestos fines are evident, then the excavation of the impacted area shall be halted and the advice of a qualified Environmental Consultant shall be sought before any further works proceed.

4.2 Step 2 – Stockpiling of C&D material

During the off-loading of material to the stockpiles, the material usually needs to be further managed to form the stockpile. The operator of the loader/excavator will do this by carefully displacing each bucket in a fashion so as not to release airborne fibres and, where possible, the operator will inspect each bucket as it is moved. If an operator finds asbestos present in any excavator bucket, or within a stockpile of demolition rubble, the following procedures will be enacted:

- Operation of the loader is to cease and a further inspection is undertaken.
- One of the options below will be applied.

The options for management are outlined below, according to the extent of asbestos contamination:

4.3 Step 3 - ACM Containment

Option 1 - If the affected incoming load is deemed to be suitable for manual hand-picking of affected area
Manual hand picking of affected area with appropriate handling measures put into practice. All ACM shall be sprayed with water and then immediately bagged (collected and stored in heavy duty, impermeable, low density, 200 µm gauge polyethylene not >1.2m high and 0.9m wide, sealed with wire tie and not >25kg, clearly marked 'CAUTION ASBESTOS') and disposed of to regulatory requirements. Water sprayed will not be of sufficient force that water droplets might generate dust when they hit the surface of the ACM. Prior to further excavation being undertaken on the stockpile, an inspection shall then be carried out and the process is repeated until no ACM can be visually detected within the material to be loaded out. All necessary personal protective equipment and respiratory protective equipment shall be utilised by every BDPL employee undertaking ACM removal. At the conclusion of the removal of all suspected ACM, the stockpile area will then be inspected again to ensure that all ACM has been removed. Further hand-picking will be undertaken if further ACM is noted during this inspection. No mechanical work shall be undertaken until no ACM can be visually detected within the rubble. If fibrous, friable or asbestos fines are detected then the full removal of affected area shall be considered. This shall be done by carrying out a risk assessment on the affected area. This inspection process is to be repeated until such time as all visible ACM has been removed. All asbestos finds on-site shall be documented by staff and records retained on-site.

Option 2 - If the affected incoming load is deemed to be heavily contaminated by visual inspection or the contaminants cannot be safely removed by manual labour i.e. the affected area is identified as an isolated area but not suitable for hand picking
If the affected load is deemed by visual inspection to be heavily contaminated, or the contaminants cannot be safely removed by manual labour, the entire load is to be treated as asbestos-contaminated and an investigation initiated as to how there is ACM within the load. The area shall be demarcated accordingly with adequate signage and barriers. All the necessary personal protective equipment and respiratory protective equipment shall be utilised by all BDS employees. The load is to be sprayed with water and then immediately mechanically loaded onto suitably lined semi tippers for disposal at an approved asbestos landfill facility. Water sprayed will not be of sufficient force that water droplets might generate dust when they hit the surface of the ACM. At the conclusion of the removal of all suspected ACM, the stockpile shall then further inspect to ensure that all ACM has been removed. If this inspection finds additional material that wasn't previously sighted or the removal procedures have not been carried out correctly, this shall prompt further spraying and mechanical loading.

Option 2 - If the affected incoming load is deemed to be heavily contaminated by visual inspection or the contaminants cannot be safely removed by manual labour i.e. the affected area is identified as an isolated area but not suitable for hand picking
This inspection process is to be repeated until such time as all visible ACM has been removed. All stockpiles shall undergo inspections from the excavator operator and the site operatives prior to being 'fed' into the crusher. The liner will then be sealed, and the loaded trailer will be wet-down during loading and covered with a suitable membrane for transportation as per the *Code of Practice for How to Safely Remove Asbestos (WHSC, 2022)*. The membrane shall cover the entire load and not allow any dust or fragments to leave the vessel during transportation. All asbestos finds on-site shall be documented by staff and records retained on-site. If fibrous, friable or asbestos fines are detected then the full removal of affected area shall be considered. This shall be done by carrying out a risk assessment on the affected area. The asbestos free certificate which accompanied the contaminated load to site will be used to identify the source of the contamination. A visual inspection of this site will be carried out by suitability qualified BDS employee/s. The site inspection will establish if further ACM remains on the site. Should ACM material be identified at the site it will be removed in accordance with the Step 5 option 1 or option 2 as appropriate. Details of site inspection and any clearance work which is carried out on the site will be recorded and kept with the records relating to the incident.

