



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 8875/2
Permit Holder:	Holcim (Australia) Pty Ltd
Duration of Permit:	16 July 2020 – 16 July 2030

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of pit development for the Esperance Quarry.

2. Land on which clearing is to be done

Lot 835 on Plan 230232, Myrup

3. Area of Clearing

The Permit Holder must not clear more than 1.89 hectares of native vegetation within the area cross-hatched yellow on attached Plan 8875/2.

4. Period in which clearing is authorised

The Permit Holder shall not clear any native vegetation after 16 July 2025.

5. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

PART II – MANAGEMENT CONDITIONS

6. Type of clearing authorised

The Permit Holder shall not clear native vegetation unless the purpose for which the clearing is authorised is enacted within 3 months of the clearing being undertaken.

7. Avoid, minimise and reduce the impacts and extent of clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- avoid the clearing of native vegetation;
- minimise the amount of native vegetation to be cleared; and
- reduce the impact of clearing on any environmental value.

8. Dieback and weed control

- (a) When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:
- (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
 - (ii) shall only move soil in *dry conditions*;
 - (iii) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
 - (iv) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.
- (b) At least once in each 12 month period for the *term* of this Permit, the Permit Holder must remove or kill any *weeds* growing within areas cleared under this permit

9. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

- (a) retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
- (b) within 6 months following completion of extractive activities, revegetate and rehabilitate the area hatched yellow, with the exception of the pit void, on attached Plan 8875/2 by:
- (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land; and
 - (ii) laying the vegetative material and topsoil retained under condition 9(a) on the cleared area
- (c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 9(b) of this Permit:
- (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
 - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 9(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.
- (d) Where additional planting or direct seeding of native vegetation is undertaken in accordance with condition 9(c)(ii) of this permit, the Permit Holder shall repeat condition 9(c)(i) and 9(c)(ii) within 24 months of undertaking the additional planting or direct seeding of native vegetation.
- (e) Where a determination by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 9(c)(i) and 9(c)(ii) of this permit, that determination shall be submitted for the CEO's consideration. If the CEO does not agree with the determination made under condition 9(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 9(c)(ii).

PART III - RECORD KEEPING AND REPORTING

10. Record keeping

The Permit Holder must maintain the following records in relation to the clearing of native vegetation authorised under this Permit:

- (a) In relation to the clearing of native vegetation authorised under this permit
- (i) The species composition, structure and density of the cleared area;
 - (ii) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (iii) the date(s) that the area was cleared;
 - (iv) the size of the area cleared (in hectares);

- (v) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 7 of this Permit; and
 - (vi) actions taken to minimise the risk of the introduction and spread of *dieback* and *weeds* in accordance with condition 8 of this Permit.
- (b) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 9 of this Permit:
- (i) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
 - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares);
 - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*, and
 - (v) a copy of the environmental specialist's report.

11. Reporting

- (a) The Permit Holder must provide to the *CEO* on or before 30 June of each year, a written report:
- (i) of records required under condition 10 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 July to 30 June of the preceding financial year.
- (b) If no clearing authorised under this Permit was undertaken between 1 July to 30 June of the preceding financial year, a written report confirming that no clearing under this permit has been carried out, must be provided to the *CEO* on or before 30 June of each year.
- (c) Prior to 16 April 2030, the Permit Holder must provide to the *CEO* a written report of records required under condition 10 of this Permit where these records have not already been provided under condition 11(a) of this Permit.

DEFINITIONS

The following meanings are given to terms used in this Permit:

CEO means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*;

dieback means the effect of *Phytophthora* species on native vegetation;

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

dry conditions means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or wheel arches;

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

fill means material used to increase the ground level, or fill a hollow;

local provenance means native vegetation seeds and propagating material from natural sources within 50 kilometres of the area cleared;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

regenerate/ed/ion means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing *mulch*;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area; and

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area; and

weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in the Department of Environment and Conservation Regional Weed Assessments, regardless of ranking; or
- (c) not indigenous to the area concerned.

