



Amendment Notice 1

Licence Number	L8529/2011/1
Licence Holder	Onslow Resources Ltd
ACN	140 317 264
File Number:	2011/000656-1
Premises	Onslow Tenement Project TALANDJI WA 6710 Being Tenements G08/80, M08/458, M08/461, M08/471, M08/473, M08/488, M08/496, L08/52, L08/132, L08/143 and E08/1728.
Date of Amendment	21 November 2018

Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act) as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act.

Steve Checker

MANAGER, WASTE INDUSTRIES

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Document control

Definitions and interpretation

Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
Amendment Notice	refers to this document
AS4964-2004	Australian Standard Method for the Qualitative Identification of Asbestos in Bulk Samples
Asbestos	means the asbestiform variety of mineral silicates belonging to the serpentine or amphibole groups of rock-forming minerals and includes actinolite, amosite, anthophyllite, chrysotile, crocidolite, tremolite and any mixture containing 2 or more of those.
Asbestos Containing Material (ACM)	means products or materials (including fragments) that contain asbestos in an inert bound matrix such as cement or resin in a sound condition and in a form that cannot pass through a 7mm x 7mm sieve.
Asbestos Guidelines	means the document titled “Guidelines for managing asbestos at construction and demolition waste recycling facilities”, published by the Department of Environment and Conservation, as amended from time to time.
Category/ Categories/ Cat.	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 33 Cloisters Square PERTH WA 6850 info@dwer.wa.gov.au
C&D Waste	refers to construction and demolition waste and has the meaning defined in the <i>Landfill Definitions</i> .
Delegated Officer	an officer under section 20 of the EP Act
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for

	the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this amendment
Licence Holder Licensee	Onslow Resources Ltd
Occupier	has the same meaning given to that term under the EP Act.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report.
Risk Event	as described in DWER's <i>Guidance Statement: Risk Assessment</i> .
Waste	has the same meaning given to that term under the EP Act.

Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

This notice is limited only to an amendment for Category 12 and the addition of Category 13.

The following guidance statements have informed the decision made on this amendment:

- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Decision Making (February 2017)*
- *Guidance Statement: Risk Assessment (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

Amendment description

The Onslow Tenement Project (the Project) excavates, crushes and screens sand, rock and shingle from the bed of the Ashburton River in an area southwest of Onslow. The Project produces material for industrial and residential developments. Collectively, the Project includes the Ashburton River Sand and Shingle Operations, Onslow Camp Dunes Project and Onslow Dune Sand Operation.

The Project is owned and operated by Onslow Resources Ltd (Onslow Resources) who, with Yarri Mining Pty Ltd, hold the various mining tenements that make up the Premises. The existing licence L8529/2011/1 approves the tenements as locations for processing of excavated material as a Category 12 premises.

Onslow Resources extracts, loads and hauls the material using excavators, dumpers and/or road trucks. The material is screened to remove organics and oversized materials and then if necessary is crushed using mobile crushing and screening equipment. A Run of Mine (ROM) pad is located adjacent to the excavation area. Dump trucks and tippers use existing roads or access roads within existing leases to access the excavation area and/or ROM pad.

On 18 April 2018, Onslow Resources submitted an application for an amendment to the Licence to:

1. Remove five tenements from the Licence (M08/472, L08/51, E08/1991, E08/1995 and E08/2009) and add three others (G08/80, L08/132, and L08/143). L08/47 will also be removed as Onslow Resources have confirmed no crushing or screening will take place on the tenement. The proposed Premises is to consist of tenements G08/80, M08/458, M08/461, M08/471, M08/473, M08/488, M08/496, L08/52, L08/132, L08/143, and E08/1728.
2. Reduce the Category 12 throughput from 500,000 tonnes per annum to 50,000 tonnes per annum, due to reduced opportunities for contracts in the area.
3. Add Category 13 to the licence for crushing and screening of cemented sand material and concrete aggregates up to 20 mm in size, as a waste sourced from building sites.

Table 2 outlines the proposed category and throughput changes to the Licence.

Table 2: Proposed category and throughput capacity changes

Category	Current throughput capacity	Proposed throughput capacity	Description of proposed amendment
12	500 000 tonnes per year	50,000 tonnes per year	Reduced throughput.
13	N/A	50,000 tonnes per year	Addition of crushing and screening of cemented sand and concrete aggregates up to 20 mm in size, sourced as waste from building sites.

Category 13

Onslow Resources proposes to crush cemented sand material and concrete aggregates as waste from construction sites, on G08/80. The cemented sand is classified as construction and demolition (C&D) waste as defined in the *Landfill Waste Classification and Waste Definitions 1996 (as amended 2018)*.

There will be no construction activities associated with crushing of waste.