4.3.1 Step 3a - The Storage of ACM on-site

ACM shall be immediately dispatched from the site once isolated and contained. If this is not possible, ACM shall be stored in a dedicated ACM-waste skip or container on site when it is not possible to immediately dispatch it from site. The skip or container shall be in good condition and be able to be secured.

4.3.2 Step 3b - The Transport and Disposal of ACM

Once the step above has been conducted in its entirety, the skip or contents of the container shall be transported by truck to an approved asbestos-accepting landfill. Prior to the removal of the asbestos material from the site, the site supervisor will contact the licenced asbestos disposal landfill to inform them that the load contains asbestos. All landfill dockets shall be retained as evidence of appropriate disposal.

4.3.3 Decontamination

Once all identified or suspected ACM has been removed, the employees shall instigate the following procedure:

1. All visible asbestos dust/residue is removed from the disposable protective clothing by wet wiping all clothing.
2. The disposable protective clothing is taken off (while still wearing a respirator) and placed in an asbestos bag.
3. Clothing and footwear worn during the removal shall be vacuumed using an asbestos vacuum cleaner and then the footwear shall be wet wiped.
4. Disposable respirators shall then be discarded as asbestos waste.
5. Workers shall wash their face and hands, paying particular attention to their fingernails.

4.4 Step 4 - Feeding crusher

During the mechanical feeding of the crusher, the operator will visually inspect the contents of the excavator bucket and the stockpile from which the material is being loaded. The 'picker' that always sits upon the crusher and screen during operation will also visually inspect the contents of the grizzly prior to the contents entering the jaws of the crusher. If at any point either employee visually identifies suspect material, the following two methods shall apply:

Method 1- For small amounts of ACM found

- The Emergency Stop button on the Crusher shall be engaged immediately
- Loading of the Crusher shall cease
- A further inspection of the material upon the grizzly and all working stockpiles (crushed and uncrushed) shall be undertaken.
- Signage and barriers, indicating the removal of asbestos is being undertaken, shall be set up until the area is deemed free of visible ACM.

At the conclusion of the above being carried out, a competent BDS person, with qualifications and experience in the identification of asbestos will ensure that the following is applied:

- All the necessary personal protective equipment and respiratory protective equipment shall be utilised by all BDS employees whilst undertaking ACM removal.
- All ACM shall be sprayed with water to moisten materials, but not with sufficient pressure to release fibres upon impact with the ACM.
- Manual hand-picking of the affected area shall be undertaken with appropriate handling measures put into practice.
- The ACM shall be removed in sections (where possible)
- All ACM shall be immediately bagged (heavy duty 200 µm gauge polyethylene, labelled '*CAUTION-ASBESTOS'* and sealed) and disposed of to regulatory requirements.
- Prior to further mechanical works or excavation of the stockpile, inspection to be carried out and process repeated until no ACM is visually detected within the rubble to be loaded out.
- For crushed material less than 10mm (fines), a sample shall be taken and sent off for laboratory analysis for Asbestos Fines (AF) and Fibrous Asbestos (FA). This material shall be wet-down and quarantined until results can show that there is less than 0.001% weight for weight asbestos. If the results of this sampling exceed this limit, the entire affected area shall be treated as Class 1 Asbestos Contaminated and Method 2 detailed overleaf shall apply.
- At the conclusion of the removal of all suspected ACM, the stockpile area will then be further inspected to ensure that all ACM has been removed. If this inspection finds additional material that wasn't previously sighted this shall prompt Method 1 or Method 2 to be repeated until all visible ACM is removed.
- This inspection process is to be repeated until such time as all visible ACM has been removed.

Method 2- For medium and large amounts of ACM found.

- The Emergency Stop button on the Crusher shall be engaged immediately
- Loading of the Crusher shall cease
- A further inspection of the material upon the grizzly and all working stockpiles (crushed and uncrushed) shall be undertaken.
- Signage and barriers, indicating the removal of asbestos is being undertaken, shall be set up until the area is deemed free of visible ACM.

