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Published on 19 October 2009

Statement No. 810

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

**KEYSBROOK MINERAL SANDS MINE  
SHIRE OF SERPENTINE-JARRAHDAL AND SHIRE OF MURRAY**

**Proposal:** To develop a mineral sands mine near the Keysbrook township. The proposal involves the excavation and processing of a low-grade heavy mineral sands deposit. The proposal is described further in schedule 1 of this document.

**Proponent:** Matilda Zircon Ltd (formerly Olympia Resources Ltd)  
(ACN: 077 221 722)

**Proponent Address:** 1<sup>st</sup> Floor, 143 Hay Street, Subiaco Western Australia

**Assessment Number:** 1580

**Report of the Environmental Protection Authority:** Bulletin 1269

**Appeal Numbers:** 99-109 of 2007

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

**1 Proposal Implementation**

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

**2 Proponent Nomination and Contact Details**

- 2-1 The proponent for the time being nominated by the Minister under sections 38(6) or 38(7) of the Act is responsible for the implementation of the proposal.
- 2-2 The proponent shall notify the CEO of any change of the name and address of the proponent for the serving of a notice or other correspondence within 30 days of such change.

Date published:

### **3 Time Limit of Authorisation**

- 3-1 The authorisation to implement the proposal provided for in this statement shall lapse and be void within five years after the date of this statement if the proposal to which this statement relates is not substantially commenced.
- 3-2 The proponent shall provide the CEO with written evidence which demonstrates that the proposal has substantially commenced on or before the expiration of five years from the date of this statement.

### **4 Compliance Reporting**

- 4-1 The proponent shall prepare and maintain a compliance assessment plan to the requirements of the CEO.
- 4-2 The proponent shall submit to the CEO the compliance assessment plan required by condition 4-1, at least six months prior to the first compliance report required by condition 4-6, and prior to ground-disturbing activity, whichever is sooner.

The compliance assessment plan shall indicate:

- a. the frequency of compliance reporting;
  - b. the approach and timing of compliance assessments;
  - c. the retention of compliance assessments;
  - d. reporting of potential non-compliances and corrective actions taken;
  - e. the table of contents of compliance reports; and
  - f. public availability of compliance reports.
- 4-3 The proponent shall assess compliance with conditions in accordance with the compliance assessment plan required by condition 4-1.
  - 4-4 The proponent shall retain reports of all compliance assessments described in the compliance assessment plan required by condition 4-1 and shall make those reports available when requested by the CEO.
  - 4-5 The proponent shall advise the CEO of any potential non-compliance within two business days of that non-compliance being known.
  - 4-6 The proponent shall submit a compliance assessment report annually from the date of issue of this Implementation Statement addressing the previous twelve month period or other period as agreed by the CEO. The compliance assessment report shall:
    - a. be endorsed by the proponent's Managing Director or a person, approved in writing by the CEO, delegated to sign on the Managing Director's behalf;
    - b. include a statement as to whether the proponent has complied with the conditions;

- c. identify all potential non-compliances and describe corrective and preventative actions taken;
- d. be made publicly available in accordance with the approved compliance assessment plan; and
- e. indicate any proposed changes to the compliance assessment plan required by condition 4-1.

## **5 Performance Review and Reporting**

- 5-1 The proponent shall submit to the CEO a Performance Review Report at the conclusion of the first year after the start of implementation and then, at a minimum of triennial intervals, which addresses:
- a. the major environmental risks and impacts; the performance objectives, standards and criteria related to these; the success of risk reduction/impact mitigation measures and results of monitoring related to management of the major risks and impacts;
  - b. the level of progress in the achievement of best practice environmental performance, including industry benchmarking, and the use of best available technology where practicable; and
  - c. improvements gained in environmental management which could be applied to this and other similar projects.

## **6 Protection of native vegetation**

- 6-1 Prior to the commencement of clearing, the proponent shall, in consultation with the DEC, ensure that a minimum of 75 hectares of native vegetation within the area cross-hatched red in Figure 3 is protected in perpetuity by an instrument or instruments approved by the CEO.
- 6-2 The instrument or instruments referred to in 6-1 shall include the following:
- a. measures to protect the area from grazing stock; and
  - b. measures which have the objective of maintaining a functioning and self sustaining vegetation community.
- 6-3 The proponent shall not clear any native vegetation within the proposal area unless the land to be cleared is required for the extraction of mineral ore within six months of the date of the clearing.

## **7 Protection of watercourses and wetlands**

- 7-1 The proponent shall not clear vegetation or undertake mining activities:
- a. within 20 metres of the banks of watercourses shown in Figure 9 of the PER document;

b. within 100 metres of the boundary a conservation category wetland.

7-2 The proponent shall implement management measures (including but not limited to weed and disease control, revegetation and monitoring) in respect to the areas under 7-1 to achieve a functioning and self sustaining vegetation community.

## **8 Rehabilitation management plan**

8-1 Prior to the commencement of operations, the proponent shall submit a Rehabilitation Management Plan to the requirements of the CEO.

8-2 The objectives of the Plan are to:

a. re-establish self-sustaining local provenance native vegetation cleared in the implementation of the proposal, at a ratio of not less than 1.4:1 (1.4 hectares of revegetation per 1 hectare of vegetation cleared); and

b. re-establish functioning pasture.

8-3 The Rehabilitation Management Plan shall:

a. describe measures to protect the areas to be revegetated from access, including grazing by stock;

b. identify measures to translocate native plant species cleared for mining into revegetated areas;

c. identify measures to eradicate weeds in the revegetated areas;

d. identify measures to use dieback un-infested topsoil and dieback resistant species in the revegetated areas;

e. describe a strategy to revegetate areas, including the use of local species of local provenance, and establishment of middle storey and understorey species;

f. identify completion criteria for revegetation; and

g. outline a revegetation monitoring programme.

8-4 The proponent shall implement the Rehabilitation Plan.

8-5 The proponent shall review and revise the Rehabilitation Plan as and when directed by the CEO.

8-6 The proponent shall implement revisions of the Rehabilitation Plan required by condition 8-5.

8-7 The proponent shall make the Rehabilitation Plan (including all amendments) publicly available in a manner approved by the CEO.

- 8-8 The proponent shall ensure grazing stock are excluded from areas described in condition 8-2(a)

## **9 Weed and Dieback Management**

- 9-1 Prior to the commencement of operations, the proponent shall prepare and submit a Dieback and Weed Management Plan to the requirements of the CEO.
- 9-2 The proponent shall implement the Plan.

## **10 Nutrient mobilisation**

- 10-1 Prior to the commencement of operations, the proponent is to submit a Nutrient Management Plan to the requirements of the CEO.
- 10-2 The objective of the Plan is to ensure the proposal assists in meeting the water quality objectives of the Peel-Harvey Water Quality Improvement Plan.
- 10-3 The Plan shall:
- a. outline a programme to monitor nutrient levels within the proposal area and at the downstream boundary of the proposal area;
  - b. identify nutrient trigger levels consistent with the Peel-Harvey Water Quality Improvement Plan; and
  - c. identify management actions should a trigger level be reached.
- 10-4 The proponent shall implement the Nutrient Management Plan.
- 10-5 The proponent shall make the Nutrient Management Plan available to the public in manner approved by the CEO.

## **11 Water Management**

- 11-1 The abstraction of any groundwater required for the implementation of this proposal shall not materially effect on the quality or quantity of groundwater available to other users in the area, or adversely effect the health and condition of native vegetation and ecosystems in the area.
- 11-2 Prior to the commencement of operations, the proponent shall revise the Water Management Plan to the requirements of the Department of Water.
- 11-3 The objective of the Plan is to comply with condition 11-1.
- 11-4 The Plan shall:

- a. outline a programme to monitor groundwater quality and quantity, including monitoring of bores located on surrounding properties, and at the downstream boundary of the project area;
- b. monitor the health and condition of native vegetation within the project area to ensure that it is not affected by groundwater drawdown associated with the proposal;
- c. identify groundwater trigger levels and management actions should a trigger level be reached;
- d. identify measures to provide an alternative source of water, particularly to surrounding groundwater users, where monitoring in item (a) indicates that mining activities has adversely affected water quality to the point where it cannot be used for its intended purpose or ecosystem maintenance;
- e. identify measures to ensure that the quality and quantity of groundwater is maintained post-mining;
- f. identify measures to minimise impacts associated with the discharge of excess water;
- g. outline a monitoring programme to detect any adverse impacts to the water quality, water levels or vegetation health of the conservation category wetlands adjacent to the mine area; and
- h. identify management measures in the event that monitoring in item (g) detects adverse impacts to conservation category wetlands adjacent to the mine area as a result of the proposal.

11-5 The proponent shall implement the Water Management Plan.

11-6 The proponent shall review and revise the Water Management Plan as and when directed by the CEO.

11-7 The proponent shall implement revisions of the Water Management Plan required by condition 11-6.

11-8 The proponent shall make the Water Management Plan (including amendments) publicly available in a manner approved by the CEO.

## **12 Acid Sulphate Soils Management**

12-1 The proponent shall not:

- a. lower the depth of the watertable to below that required for accessing the orebody;
- b. cause acid sulphate soil contamination either within the proposal area or elsewhere.

12-2 The proponent shall implement the Acid Sulphate Soils Management Plan.

12-3 Upon identifying monitoring results indicating exceedance of trigger levels specified in the Acid Sulphate Soils Management Plan the proponent shall:

- a. report the monitoring results to the CEO within seven days;
- b. submit details of the management measures proposed to be implemented to address the exceedance results to the CEO within seven days; and
- c. implement the management measures proposed to address the exceedance..

12-4 Details of any reports under the Management Plan or condition 12-3 shall be publicly available in a manner approved by the CEO.

### **13 Performance Bond**

13-1 As security for the due and punctual observance and performance by the proponent of the requirements of conditions 6, 7, 8, 9, 10, 11, 12 and 15, the proponent shall, prior to commencement of operations, provide to the CEO, to be replaced every five years in accordance with 13-2, a financial assurance for the benefit of both the Minister and the CEO and which is in the form of an unconditional and irrevocable bank guarantee, from a guarantor acceptable to the CEO and in a form acceptable to the CEO, in the amount specified in condition 13-2.

13-2 The financial assurance shall be for an initial amount of AU\$3 million and shall be substituted on 1 July every year of operations in accordance with the following schedule:

- a. \$5.568 million for the year commencing on 1 July after a minimum of 12 months from the commencement of operations (year 2);
- b. \$6.356 million for the subsequent year commencing on 1 July (year 3);
- c. \$7.552 million for the subsequent year commencing on 1 July (year 4);
- d. \$8.304 million for the subsequent year commencing on 1 July (year 5);
- e. \$6.772 million for the subsequent year commencing on 1 July (year 6);
- f. \$5.584 million for the subsequent year commencing on 1 July (year 7);
- g. \$3.795 million for the subsequent year commencing on 1 July (year 8),

with the fixed initial amount of each successive guarantee being indexed to inflation (being the Consumer Price Index, Perth).

13-3 In the event that the guarantor referred to in condition 13-1 terminates its liability under the bank guarantee by paying to the Minister or the CEO the balance of the financial assurance remaining unpaid, the CEO will hold the financial assurance (being the amount paid by the guarantor upon termination), as security for the due and punctual observance and performance by the proponent of the requirements of conditions 6, 7, 8, 9, 10, 11, 12 and 15, in an interest bearing account nominated by the CEO, with the interest accruing for the benefit of the Minister or the CEO.