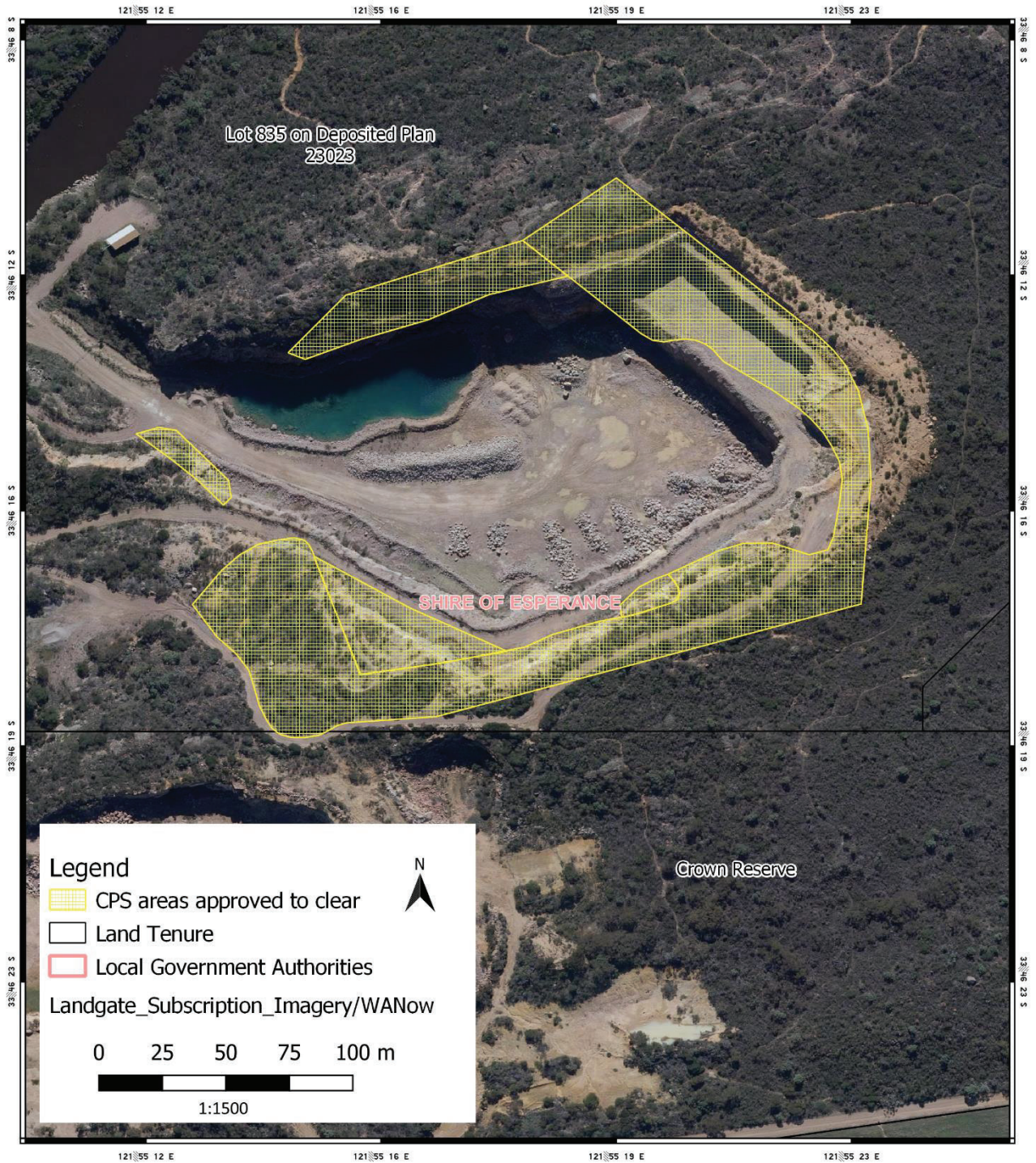
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Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

3 April 2023

Plan 8875/2





Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 8875/2
Permit type:	Purpose permit
Applicant name:	Holcim (Australia) Pty Ltd
Application received:	25 November 2021
Application area:	1.89 hectares of native vegetation
Purpose of clearing:	Expansion of pit development for the Esperance Quarry (Extractive Industry)
Method of clearing:	Mechanical Removal
Property:	Lot 835 on Plan 230232
Location (LGA area/s):	Shire of Esperance
Localities (suburb/s):	Myrup

1.2. Description of clearing activities

CPS 8875/1 allowed for the clearing of 1.40 hectares of native vegetation. This amendment is to increase the area of clearing by 0.49 hectares, across four small additional separate areas. These areas are around the edge of the existing quarry pit, and are required for the expansion of pit development for the Esperance Quarry (see Figures 3, 4 and 5, Appendix E). The amount of clearing authorised under CPS 8875/2 is 1.89 hectares (see Figure 1, Section 1.5).

The Annual Reports submitted by the applicant to the Department of Water and Environmental Regulation (DWER), indicate that no clearing has been undertaken in the 2020/21 and 2021/22 financial years (FY) under CPS 8875/1 (since the commencement of the permit on 16 July 2020) (Holcim, 2022; 2023). Additionally, no revegetation and rehabilitation activities have been undertaken during the 2020/21 and 2021/22 periods, as the areas are currently being utilised by operations (Holcim, 2022; 2023).

1.3. Decision on application

Decision:	Granted
Decision date:	3 April 2023
Decision area:	1.89 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit amendment application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). DWER advertised the application for 14 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix A), relevant datasets (see Appendix F.1), the findings of a flora and fauna survey (see Appendix E), the clearing principles set

out in Schedule 5 of the EP Act (see 0), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3.3).

Although the assessment determination has not changed since the assessment for CPS 8875/1, the assessment has considered the environmental values of the additional areas applied for under the amendment. The original assessment can be found in the Clearing Permit Decision 8875/1.

A vegetation, flora and fauna assessment conducted by Dr Greg Craig (Environmental Consultant) in 2021, in support of the amendment application, found no Threatened or Priority flora and no Threatened Ecological Communities (TEC) or Priority Ecological Communities (PEC) within the application area (Craig, 2021). Additionally, the survey found no fauna of conservation significance within the application area. While it is noted that the four additional application areas under CPS 8875/2 are located within the distribution zone for Carnaby's black cockatoo (*Zanda latirostris*) (listed as Endangered), whereby Carnaby's black cockatoos may opportunistically forage (Craig, 2021), there are other patches of better-quality vegetation within the local area which are likely to provide preferable habitat. It has been determined that the proposed clearing is not likely to provide significant habitat, or foraging resources critical for local populations of Carnaby's black cockatoo.

Through assessment of CPS 8875/1 and CPS 8875/2, it was identified that vegetation in the application area is within an extensively cleared landscape, with marginally less than 30 per cent of remnant vegetation remaining within the local area. The application area also forms a minor component of an ecological linkage. Within the vegetation, flora and fauna assessment, the additional four proposed clearing areas are described as degraded to very good (Keighery, 1994) condition, with the vegetation directly adjacent to the amendment application area in better condition. It is noted that these additional areas would not provide significant habitat for conservation fauna, due to the already disturbed and impacted areas within the existing quarry pit (Craig, 2021).

A previous clearing permit for the application area (CPS 3015/4) included an offset to mitigate the impacts to principle (e), with a conservation covenant placed on 1.4 hectares of adjacent land. The Delegated Officer determined that this offset, in combination with the revegetation and rehabilitation conditions imposed on clearing permit CPS 8875/2, was suitable to mitigate the impacts assessed under principle (e).