At the conclusion of the above being carried out, a competent BDS person, with qualifications and experience in the identification of asbestos will ensure that the following is applied:

- All the necessary personal protective equipment and respiratory protective equipment shall be utilised by all BDS employees.
- All ACM shall be sprayed with water prior to being loaded. Water will not be sprayed with such force that fibres are released upon impact.
- If the affected area is identified as an isolated ACM containing area that is not suitable for hand picking, the entire affected area will be categorised as Class 1 Asbestos Contaminated and treated as an ACM work area and shall be demarcated accordingly with adequate signage and barriers.
- The dampened ACM material shall be removed whole (as much as possible) and placed carefully into a lined (heavy duty 200 µm gauge polyethylene) trailer.
- The loaded trailer shall then be dampened prior to the liner being sealed and covered with an appropriate membrane for transportation to an appropriate landfill facility. The membrane shall cover the entire load and does not allow any dust or fragments to leave the vessel during transportation.
- The affected area shall then be mechanically loaded onto suitably lined semi-tippers for disposal at an appropriately licensed landfill facility.
- At the conclusion of the removal of all suspected ACM, the stockpile(s) shall then be inspected further to ensure that all ACM has been removed. If this inspection finds additional material that wasn't previously sighted or the removal procedures have not been carried out correctly, this shall prompt Method 1 or Method 2 to be repeated until all visible ACM is removed.
- For crushed material less than 10mm (fines), a sample of this material shall be taken and sent off for laboratory analysis for Asbestos Fines (AF) and Fibrous Asbestos (FA). This affected material shall be quarantined until results can show that there is less than 0.001% weight for weight asbestos. If the results of the sampling exceed this limit the entire affected area shall be treated as "Asbestos Contaminated" and Method 2 shall apply.
- This inspection process is to be repeated until such time as all visible ACM has been removed.

4.4.1 Decontamination

Once all the ACM has been removed by implementation of either Method 1 or Method 2, employees shall instigate the following procedure:

1. All visible asbestos dust/residue is removed from the disposable protective clothing by wet wiping all clothing.
2. The disposable protective clothing is taken off (while still wearing a respirator) and placed in an asbestos bag.
3. Clothing and footwear worn during the removal shall be vacuumed using an asbestos vacuum cleaner and then the footwear shall be wet wiped.
4. Disposable respirators shall then be discarded as asbestos waste.
5. Workers shall wash their face and hands, paying particular attention to their fingernails.

4.5 Step 5 – Stockpiling of crushed (processed) material

After passing through the crusher and screener, aggregate of specified sizes is segregated into separate piles. These materials are then transported by a loader to the appropriate stockpile, generally:

- Fines- >10mm
- 40mm
- 100mm

Material is inspected by the site staff throughout loading, transport and tipping. Should any suspected asbestos material be identified, the following will take place.

- The emergency stop button on the crusher is to be engaged immediately and loading of the material is to cease.
- Loading of the crusher is to cease and the crusher itself is to be stopped. A further inspection is required of the material upon the grizzly and all current stockpiles emanating from the crusher and/or the screen, if applicable.

All stockpiles will be isolated and inspected by a competent person and, if required, remedial action taken as described in Step 13 below.

4.6 Step 6 – Daily Visual inspection of Crushed Material

At the conclusion of each batch of crushing (minimum three times daily), the stockpiles of crushed material should be visually inspected by a competent individual(s) for the presence of asbestos material. A record of this visual inspection will be retained by the site supervisor. A sample of the record sheet is attached in **attachment 5**.

If asbestos is present, the following steps will be taken.

- The stockpile is isolated and flagged
- Method 1 or Method 2 applied (described earlier)

4.7 Step 7 – Remedial Action

Should fragments of suspected ACM be identified separate to stockpiled material, the following measures shall be employed:

- BDS employees shall carry out an emu-bob inspection of the area.
- A site plan will be created indicating the grid site layout, the area will be inspected by the on-site competent person and any findings of ACM noted on this site plan by means of a red dot corresponding to the location suspected ACM was found on site prior to its removal.