13-4 The financial assurance may be called on or used in accordance with section 86E of the Act if the proponent fails to implement the proposal in accordance with conditions 6, 7, 8, 9, 10, 11, 12 and 15.

13-5 The financial assurance shall be discharged by the CEO and the Minister when the CEO has given the proponent written notice pursuant to section 86F(1) of the Act.

## **14 Noise Management**

14-1 Unless otherwise agreed in writing between the proponent and the owner and any occupier of noise sensitive premises:

- a. the proposal must comply with the Noise Regulations at any building associated with a noise sensitive use at any noise sensitive premises; and
- b. outside the hours 0700 to 1900 Monday to Saturday, or on public holidays, no mining activity is to be undertaken within 1,500 metres of any building associated with a noise sensitive use at any noise sensitive premises.

14-2 Prior to an agreement being executed under 14-1, the proponent is to ensure owners and occupiers obtain independent legal advice on the meaning and effect of any such agreement.

14-3 Unless registered on the relevant land title, an agreement obtained under 14-1 does not bind successive owners or occupiers.

14-4 Noise monitoring shall be undertaken in a manner consistent with the Noise Monitoring Plan, and shall include monitoring of noise levels at a location or locations representative of the noise sensitive premises closest to the active mining area for which the proponent does not have written agreement in place under 14-1.

14-5 The proponent shall submit quarterly reports to the CEO, prepared by an independent acoustic expert, which include the following:

- a. reviews noise monitoring methodology and results for the quarter;
- b. an assessment of the extent to which noise emissions from the proposal comply with the Noise Regulations; and
- c. details of any management or other measures that the proponent has implemented, or proposes to implement, to abate emissions, and to prevent non-compliance with the Noise Regulations, and the effectiveness of any measures that have been implemented.

14-6 The report referred to in 14-5 is to be provided to the CEO within four weeks of the end of the quarter to which it relates, with the first report due within four months of the commencement of operations.

14-7 Within six weeks of the end of the first 12 months following the commencement of operations, the proponent is to submit a report to the CEO, prepared by an independent acoustic expert, which includes the following:

- a. an assessment of the extent to which noise emissions from the proposal comply with the Noise Regulations;



- b. details and effectiveness of management or other measures the proponent has implemented to reduce or abate noise emissions;
- c. details of what, if any, modifications are recommended to these conditions to more effectively manage noise emissions from the proposal.

14-8 The reports referred to in condition 14-5 and 14-7 shall be made available to the public in a manner approved by the CEO.

## **15 Air Quality and Dust Management**

15-1 Prior to the commencement of operations, the proponent shall revise the Air Quality and Dust Management Plan to the requirements of the CEO.

15-2 The objectives of the Plan are to:

- a. ensure dust emissions from activities undertaken in implementing the proposal do not cause ambient dust concentration levels outside the boundary of the proposal area that are
  - i. higher than  $1 \text{ ug/m}^3$  of Total Suspended Particulates as a 15 minute average; or
  - ii. higher than  $50 \text{ ug/m}^3$  of Particulate Matter smaller than 10 microns as a 24 hour average, in excess of five times per year;
- b. identify measures to reduce dust emissions; and
- c. ensure that dust emissions do not harm or adversely affect environmental values or the health, welfare and amenity of people and land uses.

15-3 The Plan shall:

- a. outline the results of on-site baseline dust monitoring and modelling;
- b. identify dust management measures for a range of predicted weather forecasts, including avoiding, ameliorating and protecting from dust impacts;
- c. identify dust management measures according to actual winds experienced at the site;
- d. identify a plan for each pit, which details the times of day and weather conditions under which parts of the pit could be mined;
- e. identify a monitoring program, incorporating trigger values for the implementation of management measures to ensure dust emissions from activities undertaken in implementing the proposal do not cause ambient dust concentration levels outside the boundary of the proposal area that are:
  - i. higher than  $1 \text{ ug/m}^3$  of Total Suspended Particulates as a 15 minute average; or
  - ii. higher than  $50 \text{ ug/m}^3$  of Particulate Matter smaller than 10 microns as a 24 hour average, in excess of five times per year;

- e. identify management measures to ensure dust emissions from activities undertaken in implementing the proposal do not cause ambient dust concentration levels outside the boundary of the proposal area that are:
  - i. higher than  $1 \text{ ug/m}^3$  of Total Suspended Particulates as a 15 minute average; or
  - ii. higher than  $50 \text{ ug/m}^3$  of Particulate Matter smaller than 10 microns as a 24 hour average, in excess of five times per year;
- f. identify a complaint management procedure; and
- g. describe the outcomes of landowner agreements when mining in close proximity to occupied residences.

15-4 The proponent shall implement the Air Quality and Dust Management Plan.

15-5 The proponent shall review and revise the Air Quality and Dust Management Plan as and when directed by the CEO.

15-6 The proponent shall implement revisions of the Air Quality and Dust Management Plan required by condition 15-5.

15-7 The proponent shall make the Air Quality and Dust Management Plan (including any revisions) and the results of monitoring publicly available in a manner approved by the CEO.

15-8 To the extent that the proposal is subject to a licence issued under Part V of the Act, that licence may impose conditions which are different from, or additional to, the requirements of this Statement.

## 16 Definitions

In these conditions, unless the contrary intention appears:

“Acid Sulphate Soils Management Plan” means the *Keysbrook Mineral Sand Project Acid Sulfate Soils Management Plan*, prepared for Olympia Resources Ltd by MBS Environmental, May 2007, and referred to in Appendix 2 of EPA Report 1269;

“Act” means the *Environmental Protection Act 1986*;

“CEO” means the chief executive officer of the Department of Environment and Conservation;

“commencement of operations” means the date on which the first ground disturbing activities commence for the implementation of the proposal, but does not include minor preliminary works such as erection of fencing and undertaking sampling;

“conservation category wetland” has the meaning given in regulation 6(7)(c) of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*;

“DEC” means the Department of Environment and Conservation;

“Minister” means the Minister for Environment;

“Noise Monitoring Plan” means the *Noise Monitoring Plan, Keysbrook Titanium Minerals Proposal*, prepared for Olympia Resources Ltd by Lloyd George Acoustics, October 2008;

“Noise Regulations” means the *Environmental Protection (Noise) Regulations 1997*;

“noise sensitive premises” has the same meaning as in Schedule 1 of the Noise Regulations;

“Peel-Harvey Water Quality Improvement Plan” means the *Water Quality Improvement Plan for the Rivers and Estuary of the Peel-Harvey System - Phosphorus Management*, EPA, November 2008;

“PER document” means the *Keysbrook Minerals Sand Project, Keysbrook Western Australia Public Environmental Review*, prepared for Olympia Resources Ltd by MBS Environmental, West Perth, WA, June 2006;

“proposal area” means the boundaries of the mining area shown in Figure 2;

“revegetated areas” refers to those areas that have been revegetated by the proponent following clearing, or as replacement for clearing done, by the proponent during the implementation of the proposal;

“watercourse” has the meaning given in section 3 of the *Rights in Water and Irrigation Act 1914*;

“Water Management Plan” means the *Keysbrook Mineral Sand Project Water Management Plan*, prepared for Olympia Resources Ltd by MBS Environmental, May 2007, and referred to in Appendix 2 of EPA Report 1269.

## Notes

1. Where a condition for a Management Plan states "to the requirements of the CEO", the proponent shall consult with the DEC during preparation of the Management Plans.
2. The Minister will determine any dispute between the proponent and the CEO over the fulfilment of the requirements of the conditions.

Hon Donna Faragher JP MLC  
MINISTER FOR ENVIRONMENT; YOUTH

# Schedule 1

## Keysbrook Mineral Sands Mine (Assessment No. 1580)

The proposal is to develop a mineral sands mine near the Keysbrook township. The proposal involves the excavation and processing of a low-grade heavy mineral sands deposit. Local roads would be upgraded to facilitate the transport of the heavy mineral concentrate to South Western Highway.

An area of 30 hectares will be progressively mined at any time. Waste from the processing will be used as backfill in the mined areas. Backfilled areas will be progressively re-contoured and stabilised prior to topsoil replacement and return to pasture or native vegetation. The wet concentrator plant will be relocated three times throughout the life of mine. Support infrastructure, such as pipelines, offices and workshops will also be relocated with the wet concentrator plant. A site dam will be constructed at each of the three locations.

The main characteristics of the proposal are summarised in Table 1 below.

**Table 1 - Key Proposal Characteristics (Assessment No. 1580)**

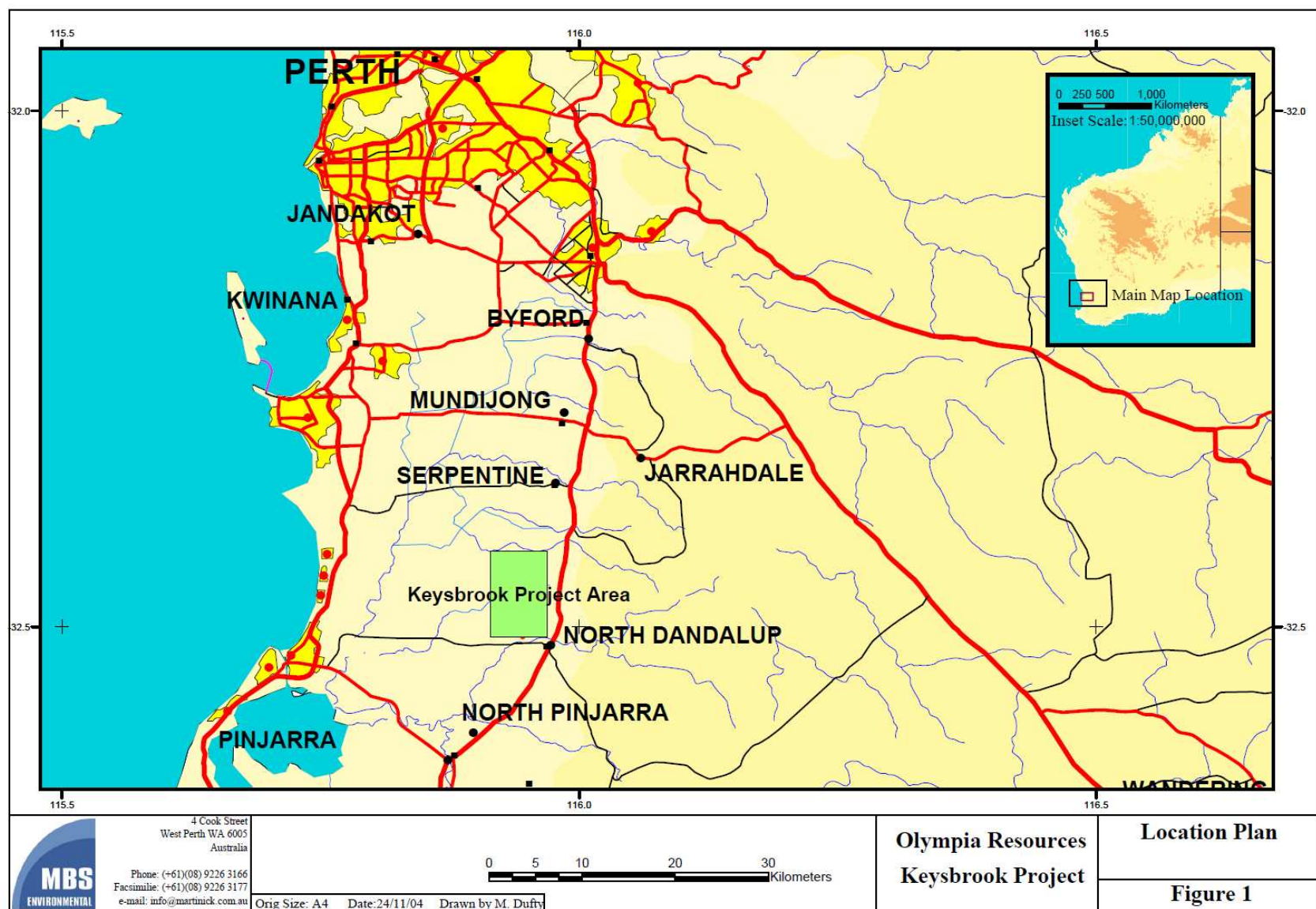
Element	Description	
Land tenure over the mining area	Keysbrook	North Dandalup
	Part Lot 56 Westcott Rd Part Lot 57 Elliott Rd Part Lot 1 Elliott Rd Part Lot 52 Westcott Rd Part Lot 111 Westcott Rd Lot 112 Westcott Rd Lot 113 Westcott Rd Part Lot 6 Westcott Rd Part Lot 63 Hopeland Rd	Part Lot 62 Hopeland Rd Part Lot 59 Westcott Rd Part Lot 300 Westcott Rd Part Lot 49 Readheads Rd Part Lot 7 Readheads Rd Part Lot 6 Readheads Rd Part Lot 44 Readheads Rd
Life of mine	Approximately 8 years	
Product quantity	approximately 920,000 tonnes of heavy mineral concentrate	
Pit depth	average 2 metres below ground level, and up to 6 metres on sandy dunes	
Proposal area	1366 hectares	
Dewatering	in-pit sumps to dewater the superficial Bassendean Sand aquifer at 0.2 gicalitres per annum	
Bore abstraction	up to 1.8 gicalitres per annum from two bores into the deep Leederville aquifer	
Road upgrades	upgrades of existing roads; Westcott Rd, Atkins Rd, Readheads Rd and intersection of Readheads Rd and South Western Hwy	

