GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 11617/1
Permit Holder:	Q Stone Pty Ltd
Duration of Permit:	From 1 November 2026 to 1 November 2046

ADVICE NOTE

Offset
The offset referred to in *condition* 10 of this permit, is to place a conservation covenant of 29 hectares of *native vegetation* within Lot 324 on Deposited Plan 203224, Warralakin. The nominated 29-hectare area contains vegetation that is representative of the extensively cleared Beard Vegetation Association (BVA) 1057 and provides foraging habitat for Carnaby's cockatoo *(Zanda latirostris),* thereby counterbalancing the residual impacts of the authorised clearing.

The permit holder is authorised to clear *native vegetation* subject to the following conditions of this permit.

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear *native vegetation* for the purpose of quartz extraction activities and associated infrastructure.

2. Land on which clearing is to be done

Lot 325 on Deposited Plan 203224, Warralakin

3. Clearing authorised

The permit holder must not clear more than 7.55 hectares of native vegetation within the area cross-hatched yellow in Figure 1 of Schedule 1.

4. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 1 November 2031.

PART II – MANAGEMENT CONDITIONS

5. Avoid, minimise, and reduce impacts and extent of clearing

In determining the *native vegetation* authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending order of preference:

(a) avoid the clearing of *native vegetation*;

(b) minimise the amount of *native vegetation* to be cleared; and

(c) reduce the impact of clearing on any environmental value.

6. Weed and dieback management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of introduction and spread of *weeds* and *dieback*:

(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;

(b) ensure that no known *dieback* or *weed*-affected soil, *mulch, fill*, or other material is brought into the area to be cleared; and

(c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

7. Demarcation of the clearing area

Prior to undertaking any *clearing* authorised under this permit that is adjacent to other *native vegetation*, the permit holder must demarcate the *clearing* area to avoid inadvertent removal of adjacent *native vegetation*.

8. Directional clearing

The permit holder must:

(a) conduct clearing activities in a slow, progressive manner, towards adjacent *native vegetation;* and

(b) allow reasonable time for fauna present within the area being cleared under this permit to move into adjacent *native vegetation* ahead of the *clearing* activity.

9. Revegetation and rehabilitation – retention of vegetation material and topsoil

The permit holder must:

(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) the permit holder then must within 12 months of completing extraction activities undertake *revegetation* and *rehabilitation* of the area cross-hatched yellow in Figure 1 of Schedule 1, using *native vegetation* representative of BVA 1057 and suitable for Carnaby's cockatoo *(Zanda latirostris)* foraging, and must include:

(i) re-shaping the surface of the land so that it is consistent with the surrounding five metres of uncleared land;

(ii) ripping the ground on the contour to remove soil compaction;

(iii) laying the vegetative material and topsoil retained under *condition* 9(a) on the cleared areas; and

(iv) ensuring only *local provenance* propagating material is used for *planting* activities;

(v) ensure *planting* is undertaken at an *optimal time;*

(vi) deliberately *planting* and/or *direct seeding* of *native vegetation* that will result in a similar species composition, structure and density of *native vegetation* to pre-clearing vegetation types in that area, including the establishment of *native vegetation* representative of BVA 1057 and suitable for Carnaby's cockatoo foraging across the area cleared under this permit;

(vii) undertake *weed* control activities on an 'as needed' basis to reduce *weed* cover within the cleared areas to no greater than the *weed* cover within the surrounding five metres of uncleared land; and

(viii) implementing of soil erosion control measures to protect the site from wind and water erosion.

(c) within 12 months of undertaking *revegetation* and *rehabilitation* 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 of that of pre-clearing vegetation types in that area, the Permit Holder must undertake additional *planting* or *direct seeding* of *native vegetation* in accordance with the requirements of *condition* 9(b)(iv)(v) and (vi) of this Permit.

(d) If the determination made by the *environmental specialist* under *condition* 9(c)(ii) is that the species composition, structure and density determined under *condition* 9(c)(i) will not, without further *revegetation,* result in a similar species composition, structure and density to that of pre-clearing vegetation types in the area, the permit holder must *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation seeds that will result in a similar species composition, structure and density of *native vegetation* to pre-clearing vegetation types in the area.