Should underlying material be identified as having asbestos content, any affected stockpiles shall be excavated and disposed of accordingly to an appropriately licensed disposal facility as per methods identified in Step 4. The material shall be carefully loaded onto lined semi-tipper(s) trailer using an excavator, wet-down and carted to an appropriate disposal facility.

5 Sampling and Monitoring

5.1 Sampling Regime

Field and laboratory sampling and testing of every 70m^3 throughput of processed material on site less than 10mm in aerodynamic diameter shall be conducted in accordance with the *Guidelines for the Assessment, Remediation and Management of Contaminated Sites in Western Australia (May 2021)*.

The location of each sample taken will be recorded to ensure the location of any positive reading which is returned is known. The stockpile will not be moved or removed from site until the laboratory test results have been returned. The volume of processed throughput shall be recorded weekly, and this data be retained.

The samples shall be sent to a NATA-accredited laboratory for analysis. All analytical results shall be retained and made available for inspection by the DWER, DoH and any other relevant parties.

The criteria applied for free-fibre materials (fibrous asbestos and free-fibres) will be an asbestos content of 0.001% in soil on a weight for weight basis (DoH, 2021).

The criteria applied for ACM fragments shall also be 0.001%. Asbestos analysis will be undertaken at a NATA accredited laboratory and will comply with the Australian *Standard Method for the Qualitative Identification of asbestos in bulk samples (AS4964-2004)*.

Samples taken will be analysed using Polarised Light Microscopy (PLM) techniques and a minimum quantity of 500ml of sample shall be taken to achieve a reporting limit of 0.1g/kg; A weight of evidence approach will be adopted to determine if the positive result is an isolated incident or if it represents a more serious contamination of the stockpile. Where is can be seen that the contamination of the stockpile is an isolated occurrence the affected portion of the stockpile will be removed from site in accordance with the procedures set out in Step 4 – Method 2. Sufficient material will be removed from around the contaminated sample location to ensure that the ACM has been removed. Further samples will be taken and analysed using PLM techniques. If this sample indicated that ACM is present in the stockpile, remedial action will take place to remove the whole stockpile from site as asbestos contaminated.

Where several samples indicate that ACM is present, the whole stockpile will be deemed to be contaminated with ACM. The whole stockpile will be quarantined and removed from site in accordance with Step 4 – Method 2. In this case the incident will in investigated to ensure that all operational and management procedures are being implemented correctly.

All the results of laboratory analysis will be retained by BDS and made available on request during site audits.

5.2 Independent Audit

Auditing shall be undertaken at the cost of BDS in accordance with the *Guideline for Managing Asbestos at Construction and Demolition Waste Recycling Facilities, April 2021*.

The audits carried out on site will include the following inspections and observations.

- The audits will include a visual inspection of all stockpiles with aggregates greater than 10mm in aerodynamic diameter.
- Field and laboratory sampling and assessment in accordance with the *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Site of Western Australia* (May, 2021).
- Checking of all relevant documentation on the first visit and then on a random judgemental basis subsequently.
- Observation on a random/judgemental basis of procedures associated with the identification and management of any asbestos material.
- Put forward any actions which should be implemented to resolve any deficiencies on site practices or if any asbestos is identified as part of the audit process.

Audits shall be conducted at the following frequencies:

Annually

5.3 Procedures for recording incidents of asbestos contamination on site

The procedures that have been set in place through this management system ensure that it is unlikely that asbestos will be present on site. However, all incidence of asbestos contamination will be recorded, and the details will be made available to the DWER, DoH, WorkSafe and the independent auditor upon request.

The form attached in **Attachment 4 w**ill l be used to record all such incidents.

5.4 Review of the Asbestos Management Plan

This plan is a comprehensive management framework to remove asbestos from recycled construction and development products, the methods set out in the AMP are the most up to date at this time. Should management practices or technologies change the AMP will be revised as a matter of urgency to reflect the revised practices.

A review of this plan will be on a biannual basis any comments or observation which are generated through the review process will be incorporated into the management of asbestos on the premises.

References

Work Health and Safety Act 2020 (Western Australia)

Work Health and Safety (General) Regulations 2022 (Western Australia)

Health (Asbestos) Regulations 1992 (Western Australia).