## Figures

Figure 1 – Regional location

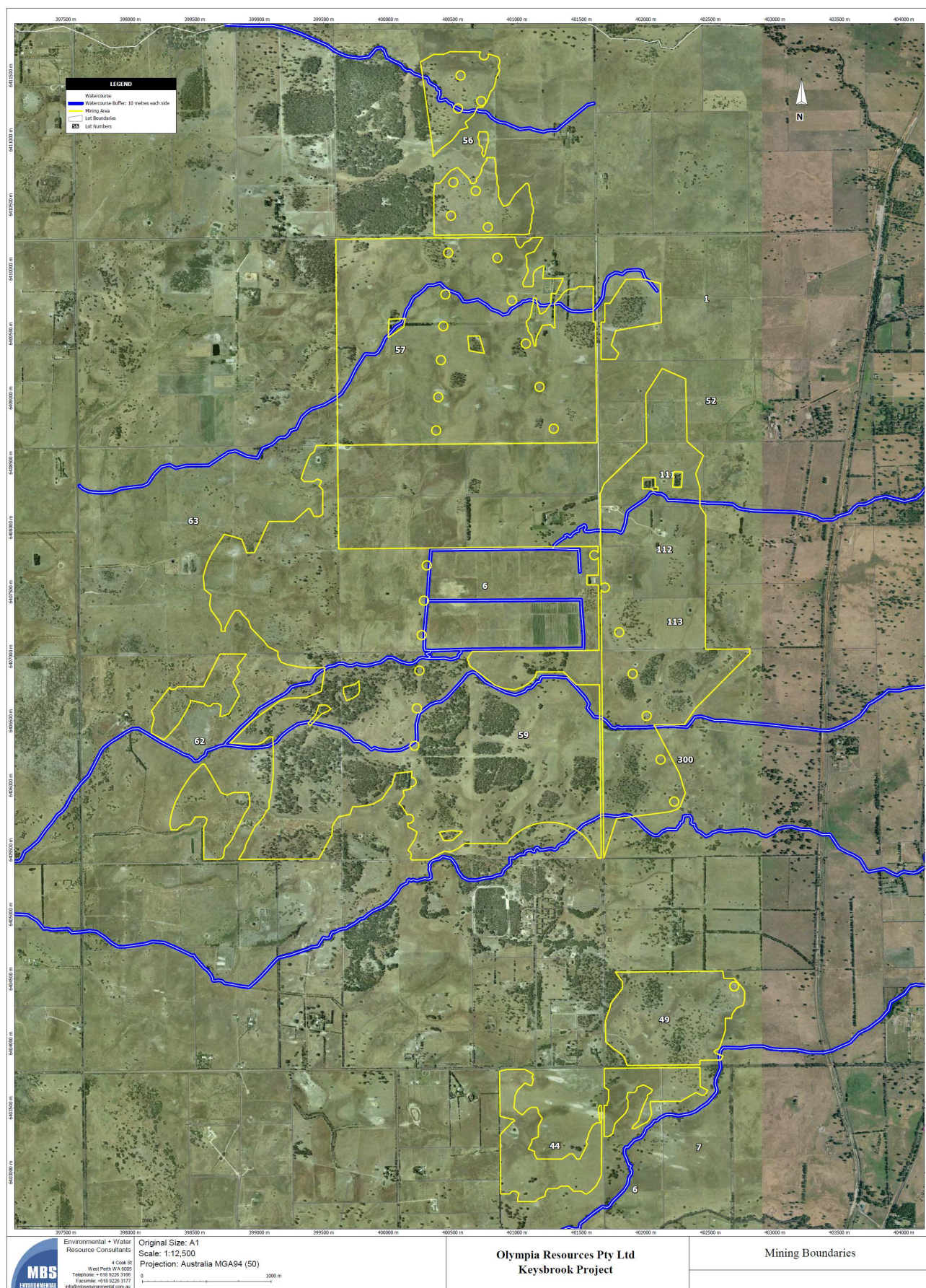
Figure 2 – Mine Boundaries

Figure 3 – Area within which minimum of 75ha of native vegetation to be retained



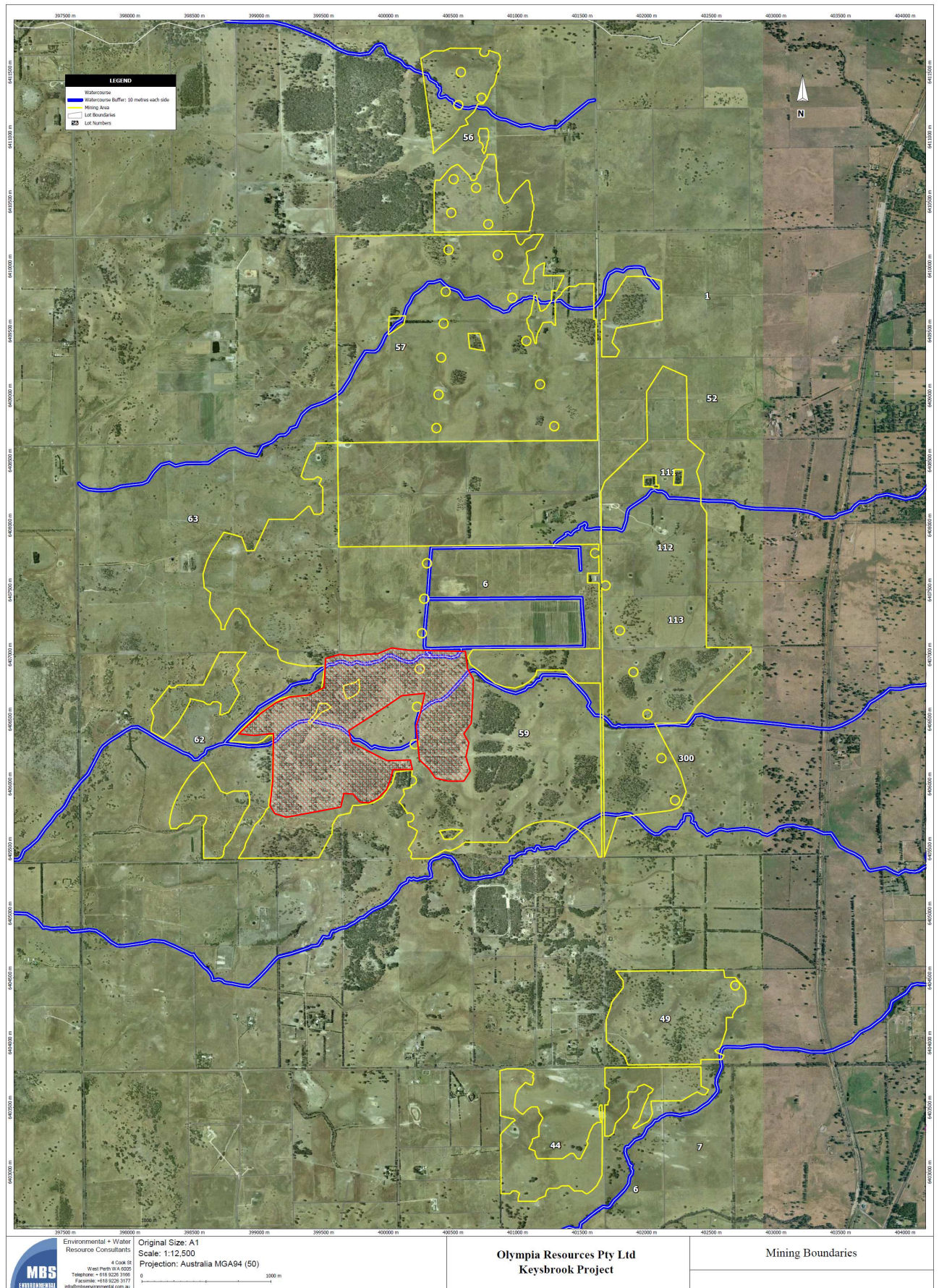
*Figure 1 – Regional location*





**Figure 2 – Mine boundaries**





**Figure 3 – Area within which minimum 75ha native vegetation to be retained (condition 6-1)**

## **ATTACHMENT 1 TO MINISTERIAL STATEMENT 810**

Section 46C  
Environmental Protection Act 1986

### **NOTICE OF CHANGES TO IMPLEMENTATION CONDITIONS MINISTERIAL STATEMENT 810**

KEYSBROOK MINERAL SANDS MINE  
SHIRE OF SERPENTINE-JARRAHDAL AND SHIRE OF MURRAY  
MATILDA ZIRCON LTD

Pursuant to section 46C(1)(b)(i) of the *Environmental Protection Act 1986*, the implementation conditions applying to the above proposal are changed in accordance with the Schedule to this Notice. I consider these changes to be of a minor nature which are necessary or desirable to correct a clerical mistake or unintentional error.