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed amendment is unlikely to lead to long-term adverse or significant impacts on environmental values.

1.5. Site map

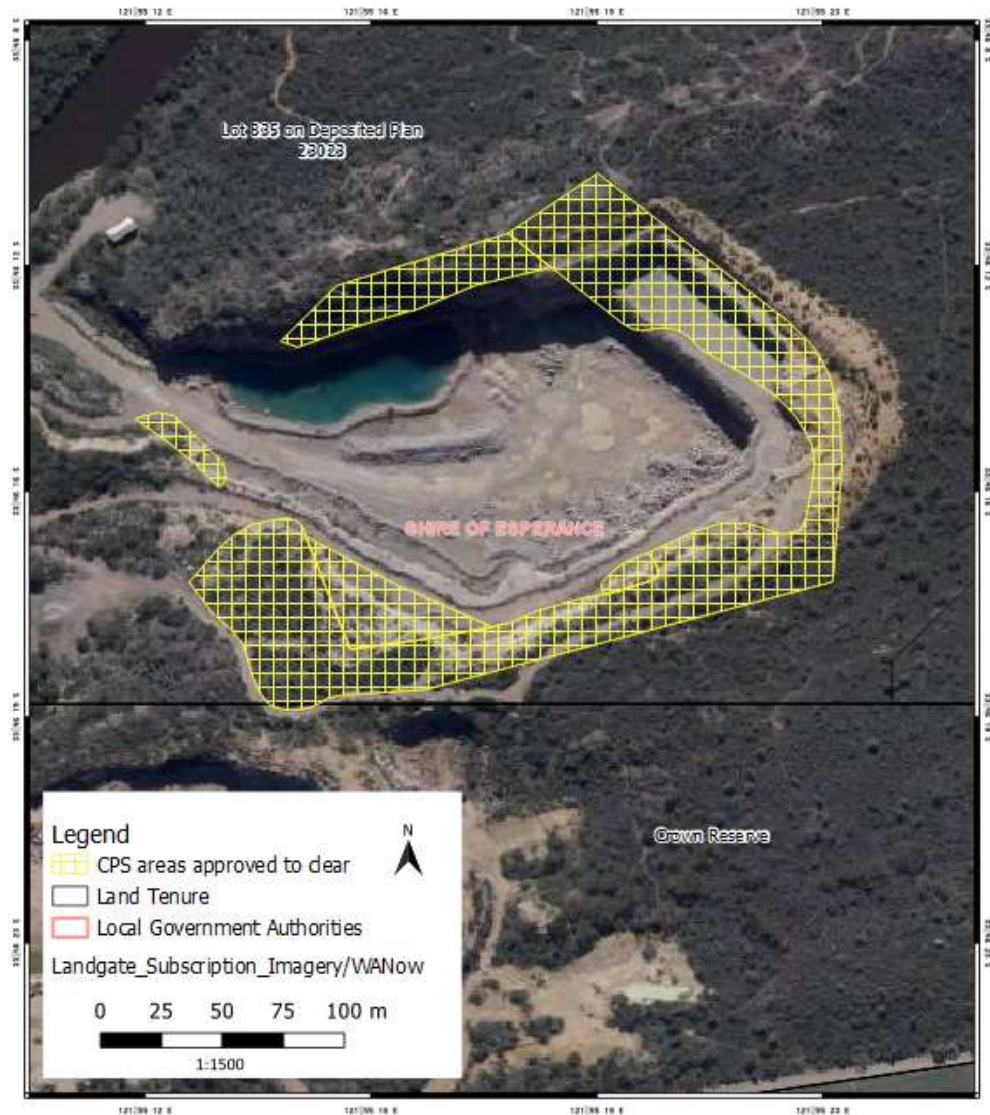


Figure 1 - Map of the application area

The areas cross-hatched yellow indicates the areas authorised to be cleared under the granted clearing permit.

2. Legislative context

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

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)

Relevant policies considered during the assessment include:

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)

- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016a)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016b)

3. Detailed assessment of application

3.1 Avoidance and mitigation measures

In relation to whether alternatives that would avoid or minimise the need for clearing were considered, the applicant (Holcim, 2022) advised that the four additional (separate) areas of application area had been specifically chosen as they all had been previously cleared under the original quarry pit development approximately 70 years ago. While it is noted the vegetation condition ranges from degraded to very good (Keighery, 1994), these areas have been chosen as they are around the edge of the current quarry extent (Holcim, 2022). The vegetation, flora and fauna assessment noted that the additional four proposed clearing areas are already disturbed and impacted areas within the existing quarry pit (Craig, 2021) and would not compromise of significant habitat for flora or fauna.

The applicant has advised that Holcim has an Environmental Management System and has a number of relevant guidelines that the applicant follows on the premises (Holcim, 2023). The guidelines implement a range of avoidance and mitigation environmental controls, which include:

- Guideline - Quarry development (6.15) – ground disturbance activities such vegetation clearing, stripping of topsoil and overburden and pit development, land degradation, erosion, and acid sulphate soils. Within this guideline, Environmental Permits to Work (EPW) must be issued prior to any works with the potential for environmental, compliance or community impacts. This includes but is not limited to any of the following:
 - within 40 metres of a riparian area;
 - within any area that has been undisturbed;
 - within any area that has previously been disturbed but shows signs of rehabilitation (grass growing, regrowth evident);
 - within any area that will affect the natural or current flow of water;
 - before clearing of any vegetation or habitat (i.e. logs, hollows, nests, burrows etc.).
- Guideline – Management of Weeds, Pathogens and Pests (6.16) – weed prevention, eradication and containment, weed propagation, introduction of invasive species, pest animals and pathogens including *Phytophthora Dieback* (machine hygiene, cleaning areas, and cleaning and disinfection methods).
- Guideline – Boundary Compliance (6.18) – management of critical boundaries, which are physically defined i.e. clearing permit approved areas (Holcim, 2023).