Guidelines for the Assessment, Remediation and Management of Asbestos-contaminated Sites in Western Australia, (DoH, April 2021)

National Occupational Health and Safety Commission, 2005. Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd ed. NOHSC:3003(2005)

Guideline for Managing Asbestos at Construction and Demolition Waste Recycling Facilities, (DoH, April 2021)

Code of Practice: How to Safely Remove Asbestos (WHSC, 2022).

Code of Practice: How to Manage and Control Asbestos in the Workplace (WHSC, 2022).

Landfill Waste Classification and Waste Definitions 1996 (as amended December 2019).

Figures

FIGURE 1: Site Layout and Dust Monitor Locations

SERS
Site Environmental and Remediation Services
Tel: +61 (08) 9220 2000
http://www.sers.net.au

CLIENT: Brajkovich Demolition & Salvage Pty Ltd

ADDRESS: Lot 1 Rockingham Road, Henderson

BASEMAP: Near Maps

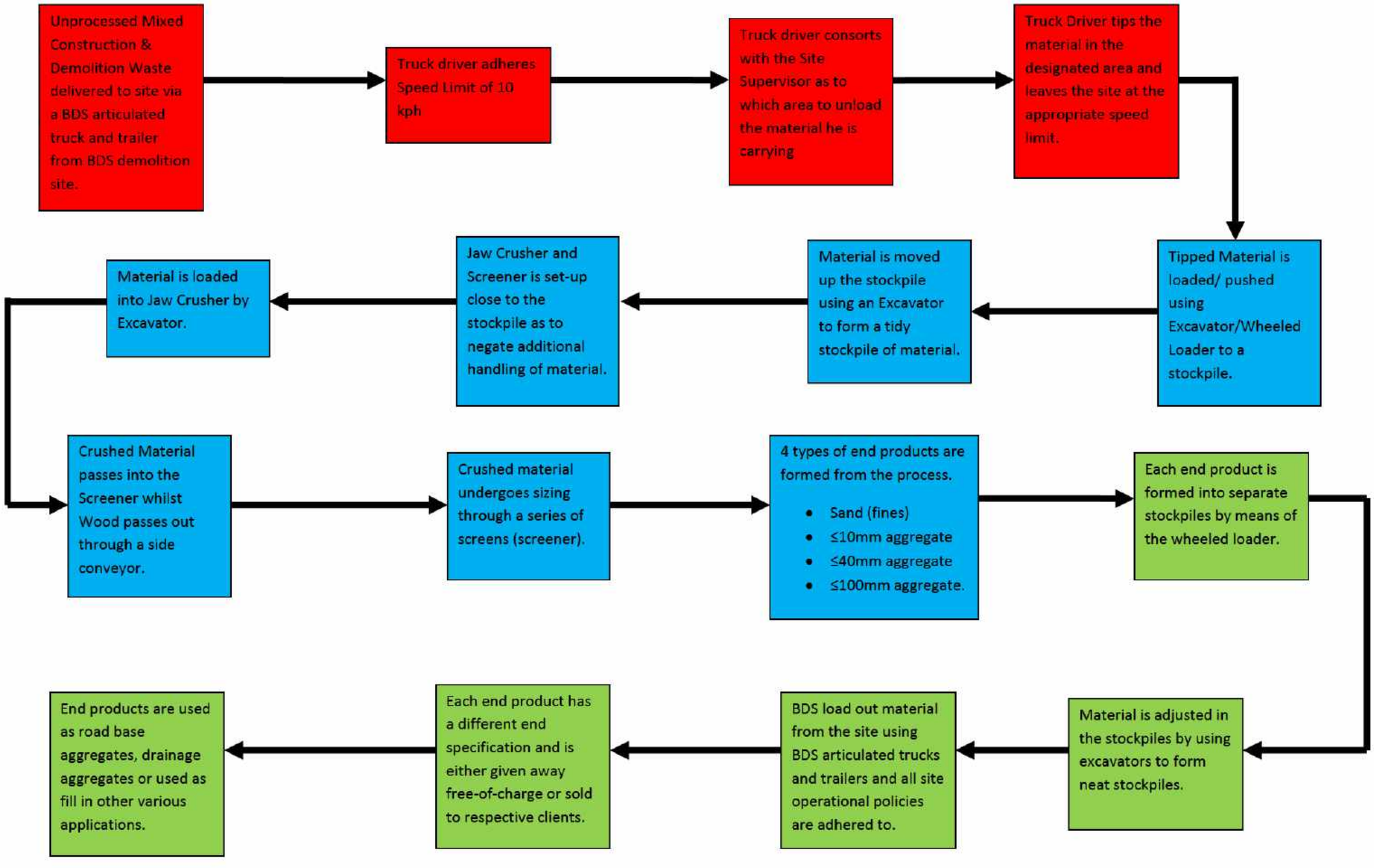
Legend

- Dust Monitor Locations
- Access
- Structures
- Crusher and Screen Location
- Waste Material
- Bunds
- Car Parking
- Product Stockpiles
- Tipping Area
- Site Boundary

SCALE: NTS | ISSUE: FINAL | DESIGN/DRAWN: | DATE: June 2022

Attachment 1. Site Process Schematic

PROCESS SCHEMATIC- BDS CRUSHING AND SCREENING FACILITY



Attachment 2. Complaint Form

Complaints Registry 2023/4: HENDERSON

DATE	TIME	ORGANISIATION	NAME	CONTACT NUMBER	ADDRESS	LOCATION OF COMPLAINT	DETAILS OF COMPLAINT	WIND DIRECTION	TEMP (°C)	ACTIONS TAKEN

Attachment 3. Training record

Provider number 52241

Statement of Completion

[redacted]

has completed

SAFE HANDLING OF ASBESTOS TRAINING

[redacted]

Dated: 06/02/2024

Certificate No: 2186

Provider number 52241

Statement of Completion

[redacted]

has completed

SAFE HANDLING OF ASBESTOS TRAINING

[redacted]

Dated: 06/02/2024

Certificate No: 2184

Provider number 52241

Statement of Completion

[redacted]

has completed

SAFE HANDLING OF ASBESTOS TRAINING

[redacted]

Dated: 07/02/2024

Certificate No: 2198