Hon Bill Marmion BE MBA MLA  
**MINISTER FOR ENVIRONMENT; WATER**  
**19 June 2011**

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### **Schedule**

#### **1 Condition 15 amended**

Condition 15 of Ministerial Statement 810 is amended as follows:

- (a) The figure '1 ug/m<sup>3</sup>' is replaced with '1000 ug/m<sup>3</sup>'
- (b) The lettering of the second '(e)' in Condition 15-3 will be replaced by '(f)' and thereafter; '(f)' with '(g)' and '(g)' with '(h)'



## Attachment 2 to Ministerial Statement 810

### Change to proposal under s45C of the *Environmental Protection Act 1986*

**Proposal:** Keysbrook Mineral Sands Mine

**Proponent:** MZI Resources Ltd

**Change:** Increase in proposal area to accommodate wet processing plant adjacent to the mining area, and change to area of vegetation to be protected.

**The following text replaces the proposal description in Schedule 1:**

The proposal is to develop a mineral sands mine near the Keysbrook township. The proposal involves the excavation and processing of a low-grade heavy mineral sands deposit.

An area of up to 30 hectares will be progressively mined at any time. Waste from the processing will be used as backfill in the mined areas. Backfilled areas will be progressively re-contoured and stabilised prior to topsoil replacement and return to pasture or native vegetation.

**Key Characteristics Table:** This table replaces Table 1 in Schedule 1

<u>Element</u>	<u>Description of proposal</u>		<u>Description of approved change to proposal</u>	
Land tenure over the mining area	Keysbrook	North Dandalup	Keysbrook	North Dandalup
	Part Lot 56 Westcott Road	Part Lot 62 Hopeland Rd	Part Lot 56 Westcott Road	Part Lot 62 Hopeland Rd
	Part Lot 57 Elliott Rd	Part Lot 59 Westcott Rd	Part Lot 57 Elliott Rd	Part Lot 59 Westcott Rd
	Part Lot 1 Elliott Rd	Part Lot 300 Westcott Rd	Part Lot 1 Elliott Rd	Part Lot 300 Westcott Rd
	Part Lot 52 Westcott Rd	Part Lot 49 Readheads Rd	Part Lot 52 Westcott Rd	Part Lot 49 Readheads Rd
	Part Lot 111 Westcott Rd	Part Lot 7 Readheads Rd	Part Lot 111 Westcott Rd	Part Lot 7 Readheads Rd
	Lot 112 Westcott Rd	Part Lot 6 Readheads Rd	Lot 112 Westcott Rd	Part Lot 6 Readheads Rd
	Lot 113 Westcott Rd	Part Lot 44 Readheads Rd	Lot 113 Westcott Rd	Part Lot 44 Readheads Rd
	Part Lot 6 Westcott Rd		Part Lot 6 Westcott Rd	
	Part Lot 63 Hopeland Rd		Part Lot 63 Hopeland Rd	

Life of mine	Approximately 8 years	Approximately 8 years
Product quantity	Approximately 920 000 tonnes of heavy mineral concentrate	Approximately 920 000 tonnes of heavy mineral concentrate
Pit depth	Average 2 metres below ground level, and up to 6 metres on sandy dunes	Average 2 metres below ground level, and up to 6 metres on sandy dunes
Proposal area	1366 hectares	<b>Up to 1379 hectares</b>
Dewatering	In-pit sumps to dewater the superficial Bassendean Sand aquifer at 0.2 gegalitres per annum	In-pit sumps to dewater the superficial Bassendean Sand aquifer at 0.2 gegalitres per annum
Bore abstraction	Up to 1.8 gegalitres per annum from two bores into the deep Leederville aquifer	Up to 1.8 gegalitres per annum from two bores into the deep Leederville aquifer
Road upgrades	Upgrades of existing roads; Westcott Rd, Atkins Rd, Readheads Rd and intersection of Readheads Rd and South Western Hwy	<b>Deleted – not an environmental factor</b>

Note: Text in **bold** in the Key Characteristics Table, indicates change/s to the proposal.

#### **List of Replacement Figures:**

Figure 2 of Schedule 1 is replaced with Figure 2 of this attachment.

Figure 3 of Schedule 1 is replaced with Figure 3 of this attachment.

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**Dr Paul Vogel**

CHAIRMAN

Environmental Protection Authority  
under delegated authority

Approval date: 4 February 2013

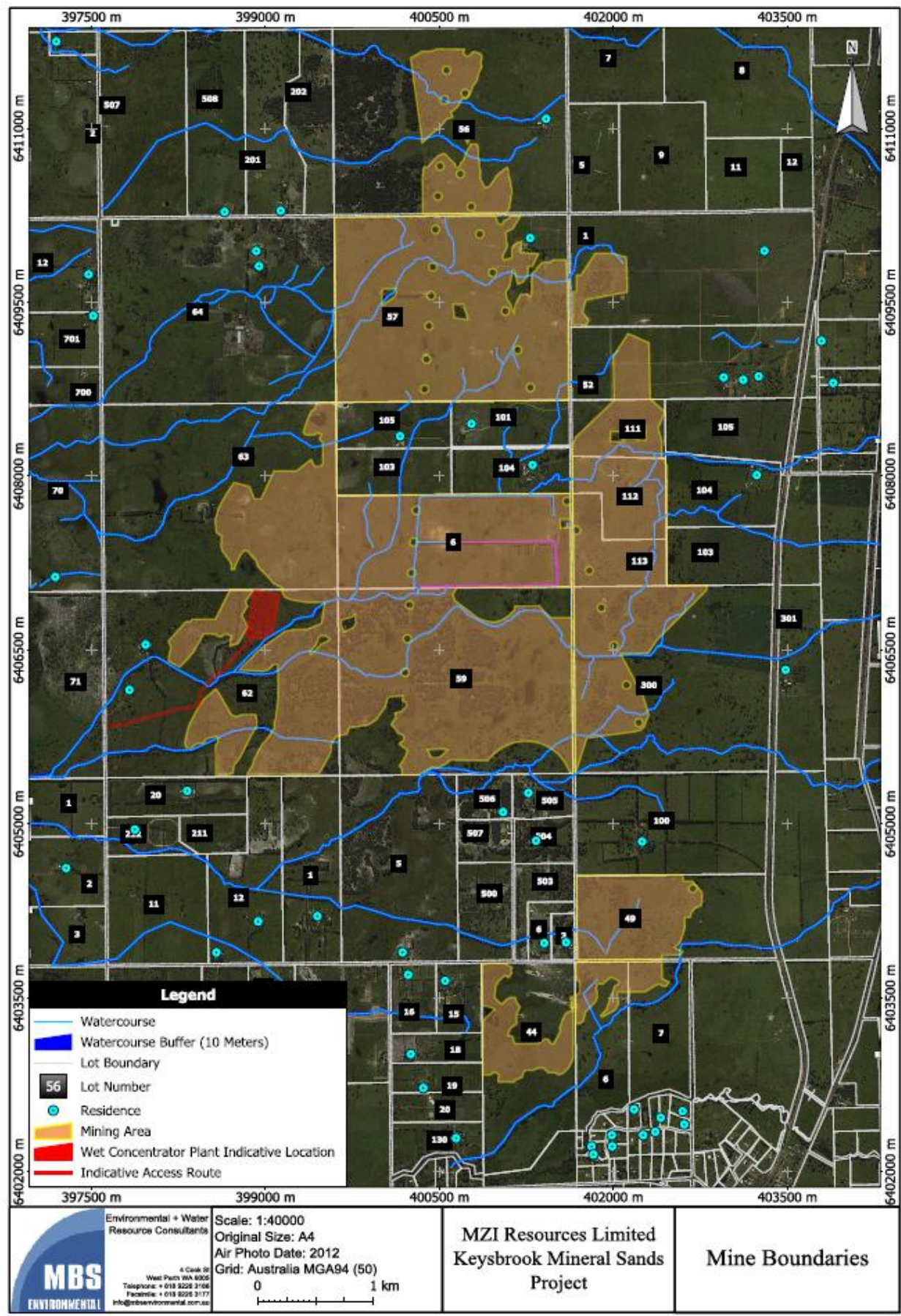
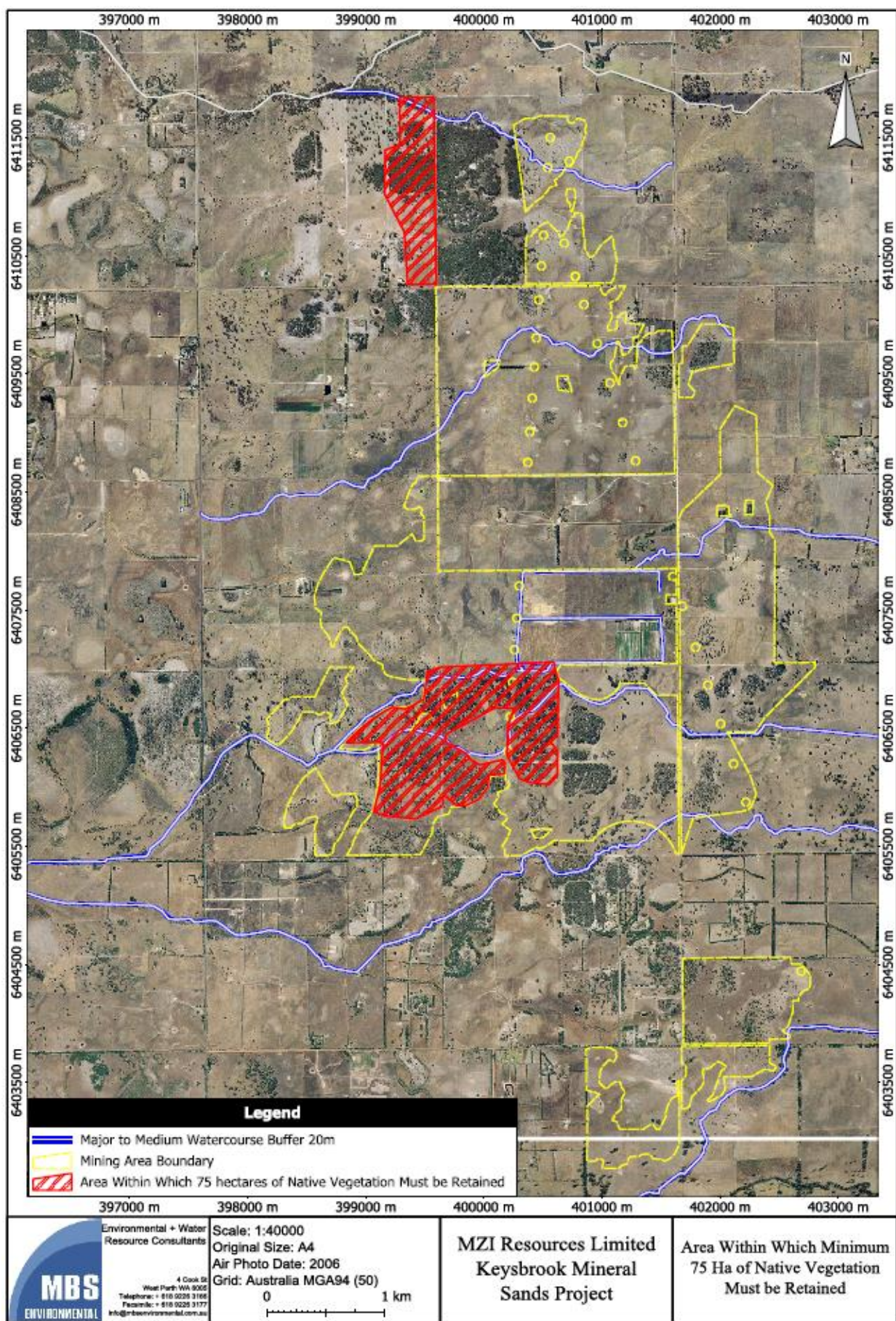


Figure 2. Mine boundaries





**Figure 3.** Area Within Which Minimum 75 hectares of Native Vegetation Must be Retained (Condition 6-1).

## Attachment 3 to Ministerial Statement 810

### Change to proposal approved under section 45C of the *Environmental Protection Act 1986*

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This Attachment replaces Schedule 1 and Attachment 2 of Ministerial Statement 810

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**Proposal: Keysbrook Mineral Sands Mine**

**Proponent: Keysbrook Leucoxene Pty Ltd**

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#### Changes:

- Amend the approved mining area from 1379 hectares to 1532 hectares and include all of Lots 101, 103, 104 and 105 Westcott Road, Keysbrook.
- Relinquish several minor areas from the approved mining area totalling 7.2 ha.
- Increase the Life of Mine from 8 to 9 years (approx.)
- Increase product quantity from 920,000 tonnes to 1,020,000 tonnes of heavy mineral concentrate.
- Amend the figures of MS 810 to include the Development Envelope and additional mining area.