The Delegated Officer was satisfied that the applicant has undertaken reasonable measures to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2 Assessment of impacts on environmental values

The Delegated Officer reviewed the information available at the time of the amendment (Appendix E) and noted that the site characteristics (Appendix A) and assessment against the clearing principles (Appendix B) have not changed from the Clearing Permit Decision Report CPS 8875/1.

3.3 Relevant planning instruments and other matters

Other clearing permits - DWER

It is noted that three (3) clearing permits have been previously issued over the premises Lot 835 on Plan 230232, Myrup (see Figures 3 to 6, Appendix E, for further details):

- CPS 3015/4 (and previous versions) – allowed for the clearing of up to 1.4 hectares, which expired on 2 May 2019. Noting the applicant was CEMEX Australia Pty Ltd not Holcim (the applicant).
- CPS 5393/3 (and previous versions) – allows for the clearing of up to 2.75 hectares within the Lot by Holcim, but in an adjacent separate and larger area to CPS 8875/2. Which expires 1 March 2030, with no clearing of native vegetation after 1 March 2025.
- CPS 8875/1 - allowed for the clearing of up to 1.4 hectares within the Lot by Holcim, which expires 16 July 2030, with no clearing of native vegetation after 16 July 2025. This permit has now been replaced with CPS 8875/2.

Development Approval – Shire of Esperance

The applicant has an approved Development Approval with the Shire of Esperance (the Shire) (DD010.2019.00004268.001), granted 26 February 2020, for the operation of a quarry, in accordance with the Shire's *Local Planning Scheme No. 24* and the Shire's *Extractive Industries Local Law* (Holcim, 2023). The expiry is noted to be 17 February 2040.

Extractive Industry Licence - Shire of Esperance

The applicant has an approved Extractive Industry Licence (EIL) with the Shire (DD106.2010.00000009.001), which is noted to be in accordance with the Shire's *Extractive Industries Local Law*, for the excavation of granite from the premises (Holcim, 2023). The expiry is also noted to be 17 February 2040.

Licence under the *Environmental Protection Act 1986* – DWER

The applicant currently holds a Category 12 Licence for Screening of Material (L8463/2010/3) with DWER, noted to expire 19 April 2041. It is noted in the 2020/21 FY, the production quantity was 92,029 tonnes.

***Rights in Water and Irrigation Act 1914* – DWER**

The application area is located within the Esperance Groundwater Area, as proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act) is not mapped within any proclaimed Surface Water Area. The application area is not located within any *Country Areas Water Supply Act 1947* (CAWS Act) Clearing Control Catchments, or Public Drinking Water Source Areas (DWER-033). The closest watercourse to the application area is located approximately 155 meters south from Coramup Creek. No watercourses or wetlands intersect the application area.

Advice was obtained from DWER South Coast Region Licensing and Allocation in relation to potential water quality impacts under the RIWI Act. The advice received is that the applicant does not hold any water licences over the application area (DWER, 2022). However, the applicant has advised that no surface water or groundwater will be required to be taken for the proposed clearing, therefore no further permitting or licensing will be required by DWER

Aboriginal sites under the *Aboriginal Heritage Act 1972*

It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process. Two Aboriginal sites of significance have been recorded within the application area:

- Coramup Camp (1639) – Registered site; and
- Bukenerup Road Camp (1644) – Stored data/not a site.

End

Appendix A. Site characteristics

The information provided below describes the key characteristics of the area proposed to be cleared and is based on the best information available to DWER at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix C.

A.1 Site characteristics

Characteristic	Details
Local context	<p>The area proposed to be cleared is part of an expansive tract of native vegetation. It is surrounded by shrublands and heath communities. The majority of the application area has been previously cleared under previous CPS 3015/4 (and previous versions). The application area is situated in a remnant of native vegetation, surrounded by agricultural land, which has been intensively cleared.</p> <p>The application area is situated approximately 10.5 kilometres north-east of the town of Esperance. The application area is located within the Esperance Plains (ESP) IBRA bioregion (Thackway and Cresswell 1995).</p> <p>Spatial data indicates the local area (20-kilometre radius from the centre of the area proposed to be cleared) retains approximately 29.55 per cent of the original native vegetation cover.</p>
Ecological linkage	The application area forms a minor ecological linkage, with the majority of the application area has been previously cleared under CPS 3015/4.
Conservation areas	The application area does not intersect any known or mapped conservation areas, with the closest, the Woody Lake Nature Reserve, located 1.2 kilometres south of the application area.
Vegetation description	<p>A flora and vegetation survey (Craig, 2021) indicates the vegetation within the proposed clearing area consists of <i>Eucalyptus pleurocarpa</i> sparse mallee shrubland over <i>Acacia cyclops</i>, <i>Calothamnus villosus</i>, <i>Leptospermum incanum</i>, <i>Xanthorrhoea platyphylla</i> heathland over sparse sedgeland/forbland.</p> <p>This is inconsistent with the Beard vegetation association 931 mapped in the application area, which is described as shrublands, banksia scrub-heath on sandplain in the Esperance Plains region (Shepherd et al, 2001).</p> <p>The mapped vegetation type retains approximately 14.16 per cent of the original extent (Government of Western Australia, 2019) (see Vegetation extent table in Section B.2).</p> <p>Representative photographs and survey extracts are available in Appendix EE.</p>
Vegetation condition	<p>A flora and vegetation survey (Craig, 2021) indicates the vegetation within the proposed clearing area) indicated the vegetation condition within the proposed clearing area consists of:</p> <p>Very good: Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.</p> <p>to</p> <p>Degraded: basic vegetation structure severely impacted by disturbance, scope for regeneration but not to a state approaching good condition without intensive management (Keighery, 1994).</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix DD. Representative photographs and survey extracts are available in Appendix EE.</p>