The Applicant has not submitted an Asbestos Management Plan.

Guidelines for managing asbestos

The *Guidelines for managing asbestos at construction and demolition waste recycling facilities* (2012), Risk Classification Matrix, rates materials that are not mixed and carried by commercial load (not in public vehicles or skip bins) as low risk. Onslow Resources has stated that loads will be transported on site by covered tip-truck.

Loads classified as “low risk”, must be visually inspected while the material is being unloaded to determine whether any asbestos can be identified. If asbestos is identified or suspected, the load must be isolated, kept wet and contained, and redirected to an appropriately authorised disposal facility.

The Guidelines also prescribe monitoring and testing requirements of final product.

Other approvals

The Licence Holder has provided the following information relating to other approvals as outlined in Table 3.

Table 3: Relevant approvals

Legislation	Number	Approval
<i>Rights in Water and Irrigation Act 1914</i>	GWL179435	For extraction of groundwater at Onslow Camp Dunes.
	-	River and sand leases will require riparian clearing permits. These will be applied for prior to project development.
<i>EP Act – clearing permit</i>	5808/1	M08/488, M08/496
<i>Mining Act 1978</i>	MP Reg ID 37830	G08/80, M08/488, M08/496
	MP Reg ID 40110	G08/80

	MP Reg ID 52735	G08/80
	MP Reg ID 56674	M08/488, M08/496
	MP Reg ID 32075	M08/458
	MP Reg ID 3268	M08/458
	MP Reg ID 50879	M08/461
	MP Reg ID 53570	M08/461
	-	Approvals for M08/471 and M08/473 will be sought as required.

Amendment history

Table 4 provides the works approval and licence history for L8529/2011/1

Table 4: Licence history

Instrument	Date	Purpose
W4896/2011/1	23/05/2011	New works approval issued
L8529/2011/1	25/01/2012	New Licence issued
L8529/2011/1	18/10/2012	Amendment – addition of M08/488 and G08/80
L8529/2011/1	07/03/2013	Amendment – removal of G8/80
L8529/2011/1	18/12/2014	Amendment - addition of M08/496 and conversion to updated format
L8529/2011/1	This amendment	Amendment – removal of M08/472, L08/51, E08/1991, E08/1995, E08/2009 and L08/47, addition of G08/80, L08/132, L08/143, and addition of category 13.

Location and receptors

Table 5 lists the closest sensitive land uses in the vicinity of the Prescribed Premises.

Table 5: Receptors and distance from activity boundary

Residential and sensitive premises	Distance from Prescribed Premises
Minderoo Homestead	3.3 km southeast of M08/458
Wheatstone Construction Camp	Approximately 5 km west of G08/80 (site of category 13 activities)
Town of Onslow	13.5 km to the north of the northern tenements. The northern most tenements are included within the proposed Ashburton Industrial Area.
	Approximately 14 km from G08/80 (site of category 13 activities)

Table 6 lists the relevant environmental receptors in the vicinity of the Prescribed Premises.

Table 6: Environmental receptors and distance from activity boundary

Environmental receptors	Distance from Prescribed Premises
Pilbara Groundwater Area	Premises is located within the Area
Pilbara Surface Water Area	Premises is located within the Area
Public Drinking Water Source Area – Can River Water Reserve	Located approximately 27 kilometers north east of the premises.
Acid Sulfate Soil Risk	Mapped as no known ASS disturbance risk (<3m from surface) at the premises tenements.
Threatened and Priority Flora	None identified within the premises tenements. Closest identified is a P1 flora approximately 25 km east.
Threatened Ecological Communities	None identified on the premises tenements. Closest is the P1 Tanpool Land System, 46 km east.
Threatened Fauna	P4 Western pebble-mound mouse identified on northern premises tenements
Ashburton River	Located within the western premises tenements and locations of quarrying and screening
Non perennial watercourse	Located within the eastern premises tenements and locations of quarrying and screening.

Topography and soils

The Onslow Coastal Plain is a broad expanse of seaward sloping low lying alluvium deposited in the Quaternary. Generally the soils in the area are dominated by sandy alluvium that forms sand sheets or sand dunes across the landscape.

Surface water

The drainage of the Onslow region is described as external where the water flows into the low-lying areas and the coast. The Ashburton River emanates from higher ground in the south-east and flows north-west to the coast. The Ashburton River flows intermittently. The intermediate zone of dunes and sand plains is bereft of water for considerable distances.

Meteorology

The Onslow area lies within a tropical semi-arid area. Climatic conditions are also affected by tropical cyclones which may cause heavy periods of heavy rainfall.

Risk assessment

Equipment and operations remain the same with regards hydrocarbons and stormwater, therefore risk of these emissions are not re-assessed. Table 7 describe the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*.