Provider number 52241

Statement of Completion

[redacted]

has completed

SAFE HANDLING OF ASBESTOS TRAINING

[redacted]

Dated: 07/02/2024

Certificate No: 2199

Provider number 52241

Statement of Completion

[redacted]

has completed

SAFE HANDLING OF ASBESTOS TRAINING

[redacted]

Dated: 07/02/2024

Certificate No: 2200

Provider number 52241

Statement of Completion

[redacted]

has completed

SAFE HANDLING OF ASBESTOS TRAINING

Including

-Legislation

-Removal and decontamination procedures

[redacted]

Dated: 22/11/2023

Certificate No: 2143

Provider number 52241

Statement of Completion

[redacted]

has completed

SAFE HANDLING OF ASBESTOS TRAINING

Including

-Legislation

-Removal and decontamination procedures

[redacted]

Dated: 22/11/2023

Certificate No: 2159

Provider number 52241

Statement of Completion

[redacted]

has completed

SAFE HANDLING OF ASBESTOS TRAINING

Including

-Legislation

-Removal and decontamination procedures

[redacted]

Dated: 24/11/2023

Certificate No: 2180

Provider number 52241

Statement of Completion

[redacted]

has completed

SAFE HANDLING OF ASBESTOS TRAINING

Including

-Legislation

-Removal and decontamination procedures

[redacted]

Dated: 24/11/2023

Certificate No: 2177

Provider number 52241

Statement of Completion

[redacted]

has completed

SAFE HANDLING OF ASBESTOS TRAINING

Including

-Legislation

-Removal and decontamination procedures

[redacted]

Dated: 24/11/2023

Certificate No: 2179

Provider number 52241

Statement of Completion

[redacted]

has completed

SAFE HANDLING OF ASBESTOS TRAINING

Including

-Legislation

-Removal and decontamination procedures

[redacted]

Dated: 24/11/2023

Certificate No: 2178

Attachment 4. Asbestos incident record sheet

BRAJKOVICH
DEMOLITION
& SALVAGE Pty Ltd

ABN: 68 125 556 167
Class 1 Demolition Licence No. WAD - 0004

Asbestos Incident Record Sheet

Appropriate PPE and RPE should always be used where asbestos is present or thought to be present.