Characteristic	Details
Climate	The region experiences a Mediterranean climate with warm summers (January - February mean maximum 26.2C) and cool wet winters (July mean maximum 17.2C). The long-term annual rainfall is 618 millimetres (mm) per annum with the majority (around 63%) falling during the cooler months of May to September (BoM 2022).
Soil description and landform	The proposed clearing area is mapped as Esperance 4R Phase - Rock outcrops (granite) (Schoknecht et al., 2004). Further described as gently inclined scarp (40m high) mantled in places by subdued sand sheets, also dissected by drainage lines in places. Soils are grey shallow sandy duplex soils and pale deep sands with associated grey deep sandy duplex (gravelly) soils, minor wet soils (Department of Agriculture and Food, 2006).
Land degradation risk	The land degradation risks in the application area are mapped as low.
Waterbodies	The desktop assessment and aerial imagery indicated that the application area is located approximately 155 metres south from Coramup Creek. No watercourses or wetlands intersect the application area.
Hydrogeography	The application area falls within the Esperance Groundwater, as proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (RIWI Act) is not mapped within any proclaimed Surface Water Area.
Flora	<p>According to available databases, 42 Priority listed flora species and one flora species listed as threatened under the BC Act, have been recorded within the local area.</p> <p>With consideration for the site characteristics set out above, relevant datasets (see Appendix F.1), the habitat preferences and conservation status of the aforementioned species, the distribution and extent of existing records, and biological survey information (Craig, 2021) the application area was determined to be unsuitable for the Priority and Threatened flora species (see Appendix B.3).</p>
Ecological communities	<p>Two federally listed TEC's, which area also state listed Priority 3 ecological communities, have been mapped within the local area:</p> <ul style="list-style-type: none"> • Proteaceae dominated kwongkan shrublands of the southeast coastal floristic province of Western Australia; and • Subtropical and Temperate Coastal Saltmarsh. <p>No TEC's mapped or found within the application area (Craig, 2021).</p>
Fauna	<p>According to available databases, 49 conservation significant fauna species have been recorded within the local area, which compromise of 40 bird species, five mammals, two reptiles, one invertebrate and one fish species. Given the boundary of the local area overlaps the ocean, the majority of the recorded species are exclusively associated with marine, estuarine or freshwater habitats that do not occur within the application area and have been discounted within the assessment.</p> <p>With consideration for the site characteristics set out above, relevant datasets (see Appendix F.1), the habitat preferences and conservation status of the aforementioned species, the distribution and extent of existing records, and biological survey information (Craig, 2021), the application area may provide suitable habitat for seven conservation significant fauna species and impacts to these species required further consideration (see Appendix B.4).</p>

B.2 Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Esperance Plains	2,899,940.66	1,494,450.87	51.53	814,612.00	28.09
Vegetation complex					
Beard vegetation association 931	31,742.71	14,269.49	44.95	2,022.84	6.37
Local area					
20km radius	102,318.7	30,235.18	29.55	-	-

*Government of Western Australia (2019a)

B.3 Flora analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Adelphacme minima</i>	3	N	N	N	1	Y
<i>Anigozanthos bicolor subsp. minor</i>	T	N	N	N	1	Y
<i>Astartea reticulata</i>	3	N	N	N	5	Y
<i>Astroloma sp. Grass Patch (A.J.G. Wilson 110)</i>	2	N	N	N	2	Y
<i>Austrostipa mundula</i>	3	N	N	N	1	Y
<i>Baeckea uncinella</i>	3	N	N	N	5	Y
<i>Banksia prolata subsp. Calcicola</i>	4	N	N	N	17	Y
<i>Beyeria physaphylla</i>	1	N	N	N	1	Y
<i>Brachyloma mogin</i>	3	N	N	N	1	Y
<i>Comesperma calcicola</i>	3	N	N	N	2	Y
<i>Comesperma griffinii</i>	2	N	N	N	1	Y
<i>Commersonia rotundifolia</i>	3	N	N	N	4	Y
<i>Cyathostemon sp. Esperance (A. Fairall 2431)</i>	1	N	N	N	1	Y
<i>Dampiera sericantha</i>	3	N	N	N	5	Y
<i>Dampiera triloba</i>	3	N	N	N	2	Y
<i>Darwinia sp. Gibson (R.D. Royce 3569)</i>	1	N	N	N	1	Y
<i>Daviesia pauciflora</i>	3	N	N	N	10	Y
<i>Eucalyptus dolichorhyncha</i>	4	N	N	N	1	Y
<i>Eucalyptus foliosa</i>	3	N	N	N	8	Y
<i>Eucalyptus preissiana subsp. lobata</i>	4	N	N	N	1	Y
<i>Eucalyptus semiglobosa</i>	3	Y	Y	N	4	Y

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Eucalyptus x missilis</i>	4	N	N	N	1	Y
<i>Frankenia glomerata</i>	4	N	N	N	1	Y
<i>Gonocarpus pycnostachyus</i>	3	N	N	N	2	Y
<i>Goodenia exigua</i>	2	N	N	N	1	Y
<i>Grevillea baxteri</i>	4	N	N	N	1	Y
<i>Hibbertia turleyana</i>	2	N	N	N	16	Y
<i>Hopkinsia adscendens</i>	3	N	N	N	1	Y
<i>Kennedia beckxiana</i>	4	N	N	N	2	Y
<i>Kunzea salina</i>	3	N	N	N	6	Y
<i>Lepidium fasciculatum</i>	3	N	N	N	1	Y
<i>Leucopogon corymbiformis</i>	2	N	N	N	7	Y
<i>Leucopogon interruptus</i>	3	N	N	N	4	Y
<i>Lobelia archeri</i>	1	N	N	N	1	Y
<i>Myriophyllum muelleri</i>	1	N	N	N	1	Y
<i>Paracaleana parvula</i>	2	N	N	N	1	Y
<i>Patersonia inaequalis</i>	2	N	N	N	1	Y
<i>Persoonia scabra</i>	3	N	N	N	1	Y
<i>Pityrodia chrysocalyx</i>	3	N	N	N	1	Y
<i>Pterostylis faceta</i>	3	N	N	N	1	Y
<i>Schoenus</i> sp. Grey Rhizome (K.L. Wilson 2922)	1	N	N	N	1	Y
<i>Styphelia rotundifolia</i>	3	N	N	N	1	Y
<i>Tecticornia indefessa</i>	2	N	N	N	2	Y