**Table 1: Summary of the Proposal**

Proposal Title	Keysbrook Mineral Sands Mine
Short Description	The proposal is to develop a mineral sands mine near the Keysbrook township. The proposal involves the excavation and processing of a low-grade heavy mineral sands deposit. An area of up to 30 hectares will be progressively mined at any time. Waste from the processing will be used as backfill in the mined areas. Backfilled areas will be progressively re-contoured and stabilised prior to topsoil replacement and return to pasture or native vegetation.

**Table 2: Location and authorised extent of physical and operational elements**

Element	Description of Proposal		Proposed Description	
Land tenure over the mine area	Keysbrook	North Dandalup	Keysbrook	North Dandalup
	Part Lot 56 Westcott Rd Part Lot 57 Elliott Rd	Part Lot 62 Hopeland Road Part Lot 59 Westcott Rd	Part Lot 56 Westcott Rd Part Lot 57 Elliott Rd	<b>Part Lot 31 Hopeland Rd</b> <b>Part Lot 32 Hopeland Rd</b>

Element	Description of Proposal		Proposed Description	
	Part Lot 1 Elliott Rd Part Lot 52 Westcott Rd Part Lot 111 Westcott Rd Lot 112 Westcott Rd Lot 113 Westcott Rd Part Lot 6 Westcott Rd Part Lot 63 Hopeland Rd	Part Lot 300 Westcott Rd Part Lot 49 Readheads Rd Part Lot 7 Readheads Rd Part Lot 6 Readheads Rd Part Lot 44 Readheads Rd	Part Lot 1 Elliott Rd Part Lot 52 Westcott Rd Part Lot 111 Westcott Rd Lot 112 Westcott Rd Lot 113 Westcott Rd Part Lot 6 Westcott Rd Part Lot 63 Hopeland Rd <b>Lot 101 Westcott Rd</b> <b>Lot 103 Westcott Rd</b> <b>Lot 104 Westcott Rd</b> <b>Lot 105 Westcott Rd</b>	<b>Part Lot 33 Hopeland Rd</b> <b>Part Lot 34 Hopeland Rd</b> Part Lot 59 Westcott Rd Part Lot 300 Westcott Rd Part Lot 49 Readheads Rd Part Lot 7 Readheads Rd Part Lot 6 Readheads Rd Part Lot 44 Readheads Rd
Life of Mine	Approximately 8 years		<b>Approximately 9 years</b>	
Product quantity	Approximately 920,000 tonnes of heavy mineral concentrate		<b>Approximately 1,020,000 tonnes of heavy mineral concentrate</b>	
Pit depth	Average 2 metres below ground level, and up to 6 metres on sandy dunes		Average 2 metres below ground level, and up to 6 metres on sandy dunes	
Proposal Area	Up to 1379 hectares		<b>Up to 1532 hectares</b>	
Dewatering	In-pit sumps to dewater the superficial Bassendean Sand aquifer at 0.2 gegalitres per annum		In-pit sumps to dewater the superficial Bassendean Sand aquifer at 0.2 gegalitres per annum	
Bore abstraction	Up to 1.8 gegalitres per annum from two bores into the deep Leederville aquifer		Up to 1.8 gegalitres per annum from two bores into the deep Leederville aquifer	

Note: Text in **bold** in Table 2 indicates a change to the proposal.

**Table 3: Abbreviations**

Abbreviation	Term
CEO	Chief Executive Officer
GL	gigalitre
ha	hectare
km	kilometre

**Figures (attached)**

Figure 1 Keysbrook Mineral Sands Mine - Regional Location

Figure 2 Keysbrook Mineral Sands Mine - Development Envelope and Mining Area

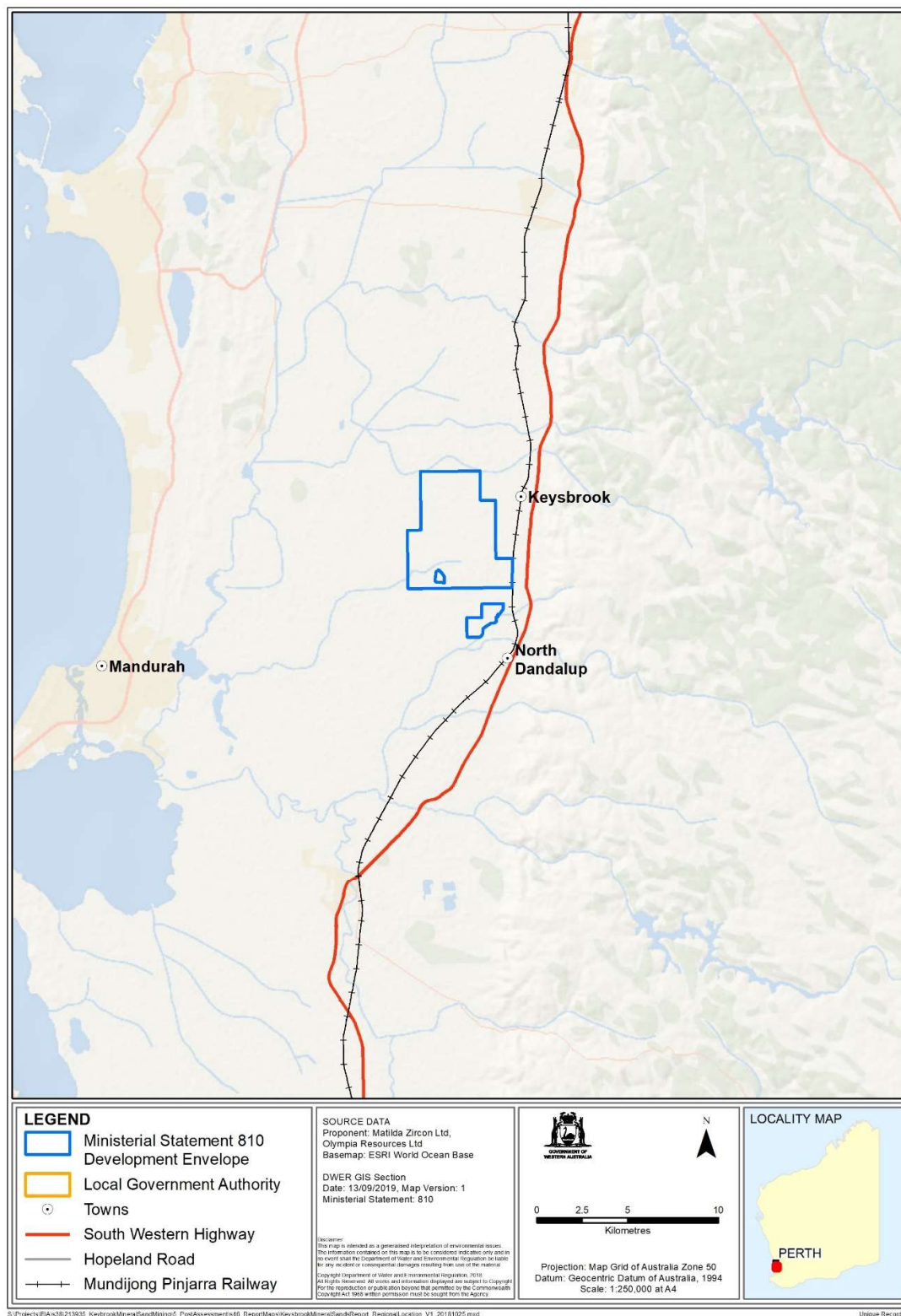
[Signed 14 October 2019]

**Dr Tom Hatton**

CHAIRMAN

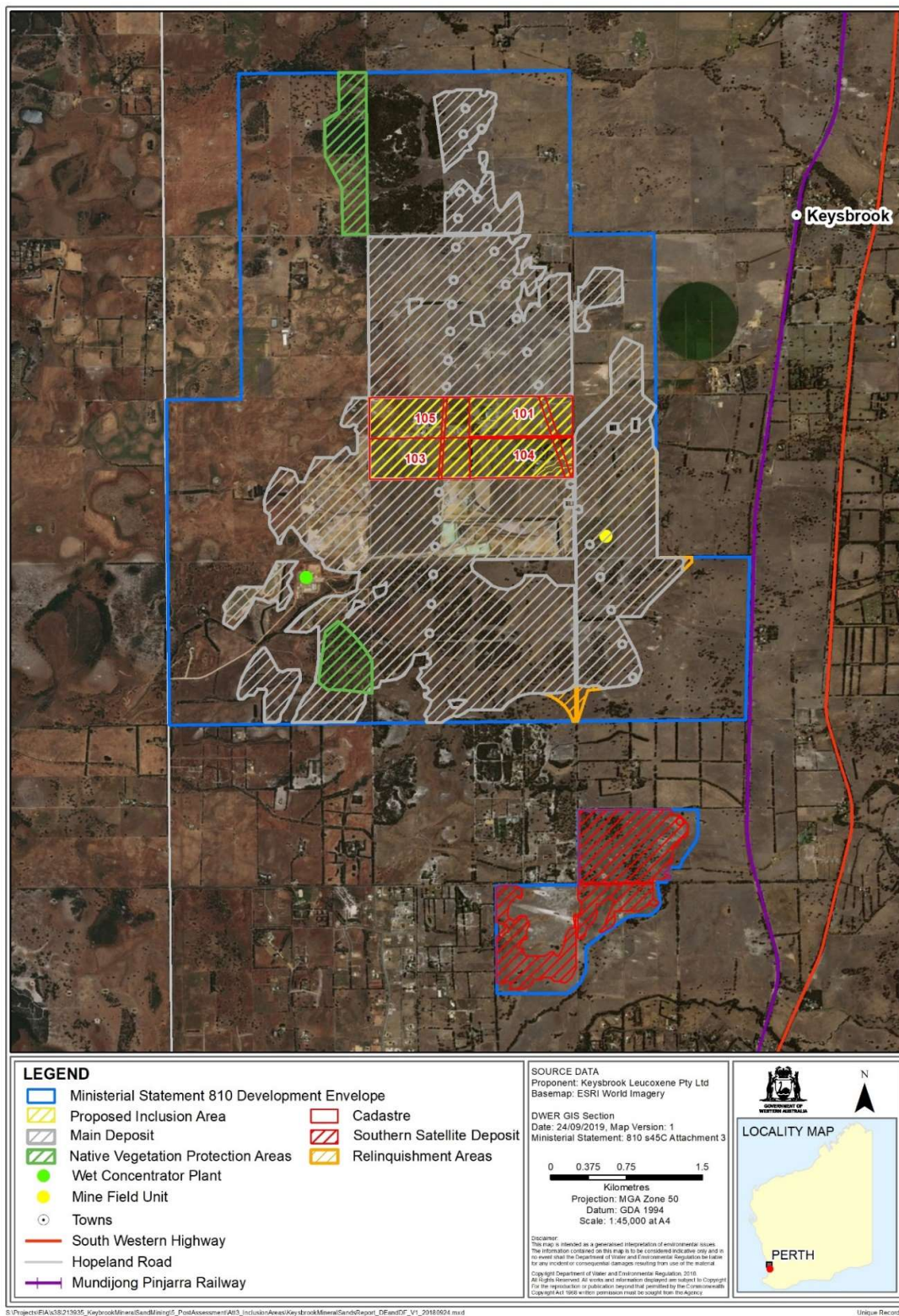
Environmental Protection Authority  
under delegated authority