Table 7 identifies whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

Table 7: Risk assessment for proposed amendments during operation

Risk Event					Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts				
Category 12: Screening etc. of material extracted from the ground – throughput reduced to 50,000 tonnes per year.	Operation of screening and crushing infrastructure and storage and transfer of material.	Noise	Closest sensitive receptor is Minderoo Homestead 3.3 km from closest tenement. Wheatstone Construction Camp is approximately 5 km from crushing and screening activities.	Air	Amenity impacts	Slight Low level impact to amenity at a local scale	Rare The risk event may only occur in exceptional circumstances	Low Distance to closest sensitive receptor is sufficient to inform the risk of noise emissions as not foreseeable. No complaints have been received <i>The Environmental Protection (Noise) Regulations 1997 are applicable.</i>
		Dust from crushing/screening of material extracted from the ground.	Town of Onslow is 13.5 km from closest tenement.		Health and amenity impacts			
Category 13: Crushing of building material: premises on which waste building or demolition material is crushed or cleaned.		Dust from crushing C&D waste. Asbestos fibres from non-conforming waste types at G08/80 being released into the air and/or included in final product. Asbestos was used extensively in	Closest residents are at the Wheatstone Construction Camp is 5 km west of G08/80. Town of Onslow is 14 km from G08/80. G08/80 adjoins Onslow Road.	Air	Health and amenity impacts	Severe Loss of life Asbestos is a hazardous material that can cause mesothelioma, asbestosis or lung cancer. There is potential for	Unlikely The risk event will probably not occur in most circumstances	High <u>Applicant controls:</u> There are three bores on site for water for dust suppression if required. Materials are pre-wetted prior to crushing. Onslow Resources has stated that waste will be brought onto the site by trucks (not by skip bins or public trailer) and to

		<p>Australian buildings and structures from the 1950's through to 1990. Due to this widespread use, there is the potential for C&D waste to contain asbestos fibres.</p>	<p>Fiber in final product may be transported off site to other locations.</p>			<p>asbestos fibres to become airborne when processed at the Premises.</p> <p>Asbestos fibres present in products sold to third parties may result in potential health impacts for the final end users.</p>			<p>consist only of cemented/concreted sand that has been used for stabilization and concrete aggregates up to 20 mm in size.</p> <p>There is potential for asbestos waste to be mixed into the cemented sand waste either inadvertently, or by opportunistic dumping.</p> <p>Waste will be sourced from sites where demolition may have occurred and where asbestos products may be on the site.</p> <p><u>Licence conditions</u></p> <p>The Applicant has not submitted an Asbestos Management Plan, a waste management plan or information detailing how the Licensee will minimise the risk that asbestos is not inadvertently included in the waste accepted in the waste stream. (For example, who will determine and record if the waste is sourced from a site constructed prior to, or after 1990, how will employees/subcontractors and customers know that asbestos in waste is not accepted, how waste from pre 1990 will be managed on site).</p>
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									<p>In the absence of an Asbestos Management Plan, conditions will be added to the licence to minimise the likelihood of asbestos in waste being accepted onto the premises, and being crushed into product.</p> <p>Occupational Health and Safety issues for employees and visitors on site are managed under Occupational Health and Safety legislation.</p> <p>The existing licence includes condition 2.6.2 that requires no visible dust to cross the boundary of the premises. This condition will be removed as risk of dust is regulated by conditions regulating waste acceptance and management.</p>
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Decision

Definitions

Definitions are added where applicable to new conditions being added to the Licence.

Premises boundary

The Tenement Holder of M08/458, M08/461, L08/143 and E1728 is Onslow Resources Ltd. The Tenement Holder of G08/80, M08/471, M08/473, M08/488, M08/496, L08/52 and L08/132 is Yarri Mining Pty Ltd. Onslow Resources holds no equity in Yarri Mining Pty Ltd. However, Onslow Resources has provided written confirmation that Onslow Resources and Yarri Mining Pty Ltd share common management and control.

The removal of some tenements has resulted in non-contiguous tenements. The Delegated Officer has determined that the premises will be made up of each proposed tenement, and the Licence is amended to update the premises map.

Reduction in Category 12 throughput

The Licence is amended for the approved Category 12 premises production to be reduced to 50,000 tonnes per annum.

Addition of Category 13

The risk of Asbestos fibres is 'High' due to the consequence of emissions of asbestos being 'severe'.