B.4 Fauna analysis table

Species name and Common name	Conservation status	Suitable habitat features? [Y/N]	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Acanthophis antarcticus</i> (Southern death adder)	P3	Y	3	Y
<i>Elanus scriptus</i> (Letter-winged kite)	P4	N	1	Y
<i>Falco peregrinus</i> (Peregrine falcon)	OS	Y	20	Y
<i>Isoodon fusciventer</i> (Quenda, southwestern brown bandicoot)	P4	Y	3	Y
<i>Leipoa ocellata</i> (Malleefowl)	VU	N	1	Y
<i>Notamacropus Irma</i> (western brush wallaby)	P4	Y	1	Y
<i>Zanda latirostris</i> (Carnaby's cockatoo)	EN	Y	133	Y
<i>Zanda</i> sp. 'white-tailed black cockatoo' (White-tailed black cockatoo)	EN	Y	38	Y

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p><u>Assessment:</u></p> <p>The application area has previously been cleared under CPS 3015/4 (and previous versions) and 5393/3 (and previous versions), as such the application area contains regrowth. Based on the soil type (granite outcrop), the disturbed nature of the application area and biological survey results (Craig, 2021), the habitat within the application area has been determined to be unsuitable for Priority flora species and not significant for conservation significant fauna species. In addition, the application area does not provide suitable habitat for threatened or priority ecological communities.</p>	<p>Not likely to be at variance</p> <p><i>As per CPS 8875/1 Decision Report</i></p>	<p>Yes</p> <p><i>Refer to Section 3.2.1 above</i></p>
<p><u>Principle (b):</u> <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.”</i></p> <p><u>Assessment:</u></p> <p>The application area has previously been cleared under CPS 3015/4 (and previous versions) and 5393/3 (and previous versions), as such the application area contains regrowth, therefore the application area does not contain significant habitat for conservation significant fauna species.</p>	<p>Not likely to be at variance</p> <p><i>As per CPS 8875/1 Decision Report</i></p>	<p>Yes</p> <p><i>Refer to Section 3.2.1 above</i></p>
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u></p> <p>The application area has previously been cleared under CPS 3015/4 (and previous versions) and 5393/3 (and previous versions), as such the application area contains regrowth. Based on the soil type (granite outcrop), the disturbed nature of the application area and biological survey results, the habitat within the application area has been determined to be unsuitable for Threatened flora species listed under the BC Act (Craig, 2021).</p>	<p>Not likely to be at variance</p>	<p>No</p>
<p><u>Principle (d):</u> <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community.”</i></p> <p><u>Assessment:</u></p> <p>The application area has previously been cleared under CPS 3015/4 (and previous versions) and 5393/3 (and previous versions), as such the application area contains regrowth. Based on the soil type (granite outcrop), the disturbed nature of the application area and biological survey results, the habitat within the application area and does not provide suitable habitat for threatened ecological communities (Craig, 2021).</p>	<p>Not likely to be at variance</p> <p><i>As per CPS 8875/1 Decision Report</i></p>	<p>No</p>
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u></p> <p>The National Objectives and Targets for Biodiversity Conservation 2001-2005 include a target to have clearing controls in place that prevent clearance of ecological communities with an extent below 30 per cent of that present pre-</p>	<p>At variance</p>	<p>Yes</p> <p><i>Refer to Section 3.2.1 above</i></p>

Assessment against the clearing principles	Variance level	Is further consideration required?
<p>1750 (Commonwealth of Australia 2001).</p> <p>The extent of the native vegetation in the local area is inconsistent with this objective, with 29.55 per cent remaining.</p>		
<p>Principle (h): <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.”</i></p> <p><u>Assessment:</u></p> <p>Given the separation distance between the application area and conservation areas, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.</p>	<p>Not likely to be at variance</p> <p><i>As per CPS 8875/1 Decision Report</i></p>	<p>No</p>
Environmental value: land and water resources		
<p>Principle (f): <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u></p> <p>The application area is located approximately 155 m from Coramup Creek. Based on the flora and vegetation survey of the application area and the topography, the vegetation within the application area was not consistent with riparian vegetation; the proposed clearing is not associated with a wetland or watercourse and is unlikely to impact on- or off-site hydrology and water quality.</p>	<p>Not likely to be at variance</p> <p><i>As per CPS 8875/1 Decision Report</i></p>	<p>No</p>
<p>Principle (g): <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u></p> <p>The mapped soils are not susceptible to wind / water erosion, nutrient export, salinity. Noting the small extent and location of the application area and the condition of the vegetation, the proposed clearing is not likely to have an appreciable impact on land degradation.</p>	<p>Not likely to be at variance</p> <p><i>As per CPS 8875/1 Decision Report</i></p>	<p>No</p>
<p>Principle (i): <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.”</i></p> <p><u>Assessment:</u></p> <p>Given no watercourses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact on or off-site hydrology and water quality.</p>	<p>Not likely to be at variance</p> <p><i>As per CPS 8875/1 Decision Report</i></p>	<p>No</p>
<p>Principle (j): <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u></p> <p>The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding. Given no watercourses or wetlands are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging.</p>	<p>Not likely to be at variance</p> <p><i>As per CPS 8875/1 Decision Report</i></p>	<p>No</p>

Appendix D. Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Measuring vegetation condition for the South West and Interzone Botanical Province (Keighery, 1994)

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.