**Figure 1: Keysbrook Mineral Sands Mine - Regional Location**





**Figure 2: Keysbrook Mineral Sands Mine - Development Envelope and Mining Area**

## Attachment 4 to Ministerial Statement 810

### Amendment to proposal approved under section 45C of the *Environmental Protection Act 1986*

This Attachment replaces Attachment 3 of Ministerial Statement 810

**Proposal: Keysbrook Mineral Sands Mine**

**Proponent: Keysbrook Leucoxene Pty Ltd**

#### Changes:

- Amend the approved mining area from 1532 hectares to 1602 hectares and include an additional area on Lot 56 Westcott Road, Keysbrook.
- Increase the Life of Mine from 9 to 10 years
- Increase product quantity from 1,020,000 tonnes to 1,070,000 tonnes of heavy mineral concentrate.
- Amend the figures of MS 810 to include additional mining area.

**Table 1: Summary of the proposal**

Proposal title	Keysbrook Mineral Sands Mine
Short description	The proposal is to develop a mineral sands mine near the Keysbrook township. The proposal involves the excavation and processing of a low-grade heavy mineral sands deposit. An area of up to 30 hectares will be progressively mined at any time. Waste from the processing will be used as backfill in the mined areas. Backfilled areas will be progressively recontoured and stabilised prior to topsoil replacement and return to pasture or native vegetation.

**Table 2: Location and authorised extent of physical and operational elements**

Element	Previously Authorised Description of Proposal		Authorised Description of Proposal	
Land tenure over the mine area	Keysbrook	North Dandalup	Keysbrook	North Dandalup
	Part Lot 56 Westcott Rd	Part Lot 31 Hopeland Rd	Part Lot 56 Westcott Road	Part Lot 31 Hopeland Rd
	Part Lot 57 Elliott Rd	Part Lot 32 Hopeland Rd	Part Lot 57 Elliott Rd	Part Lot 32 Hopeland Rd
	Part Lot 1 Elliott Rd	Part Lot 33 Hopeland Rd	Part Lot 1 Elliott Rd	Part Lot 33 Hopeland Rd
	Part Lot 52	Part Lot 34	Part Lot 52	Part Lot 34

Element	Previously Authorised Description of Proposal		Authorised Description of Proposal	
	Westcott Rd Part Lot 111 Westcott Rd Lot 112 Westcott Rd Lot 113 Westcott Rd Part Lot 6 Westcott Rd Part Lot 63 Hopeland Rd Lot 101 Westcott Rd Lot 103 Westcott Rd Lot 104 Westcott Rd Lot 105 Westcott Rd	Hopeland Rd Part Lot 59 Westcott Rd Part Lot 300 Westcott Rd Part Lot 49 Readheads Rd Part Lot 7 Readheads Rd Part Lot 6 Readheads Rd Part Lot 44 Readheads Rd	Westcott Rd Part Lot 111 Westcott Rd Lot 112 Westcott Rd Lot 113 Westcott Rd Part Lot 6 Westcott Rd Part Lot 63 Hopeland Rd Lot 101 Westcott Rd Lot 103 Westcott Rd Lot 104 Westcott Rd Lot 105 Westcott Rd	Hopeland Rd Part Lot 59 Westcott Rd Part Lot 300 Westcott Rd Part Lot 49 Readheads Rd Part Lot 7 Readheads Rd Part Lot 6 Readheads Rd Part Lot 44 Readheads Rd
Life of Mine	Approximately 9 years		<b>Approximately 10 years</b>	
Product quantity	Approximately 1,020,000 tonnes of heavy mineral concentrate		Approximately <b>1,070,000</b> tonnes of heavy mineral concentrate	
Pit depth	Average 2 metres below ground level, and up to 6 metres on sandy dunes		Average 2 metres below ground level, and up to 6 metres on sandy dunes	
Proposal Area	Up to 1532 hectares		Up to <b>1602</b> hectares	
Dewatering	In-pit sumps to dewater the superficial Bassendean Sand aquifer at 0.2 giga litres per annum		In-pit sumps to dewater the superficial Bassendean Sand aquifer at 0.2 giga litres per annum	
Bore abstraction	Up to 1.8 giga litres per annum from two bores into the deep Leederville aquifer		Up to 1.8 giga litres per annum from two bores into the deep Leederville aquifer	

Note: Text in **bold** in Table 2 indicates a change to the proposal.

**Table 3: Abbreviations**

Abbreviation	Term
CEO	Chief Executive Officer
GL	gigalitre
ha	hectare
km	kilometre

**Figures (attached)**

Figure 1: Keysbrook Mineral Sands Mine - Regional Location

Figure 2: Keysbrook Mineral Sands Mine - Development Envelope and Mining Area

Figure 3: Native Vegetation Protection Areas (Condition 6-1)



**Prof Matthew Tonts**

CHAIR

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Approval date: 18 September 2023