The Delegated Officer has determined that the following conditions are added to the licence to minimise likelihood of asbestos emissions:

- Condition 1.2.6 is added (as an Applicant control) to restrict Category 13 operations for crushing of building material to the location applied for, being G08/80.
- Conditions 1.2.7, 2.1.8, 1.2.9, 1.2.10 and 1.2.11 are added to the licence to minimise the risk of asbestos being accepted onto the premises. The conditions require signage, and inspection of loads prior to being accepted and restrict the type of waste accepted. If asbestos is identified the load must be rejected and details recorded.
- Conditions 1.2.12 and 1.2.13 are added to the licence to minimise the risk of asbestos that has been inadvertently accepted onto the premise being crushed or fibres released. The conditions require visual inspection when unloading, and if asbestos is identified or suspected, it is isolated and removed.
- Conditions 1.2.14, 1.2.15 and 1.2.16 require monitoring of product in accordance with the Asbestos Guidelines.

Risk of dust from screening etc. of material extracted from the ground is 'Low'. However risk of dust containing asbestos fibres from crushing and screening construction and demolition waste is 'High' due to the consequence of asbestos fibres to human health. The Delegated Officer has determined that Condition 2.6.2 relating to the requirement for visible dust not to cross the premises boundary is unreasonable due to the 'Low' risk associated with general dust emissions, distance to receptors and the size of the premises and has removed this condition from the licence. Risks associated with dust containing asbestos fibres are regulated as detailed above.

Monitoring inputs and outputs

Condition 3.1.1 is added to the Licence for reporting tonnage of materials processed for each

category and for reporting purposes.

Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 13 November 2018 for a 21 day comment period. The Licence Holder notified DWER on 16 November that there were no comments for the draft and waived the 21 day comment period.

Amendment

1. The cover page of the Licence is amended by the deletion of the text shown in strike through below and the addition of the text shown in bold underline below:

Premises address: Onslow Tenement Project
TALANDJI WA 6710
Being tenements **G08/80**, M08/458, M08/461, M08/471, ~~M08/472~~, M08/473, M08/488, M08/496, ~~L08/47~~, ~~L08/54~~, L08/52, **L08/132**, **L08143**, ~~E08/2009~~, ~~E08/1995~~, ~~E08/1994~~ and E08/1728 ~~outlined on Plan L8529 as depicted in Schedule 4.~~

Prescribed Premises Category

Schedule 1 of the *Environmental Protection Regulations 1987*

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
12	Screening etc. of material: premises (other than premises within category 5 or 8) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated.	50 000 tonnes or more per year.	500 000 50 000 tonnes per annual period.
13	<u>Crushing of building material: premises on which waste building or demolition material (for example, bricks, stones or concrete) is crushed or cleaned.</u>	<u>1 000 tonnes or more per year</u>	<u>50 000 tonnes per annual period.</u>

2. Definitions of the Licence is amended by the insertion of the text shown in underline below:

'Asbestos' means the asbestiform variety of mineral silicates belonging to the serpentine or amphibole groups of rock-forming minerals and includes actinolite, amosite, anthophyllite, chrysotile, crocidolite, tremolite and any mixture containing 2 or more of those.

'ACM' means asbestos containing material and has the meaning defined in the Guidelines for Assessment, Remediation and Management of Asbestos Contaminated Sites, Western Australia, (Department of Health, 2009).

'C&D waste' means means construction and demolition waste and has the meaning defined in the *Landfill Definitions*;

'Cemented sand' means a mix of cement and sand;

'Concreted sand' means a hard construction material consisting of sand in a cement matrix'

'Landfill Definitions' means means the document titled "Landfill Waste Classification and Waste Definitions 1996" published by the Chief Executive Officer of the Department of Environment, as amended from time to time;

'Waste' has the same meaning given to that term under the EP Act;

3. The Licence is amended by the deletion of Condition 2.6.2 as shown in strikethrough below:

~~2.6.2 The Licensee shall ensure that no visible dust generated by the activities on the Premises crosses the boundary of the Premises.~~

4. The Licence is amended by the insertion of the following Conditions 1.2.6, 1.2.7, 1.2.8, 1.2.9, 1.2.10, 1.2.11, 1.2.12, 1.2.13, 1.2.14, 1.2.15 and 2.1.16 as shown below:

1.2.6 The Licensee may accept and process C&D Waste on G08/80 only.

1.2.7 The Licensee is permitted to accept and process C&D waste only in the form of cemented sand, concreted sand and concrete aggregates up to 20 mm in size.

1.2.8 The Licensee must maintain a clearly visible sign specifying "No Asbestos" at the entry to G08/80.

1.2.9 The Licensee must obtain a signed declaration from the supplier of the source material with each delivery that:

- (a) sets out the details of the Waste source, carrier, registration number of the vehicle and the date of delivery;**
- (b) sets out the Waste type and volume being delivered; and**
- (c) warrants that the load does not contain any Asbestos or ACM.**

1.2.10 The Licensee must visually inspect all loads of Waste when they arrive at the Premises, prior to unloading.

1.2.11 Where the visual inspection identifies that Waste is not permitted by the Licence, the Licensee must:

- (a) reject the Waste for acceptance; and**
- (b) record the details of the Waste source, Waste carrier, registration number of the vehicle and the date of rejection; and**
- (c) maintain accurate and auditable records of all rejected loads on the Premises.**

1.2.12 The Licensee must visually inspect loads while the material is being unloaded, to determine whether any asbestos can be identified.