Figure 2 – Map of Esperance Quarry location (Umwelt, 2009)

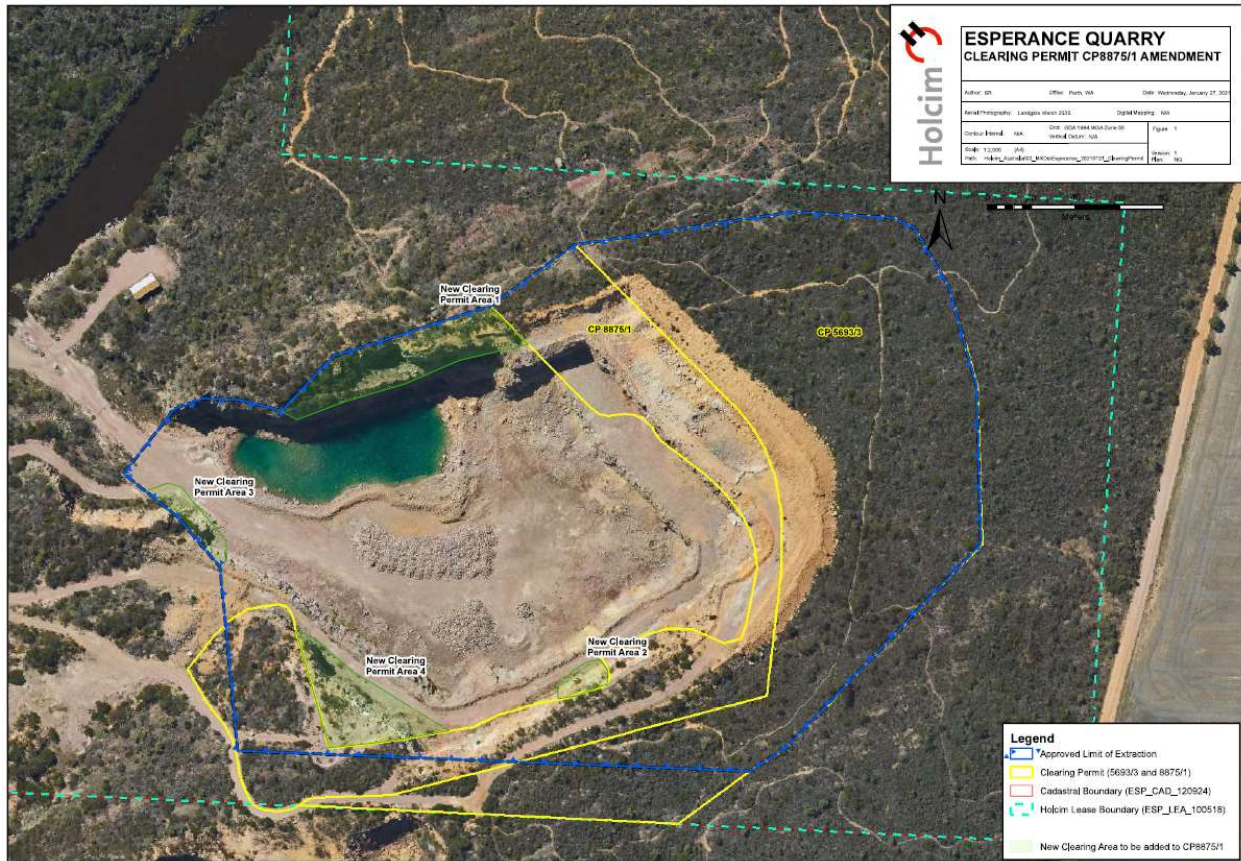


Figure 3 – Map of existing and proposed clearing areas (Holcim, 2022)