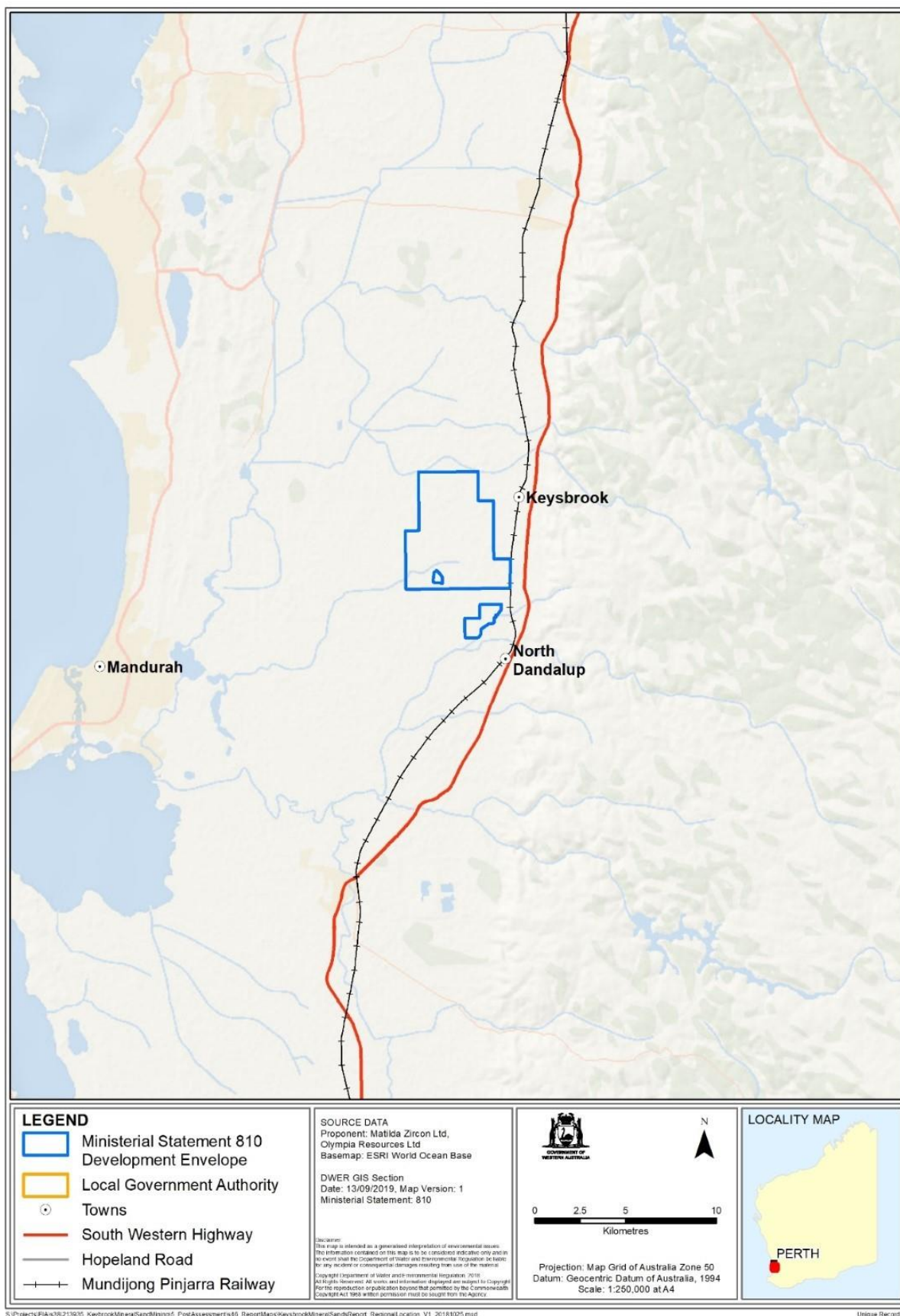


Figure 1: Keysbrook Mineral Sands Mine – Regional Location



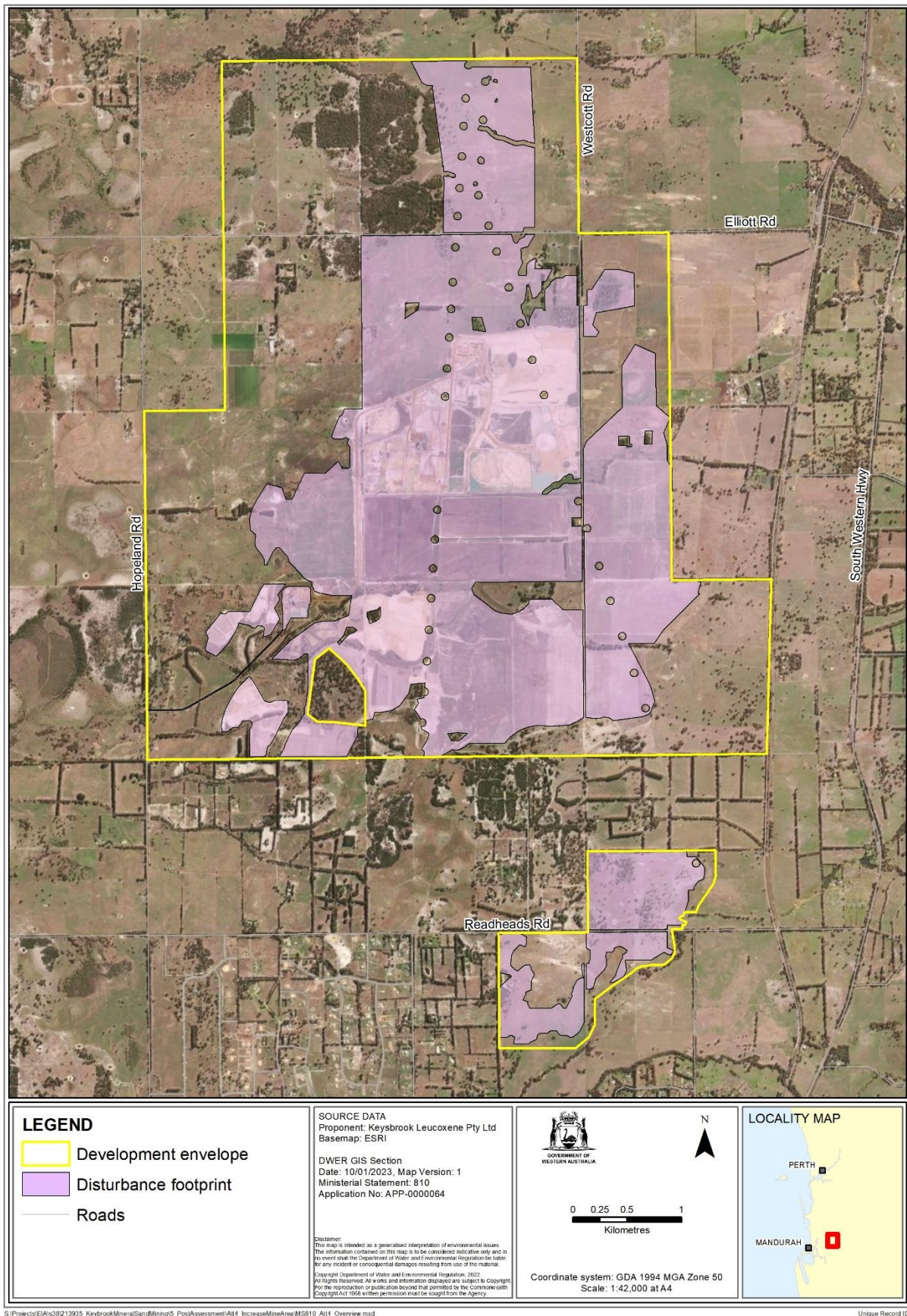


Figure 2: Keysbrook Mineral Sands Mine – Development Envelope and Mining Area



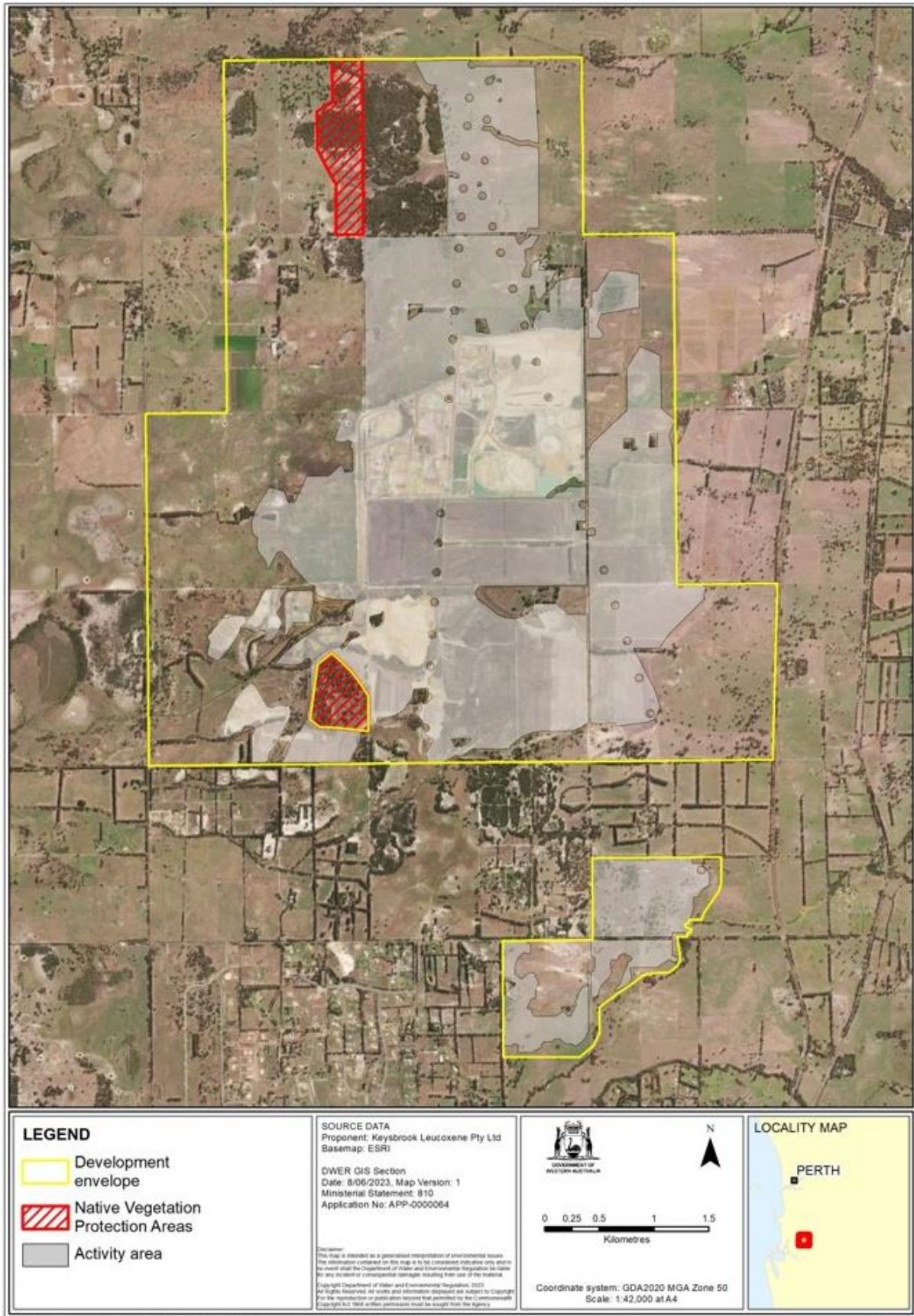


Figure 3: Native Vegetation protection areas (Condition 6-1)

## Attachment 5 to Ministerial Statement 810

### Amendment to proposal approved under section 45C of the *Environmental Protection Act 1986*

This Attachment replaces Attachment 4 of Ministerial Statement 810

**Proposal: Keysbrook Mineral Sands Mine**

**Proponent: Keysbrook Leucoxene Pty Ltd**

#### Changes:

- Amend the approved mining area from 1602 hectares to 1744.3 hectares and include an additional area on Lot 63 Hopeland Road, Keysbrook.
- Increase the Life of Mine from 10 to 12 years
- Increase product quantity from 1,070,000 tonnes to 1,135,000 tonnes of heavy mineral concentrate.
- Amend the figures of MS 810 to include additional mining area.

**Table 1: Summary of the proposal**

Proposal title	Keysbrook Mineral Sands Mine
Short description	The proposal is to develop a mineral sands mine near the Keysbrook township. The proposal involves the excavation and processing of a low-grade heavy mineral sands deposit. An area of up to 30 hectares will be progressively mined at any time. Waste from the processing will be used as backfill in the mined areas. Backfilled areas will be progressively recontoured and stabilised prior to topsoil replacement and return to pasture or native vegetation.

**Table 2: Location and authorised extent of physical and operational elements**

Element	Previously Authorised Description of Proposal		Authorised Description of Proposal	
Land tenure over the mine area	Keysbrook	North Dandalup	Keysbrook	North Dandalup
	Part Lot 56 Westcott Rd	Part Lot 31 Hopeland Rd	Part Lot 56 Westcott Road	Part Lot 31 Hopeland Rd
	Part Lot 57 Elliott Rd	Part Lot 32 Hopeland Rd	Part Lot 57 Elliott Rd	Part Lot 32 Hopeland Rd
	Part Lot 1 Elliott Rd	Part Lot 33 Hopeland Rd	Part Lot 1 Elliott Rd	Part Lot 33 Hopeland Rd
	Part Lot 52 Westcott Rd	Part Lot 34 Hopeland Rd	Part Lot 52 Westcott Rd	Part Lot 34 Hopeland Rd



Element	Previously Authorised Description of Proposal		Authorised Description of Proposal	
	Part Lot 111 Westcott Rd Lot 112 Westcott Rd Lot 113 Westcott Rd Part Lot 6 Westcott Rd Part Lot 63 Hopeland Rd Lot 101 Westcott Rd Lot 103 Westcott Rd Lot 104 Westcott Rd Lot 105 Westcott Rd	Part Lot 59 Westcott Rd Part Lot 300 Westcott Rd Part Lot 49 Readheads Rd Part Lot 7 Readheads Rd Part Lot 6 Readheads Rd Part Lot 44 Readheads Rd	Part Lot 111 Westcott Rd Lot 112 Westcott Rd Lot 113 Westcott Rd Part Lot 6 Westcott Rd Part Lot 63 Hopeland Rd Lot 101 Westcott Rd Lot 103 Westcott Rd Lot 104 Westcott Rd Lot 105 Westcott Rd	Part Lot 59 Westcott Rd Part Lot 300 Westcott Rd Part Lot 49 Readheads Rd Part Lot 7 Readheads Rd Part Lot 6 Readheads Rd Part Lot 44 Readheads Rd
Life of Mine	Approximately 10 years		<b>Approximately 12 years</b>	
Product quantity	Approximately 1,070,000 tonnes of heavy mineral concentrate		Approximately <b>1,135,000</b> tonnes of heavy mineral concentrate	
Pit depth	Average 2 metres below ground level, and up to 6 metres on sandy dunes		Average 2 metres below ground level, and up to 6 metres on sandy dunes	
Proposal Area	Up to 1602 hectares		Up to <b>1744.3</b> hectares	
Dewatering	In-pit sumps to dewater the superficial Bassendean Sand aquifer at 0.2 gegalitres per annum		In-pit sumps to dewater the superficial Bassendean Sand aquifer at 0.2 gegalitres per annum	
Bore abstraction	Up to 1.8 gegalitres per annum from two bores into the deep Leederville aquifer		Up to 1.8 gegalitres per annum from two bores into the deep Leederville aquifer	

Note: Text in **bold** in Table 2 indicates a change to the proposal.

**Table 3: Abbreviations**

Abbreviation	Term
CEO	Chief Executive Officer
GL	gegalitre

Abbreviation	Term
ha	hectare
km	kilometre

### **Development Envelope Coordinates**

Spatial data depicting the figures are held on Environment Online by the Department of Water and Environmental Regulation.