Please note this sheet should not be used as guidance for asbestos management, it should only be used for record keeping. If guidance is required in relation to the management of asbestos on site, please refer to the site supervisor or the site Asbestos Management Plan.

Please ☑ as appropriate.

Date of incident: _____

Asbestos identified in:

In coming load	☐	While feeding the crusher	☐
While tipping material	☐	As material comes off conveyor belt	☐
While stockpiling C&D material	☐	While stockpiling crushed material	☐
In the unprocessed stockpile	☐	During inspection of the crushed material	☐

Action taken:

Appropriate PPE/RPE worn	☐	Hand picking of affected area	☐
Load/area isolated	☐	Mechanically loaded to skip/ semi tipper	☐
Affected area dampened down	☐	Whole load rejected	☐

Decontamination:

Disposal PPE/RPE removed placed in asbestos bag ☐

Footwear wiped down ☐

Asbestos Landfill Details:

Name of asbestos landfill waste taken to: _____

Date of removal: _____

Landfill notified that waste contains asbestos ☐

Any Other Comments:

Site supervisor name: _____ Date: _____

Signature: _____

PO Box 417 NORTHBRIDGE WA 6865
Ph: (08) 9227 8222 Fax: (08) 9227 5478 Email: admin@bdemo.com.au

Attachment 5. Record of inspection of processed stockpiles

2012

BRAJKOVICH DEMOLITION & SALVAGE PTY LTD

ASBESTOS VISUAL INSPECTION CHECKLIST

DATE: 29/11	AGGREGATE TYPE (√)		VISUAL ASBESTOS DETECTED (Y/N)		ACTION TAKEN
	19MM	OVERSIZE	19MM	OVERSIZE	[redacted]
TIME: 7.00AM	✓	✓	N	N	
TIME: 11.00AM	✓	✓	N	N	
TIME: 3.30Pm	✓	✓	N	N	

DATE: 30/11	AGGREGATE TYPE (√)		VISUAL ASBESTOS DETECTED (Y/N)	
	19MM	OVERSIZE	19MM	OVERSIZE
TIME: 6.30Am	✓	✓	N	N
TIME: 11.00Am	✓	✓	N	N
TIME: 2.30Pm	✓	✓	N	N

DATE: 1/12	AGGREGATE TYPE (√)		VISUAL ASBESTOS DETECTED (Y/N)	
	19MM	OVERSIZE	19MM	OVERSIZE
TIME: 6.30Am	✓	✓	N	N
TIME: 11.00Am	✓	✓	N	N
TIME: 2.30Pm	✓	✓	N	N

DATE: 3/12	AGGREGATE TYPE (√)		VISUAL ASBESTOS DETECTED (Y/N)	
	19MM	OVERSIZE	19MM	OVERSIZE
TIME: 7.00Am	✓	✓	N	N
TIME: 11.30Am	✓	✓	N	N
TIME: 3.00Pm	✓	✓	N	N

DATE: 4/12	AGGREGATE TYPE (√)		VISUAL ASBESTOS DETECTED (Y/N)	
	19MM	OVERSIZE	19MM	OVERSIZE
TIME: 6.30Am	✓	✓	N	N
TIME: 10.30Am	✓	✓	N	N
TIME: 3.00Pm	✓	✓	N	N

DATE: 5/12	AGGREGATE TYPE (√)		VISUAL ASBESTOS DETECTED (Y/N)	
	19MM	OVERSIZE	19MM	OVERSIZE
TIME: 7.00Am	✓	✓	N	N
TIME: 11.00Am	✓	✓	N	N
TIME: 3.30Pm	✓	✓	N	N

DATE: 6/12	AGGREGATE TYPE (√)		VISUAL ASBESTOS DETECTED (Y/N)	
	19MM	OVERSIZE	19MM	OVERSIZE
TIME: 6.30Am	✓	✓	N	N
TIME: 10.30Am	✓	✓	N	N
TIME: 2.30Pm	✓	✓	N	N