1.2.13 If asbestos is suspected or identified, the load must be reclassified as a High Risk Load and the Licensee must implement the High Risk Load procedure set out in Schedule 3.

1.2.14 The Licensee must ensure that testing of all recycled waste products is undertaken in accordance with the product testing procedures specified in Schedule 4.

1.2.15 The Licensee must ensure that recycled waste products are only supplied to customers that have been tested in accordance with Condition 1.2.14 and shown to conform to the product specification of 0.001% asbestos weight for weight (w/w) for asbestos content (in any form) within any recycled products.

1.2.16 The Licensee must maintain accurate and auditable records of all asbestos product testing undertaken in accordance with Condition 1.2.14. These records must include:

- (a) details of the sample size;**
- (b) a statement of Limit of Detection of the analysis;**
- (c) results in relation to asbestos detected (positive result exceeding the 0.001% w/w limit) or not;**

- (d) description of any asbestos detected; and
 (e) an estimate of the concentration of asbestos detected if practical to do so.

5. The Licence is amended by the insertion of the following Condition 3.1.1

3.1.1 The Licence Holder must monitor and record the tonnes of materials processed at the Premises as specified in Table 3.1.1.

Table 3.1.1: Monitoring of inputs and outputs		
<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
<u>Raw material extracted from the ground processed by crushing and screening plant</u>	<u>Tonnes processed.</u>	<u>Daily when processing.</u>
<u>C&D Waste - Cemented Sand</u>	<u>Tonnes processed.</u>	<u>Daily when processing</u>

6. Condition 5.2.1 of the Licence is amended by the insertion of the text shown in underline below:

5.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 91 calendar days after the end of the annual period. The report shall contain the information listed in Table 5.2.1 in the format or form specified in that table.

Table 5.2.1: Annual Environmental Report		
<u>Condition or table (if relevant)</u>	<u>Parameter</u>	<u>Format or form¹</u>
-	Summary of any failure or malfunction of any pollution control equipment or any incidents that have occurred during the annual period and any action taken	None specified
5.1.3	Compliance	Annual Audit Compliance Report (AACR) <u>accessed at www.dwer.wa.gov.au</u>
5.1.4	Complaints summary	None specified
-	Measures taken to suppress dust	None specified
-	Monthly quantity of primary raw feed (in tonnes)	
-	<u>Monthly quantity of C&D waste feed (in tonnes)</u>	