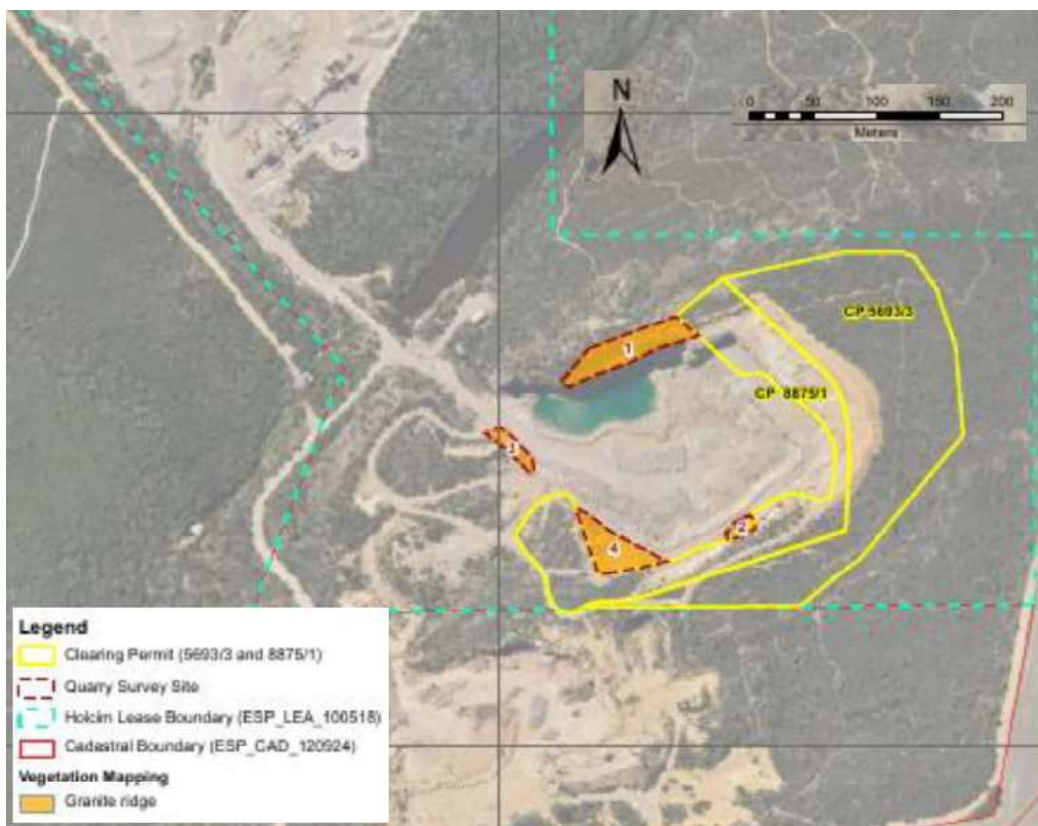


Figure 4 – Map of existing clearing permits and proposed clearing areas (Holcim, 2022)



Figure 5 – Map of additional clearing areas under CPS 8875/2 (Holcim, 2022)

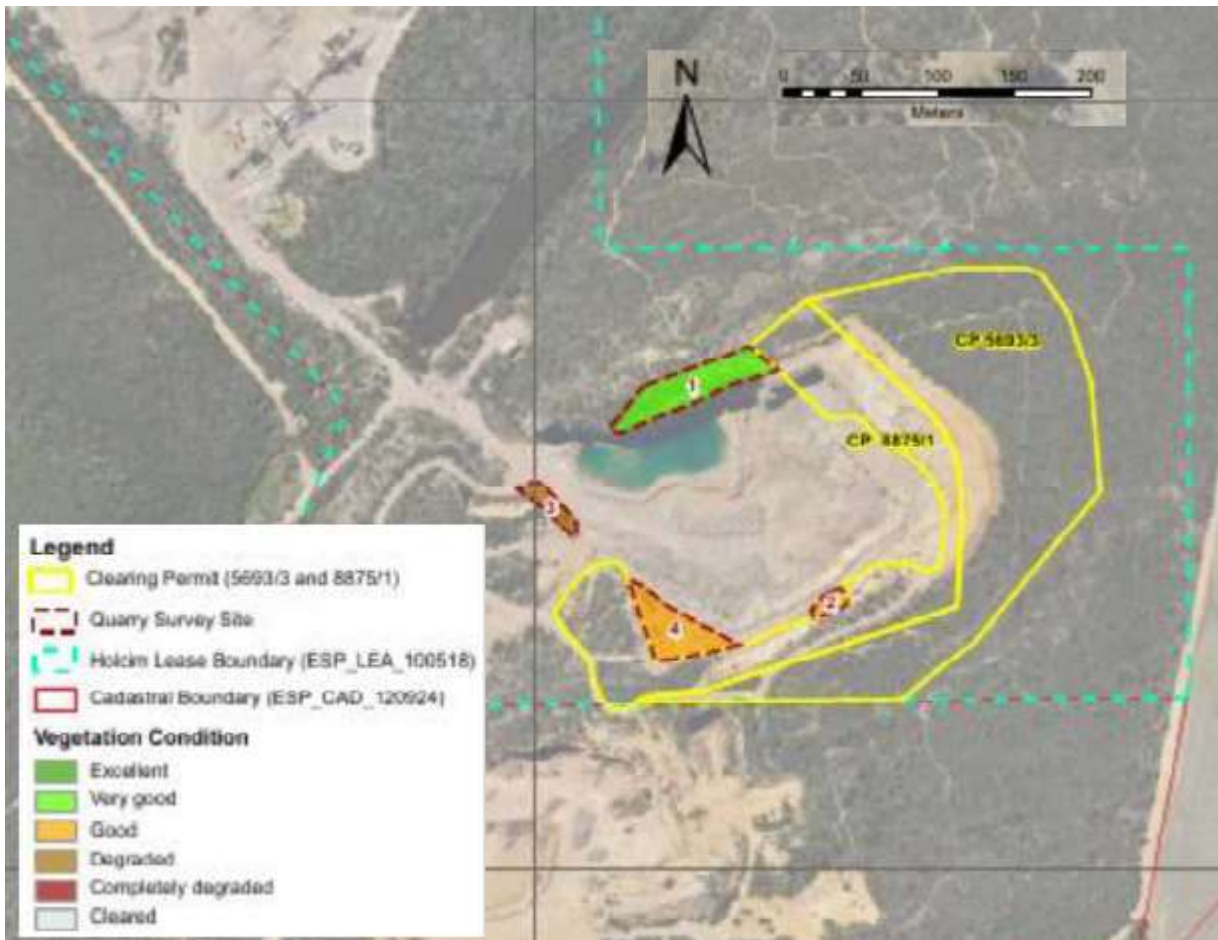


Figure 6 – Vegetation condition in additional areas (Holcim, 2022)



Figure 7 - Representative photograph of north-east of quarry in very good (Keighery, 1994) condition (Craig, 2021)



Figure 8 - Photograph of old bench above the quarry in good (Keighery, 1994) condition (Craig, 2021)



Figure 9 - Photograph includes a rubble heap at the base of the quarry where the vegetation is degraded (Keighery, 1994) condition. The top of the quarry site and face support some native vegetation (Craig, 2021)



Figure 10 - Photograph includes an old bench mid-way up the quarry face (middle distance). Native vegetation in good (Keighery, 1994) condition has rehabilitated on the bench.



Figure 11 – Representative photograph of existing quarry pit (noting Granite ridges) (Umwelt, 2009)



Figure 12 – Representative photograph of heath vegetation on granite outcrop (note from 2009) (Umwelt, 2009)

Appendix F. Sources of information

F.1. GIS databases

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

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