### **Figures (attached)**

Figure 1: Keysbrook Mineral Sands Mine - Regional Location

Figure 2: Keysbrook Mineral Sands Mine - Development Envelope and Mining Area



### **Prof. Matthew Tonts**

CHAIR

Environmental Protection Authority  
under delegated authority

16 October 2023

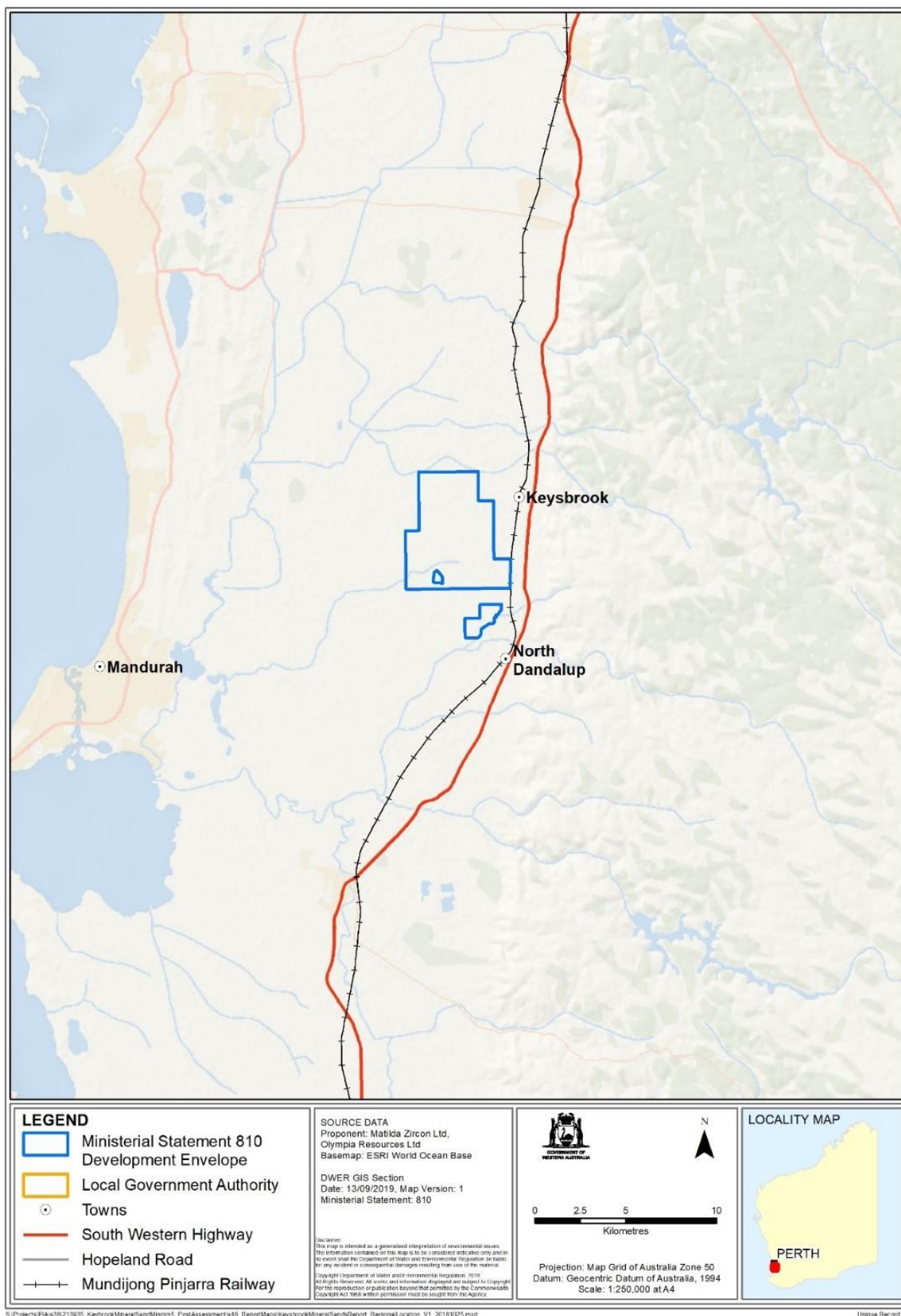


Figure 1: Keysbrook Mineral Sands Mine – Regional Location



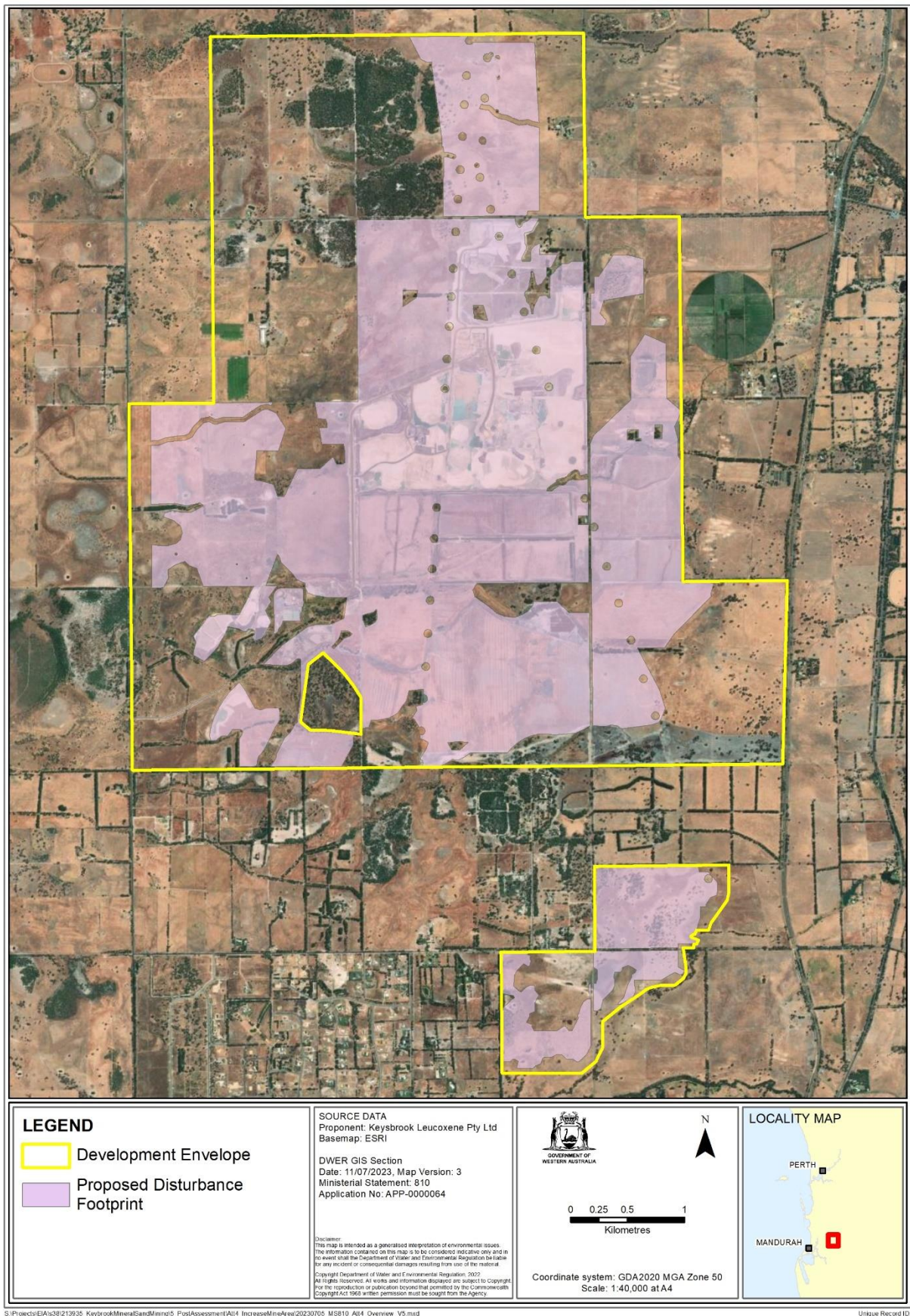


Figure 2: Keysbrook Mineral Sands Mine – Development Envelope and Mining Area



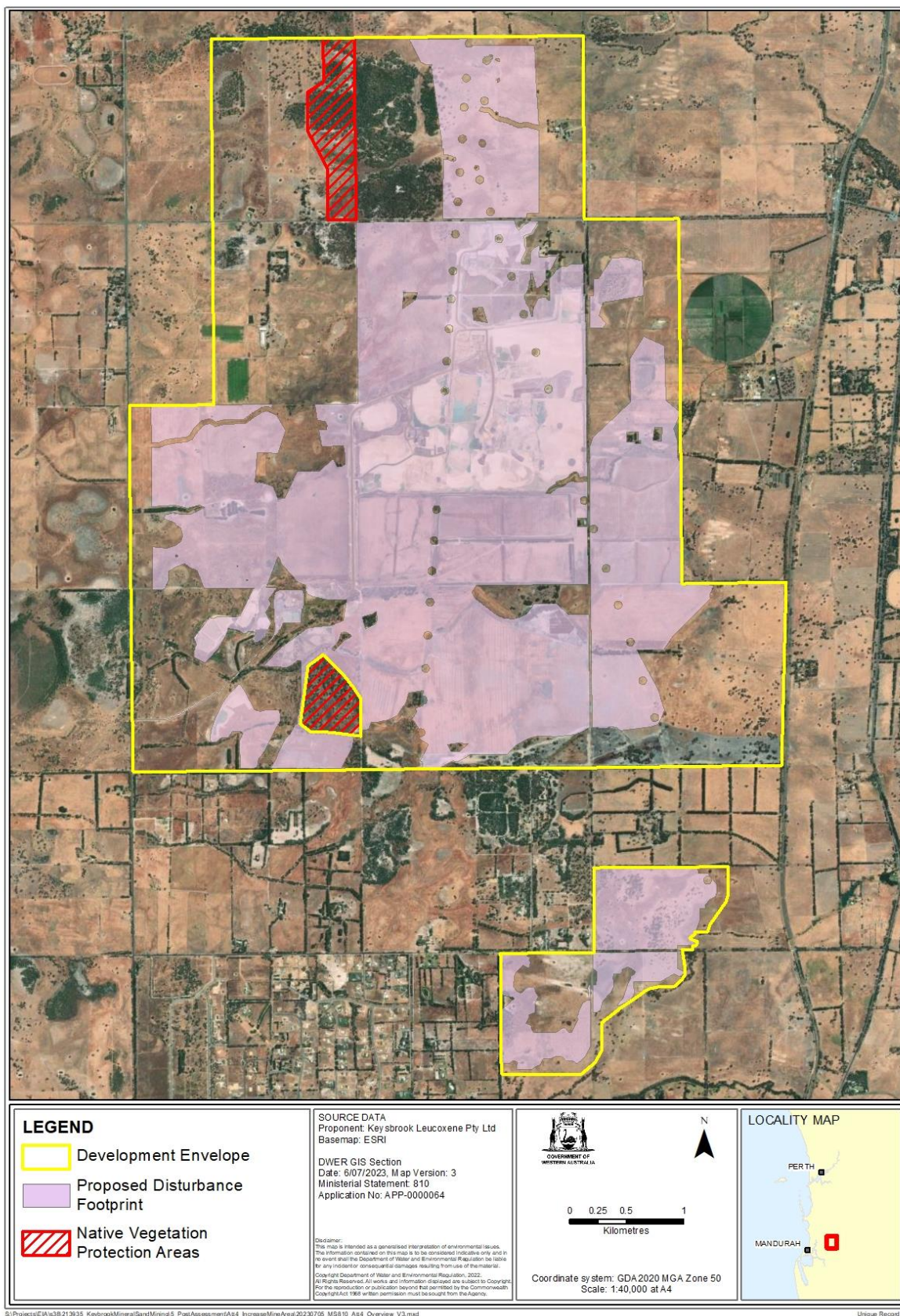


Figure 3: Native Vegetation Protection Areas