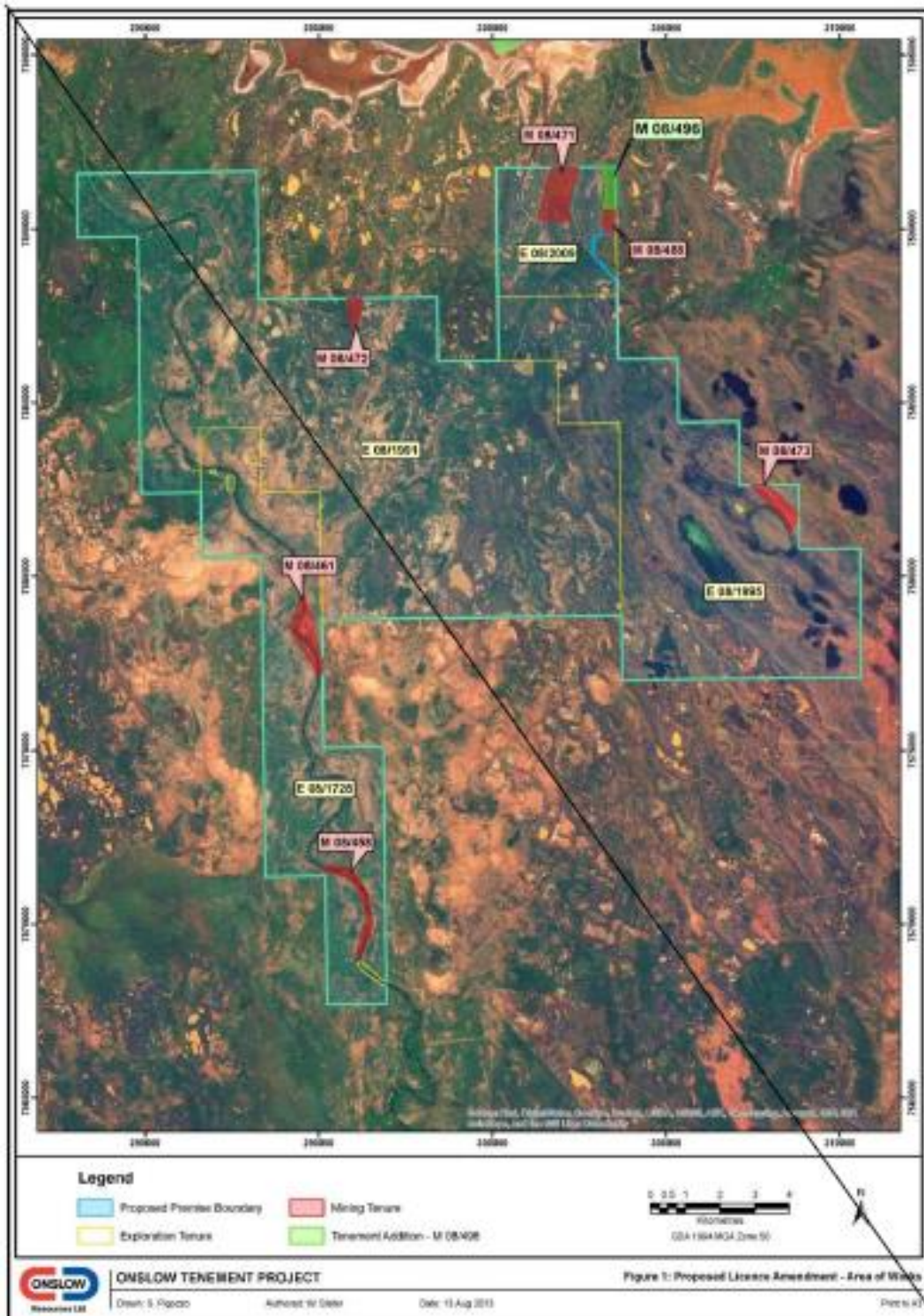
Note 1: Forms are in Schedule 2

7. The premises map of the Licence is amended by the deletion of the text shown in strikethrough below and the deletion of the Premises map shown in strikethrough below and the insertion of the Premises map shown in underline below:

8. Schedule 2: Reporting and notification forms: Annual Audit Compliance Report Proforma of the Licence is amended by the deletion of the Annual Audit Compliance Report Proforma.

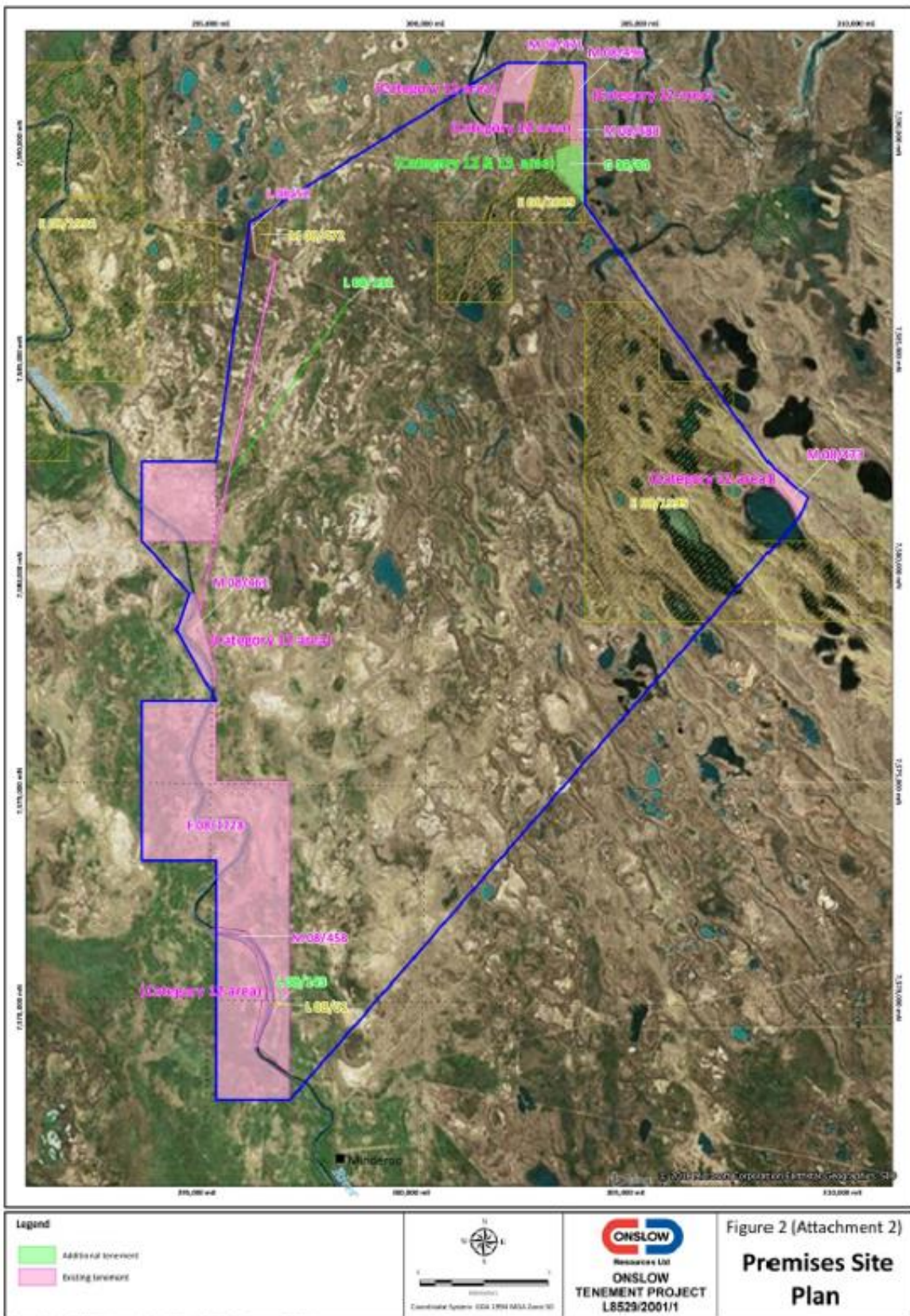
Premises Map

The Premises is shown in the map below. The shaded blue area depicts the Premises



Premises Map

The premises consists of the tenements only, as shown in green and pink below



Schedule 3 – High Risk Load Procedure

- If Asbestos is suspected or detected, the load must be isolated, kept wet and once appropriately contained in accordance with the *Environmental Protection (Controlled Waste) Regulations 2004*, redirected to an appropriately authorised disposal facility.
- Where suspect ACM is identified within a load and is not capable of being easily removed by hand, the load must be rejected and should be isolated, kept wet and once appropriately contained be redirected to an appropriately authorised disposal facility.
- Where suspected ACM fragments capable of being easily removed by hand are identified in a load, the suspect ACM must be removed from the load and either:
 1. Appropriately isolated and covered for Asbestos testing. If testing of representative samples confirms the material is ACM it must be redirected to an appropriately authorised disposal facility. If testing confirms the material is not ACM the Waste can be added to the stockpile awaiting further processing; OR
 2. Assumed to be ACM and redirected to an appropriately authorised disposal facility.
- 1 All suspected or assumed ACM must be segregated. Material must be clearly labelled, kept secure and sufficiently contained to prevent the release of Asbestos including windblown fibres.
- 2 Once all suspected or assumed ACM has been removed from a load in line with the above procedure, the residual Waste can be added to the stockpile for further processing.
- 3 Records must be kept to ensure that the process from receipt of C&D material to the completion of the unloading procedure is auditable and that any loads found to contain suspect Asbestos will be traced back to the customer and originating site.

(Derived from Section 4.3 of the DWER Asbestos Guidelines, page 12)

Schedule 4: Asbestos Monitoring and Testing

Product testing and supply

The testing procedures detailed in this attachment have application to the following recycled products:

1. Aggregates for manufacturing of wall and construction blocks, pavement materials and drainage rock; and
2. Recycled sand (material excavated from construction sites).

Stockpile inspection and sampling

- No sampling is required for recycled drainage rock, other than to determine by laboratory analysis if necessary whether a suspect fragment is Asbestos.
- For recycled sand, sampling is necessary and must be spread evenly over the whole stockpile surface or samples may be taken at regular intervals (as per conveyor sampling) during construction of the stockpile. Suspect Asbestos Containing Material (ACM) or areas must be targeted for sampling.
- Sampling of recycled sand products must occur at a minimum rate of 40 locations per 4000 tonnes or 14 samples per 1000m³ of product.

Sample treatment

- Each sample collected must be at least 10 litres in volume and then be divided into 2 size fractions (>7mm and <7mm) in the field by sieving through a 7mm screen or spread out for inspection on a contrasting colour fabric. The >7mm fraction should be examined for any suspect ACM and this be retained to calculate the level of contamination.
- The <7mm fraction will need to be a minimum 500 ml, be wetted, and submitted for laboratory analysis. This sample size is considered necessary to improve the limit of detection for Asbestos in the analysis procedure.

Sample analysis method

- **>7mm sample fractions –**
 - Asbestos concentrations (ACM and Asbestos) should be calculated in accordance with the methods detailed in section 4.1.7 of Department of Health, 2009, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia. Averaging Asbestos levels across the stockpile is not appropriate and Asbestos levels within each sample should be reported.
- **<7mm sample fractions**
 - Each <7mm sample fraction must be analysed for Asbestos and ACM.
 - Asbestos analysis must be undertaken by an independent NATA certified laboratory and comply with *Australian Standard Method for the Qualitative Identification of asbestos in bulk samples (AS4964-2004)* or be demonstrated to be able to achieve the equivalent level of results to this Australian Standard.

AS4964-2004 is currently the only method in Australia that has NATA certification; however the practicable level of detection for this standard polarized light microscopy method (PLM) and dispersion staining (DS) is 0.01%w/w. It is possible however, to measure Asbestos contamination at or lower than 0.001% w/w where an increased sample size is used, however DWER recognises that any reporting of concentrations below 0.01%w/w will be outside the conditions set by NATA.

Therefore, to determine whether recycled products meet the product specifications for Asbestos content, samples must be a minimum of 500mL in size. Licence Holders must adopt one of the following analytical approaches:

1. Detected/non-detected – where any quantity of Asbestos is detected by the PLM method it must be assumed, without further analysis, to be in concentrations above the product specification limit of 0.001%w/w. A weight of evidence approach may be adopted i.e. the frequency and occurrence of other positive results in the stockpile can be taken into account to determine whether the stockpile being assessed is considered to meet the product specification or not; or
2. Where any quantity of Asbestos is detected by the PLM method, the sample is subject to further testing in the form of a semi-quantitative method with a lower level of detection for Asbestos. Either of the following methods are considered acceptable by DWER:
 - 1 The extraction and weighing of fibre bundles or fibre cement material from the total sample; and
 - 2 Measuring the width and length (i.e. volume) of individual fibre by Phase Contrast Microscopy (PCM) and calculating the weight of fibres in the extracted sub-sample.

Interpreting inspection and sampling results

- If the visual inspection, sieve sample or analytical results identify Asbestos above or possibly above the 0.001%w/w criteria, then that stockpile or product process should be deemed potentially contaminated and considered for off-site disposal as Asbestos waste, or subject to further actions to remediate it or to demonstrate its acceptability by further assessment. A record should be made of the decision-making and action taken (e.g. off-site disposal, further assessment undertaken etc.) in relation to that stockpile.
- In addition to the above, where Asbestos is identified above or possibly above the 0.001%w/w criteria, an investigation into the likely cause for the presence of Asbestos in the Product should be undertaken and measures implemented to prevent a reoccurrence. A record of the investigation and its findings together with the details of any preventative measures implemented at the site should be made.

(Derived from Section 4.3 of the DWER Asbestos Guidelines, pages 15 - 20)

Appendix 1: Key documents

	Document title	In text ref	Availability
1	Licence L8529/2011/1 – Onslow Tenement Project	L8529/2011/1	accessed at www.dwer.wa.gov.au
2	Application form and Onslow Tenement Project, Application to Amend Existing Licence 8529/2011/1 Supporting Information, Onslow Resources Ltd, April 2018	Application	DWER records (A1657139)
3	Email: HPRM: <i>Relationship between Onslow Resources Ltd and Yarri Mining Pty Ltd</i> . From Damon Parsons, Onslow Resources Ltd, 5/10/2018.		DWER records (A1726464)
4	Email: <i>Onslow Tenement Project</i> . From Warren Slater, Onslow Resources, 8/10/2018		DWER records (A17226916)
	Email: <i>Re: L8529 Onslow Resources amendment further queries</i> . From Warren Slater, Onslow Resources, 23/10/2018		DWER records (A1734680)
5	DER, October 2015. <i>Guidance Statement: Setting conditions</i> . Department of Environment Regulation, Perth.	-	accessed at www.dwer.wa.gov.au
6	DER, November 2016. <i>Guidance Statement: Environmental Siting</i> . Department of Environment Regulation, Perth.	-	accessed at www.dwer.wa.gov.au
7	DER, February 2017. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	-	accessed at www.dwer.wa.gov.au
8	DER, February 2017. <i>Guidance Statement: Decision Making</i> . Department of Environment Regulation, Perth.	-	accessed at www.dwer.wa.gov.au
9	Department of Environment and Conservation, 18 December 2012. <i>Guidelines for managing asbestos at construction and demolition waste recycling facilities</i> .	Asbestos Guidelines	accessed at www.dwer.wa.gov.au
10	Department of Water and Environmental Regulation, April, 2018. <i>Landfill Waste Classification and Waste Definitions 1996 (as amended 2018)</i> .	Landfill Definitions	accessed at www.dwer.wa.gov.au