(e) Where additional *planting* or *direct seeding* of *native vegetation* is undertaken in accordance with *condition* 9(d), the permit holder must repeat the activities required by *condition* 9(c) and 9(d) within 18 months of undertaking the additional *planting* or *direct seeding* of *native vegetation.*

(f) Where a determination is made by an *environmental specialist* under *condition* 9(c)(ii) 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, that determination shall be submitted to the *CEO* within three months of the determination being made by the *environmental specialist.*

(g) During the next *optimal time* occurring after receiving notice from the *CEO:*

(i) stating that the *CEO* disagrees with the determination submitted under *condition* 9 (f); and

(ii) specifying the required further *planting* of *local provenance* propagating material and/or *direct seeding* of *local provenance* seeds that in the *CEO's* reasonable opinion are necessary to ensure that the *native vegetation* will result in a similar species composition, structure and density to that of pre-

clearing vegetation types in the area, the permit holder must carry out the further *planting* and/or *direct seeding* specified in the notice.

10. Offset – conservation covenant

Within 12 months of the commencement of clearing authorised under this permit, the permit holder must, for the area cross-hatched red in Figure 1 of Schedule 1, give a conservation covenant under section 30B of the *Soil and Land Conservation Act 1945* for the protection and management of vegetation in perpetuity, in accordance with the following conditions:

(a) *Native vegetation* in the area subject to the conservation covenant must not be cleared, other than for clearing required under the *Bush Fires Act 1954;*

(b) The conservation covenant is to apply in perpetuity and be registered on the title of the property; and

(c) Within one month of executing and returning the conservation covenant to the Commissioner of Soil and Land Conservation the permit holder shall notify the *CEO* in writing that the conservation covenant has been executed.

PART III - RECORD KEEPING AND REPORTING

11. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	(a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with *condition* 5; (f) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with *condition* 6; and (g) actions taken in accordance with *condition* 7, 8 and 10.
2.	In relation to *rehabilitation* and *revegetation* pursuant to *condition* 9	(a) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees;

No.	Relevant matter	Specifications
		(b) a description of the *revegetation* and *rehabilitation* activities undertaken; (c) the size of the area *revegetated* and *rehabilitated* (in hectares); (d) the date *rehabilitation* activities were undertaken; (e) the number and type of species *planted* or seeded; (f) actions undertaken to monitor and maintain *rehabilitated* areas, including weed control; and (g) a copy of the *environmental specialist's* report.

12. Reporting

(a) The permit holder must provide the *CEO*, on or before 30 June of each calendar year, a written report containing:

(i) the records required to be kept under *condition* 11; and

(ii) records of activities done by the permit holder under this permit between 1 January and 31 December of the preceding calendar year

(b) If no clearing authorised under this permit has been undertaken, a written report confirming that no clearing under this permit has been undertaken, must be provided to the *CEO* on or before 30 June of each calendar year.

(c) The permit holder must provide to the *CEO*, no later than 90 calendar days prior to the expiry date of the permit, a written report of records required under *condition* 11, where these records have not already been provided under *condition* 12(a).

DEFINITIONS

In this permit, the terms in Table 2 have the meanings defined.

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
dieback	means the effect of *Phytophthora* species on native vegetation.
direct seeding	direct seeding means a method of re-establishing vegetation through establishment of a seed bed and the introduction of seeds of the desired plant species.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.

Term	Definition
environmental specialist	means a person who holds a tertiary qualification in environmental science of equivalent and has a minimum of 2 years work experience relevant to the type of environmental advice that an environmental specialist is required to provide under this permit, or who is approved by the CEO as a suitable environmental specialist.
EP Act	*Environmental Protection Act 1986* (WA)
fill	means material used to increase the ground level, or to fill a depression.
local provenance	means native vegetation seeds and propagating material from natural resources within 50 kilometers and the same IBRA subregion 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.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
optimal time	means the period from May to July for undertaking planting.
planted/planting	means the re-establishment of vegetation by creating soil conditions and planting seedlings of the desired species.
rehabilitate/ rehabilitated/ rehabilitation	means actively managing an area containing native vegetation in order to improve the ecological function of that area.
revegetate/ revegetated/ revegetation	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.
weeds	means any plant – (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS



Meenu Vitarana
MANAGER
Native Vegetation Regulation

Officer delegated under Section 20
of the Environmental Protection Act 1986

8 October 2026

Schedule 1

The boundary of the area authorised to be cleared is shown in the map below (Figure 1).

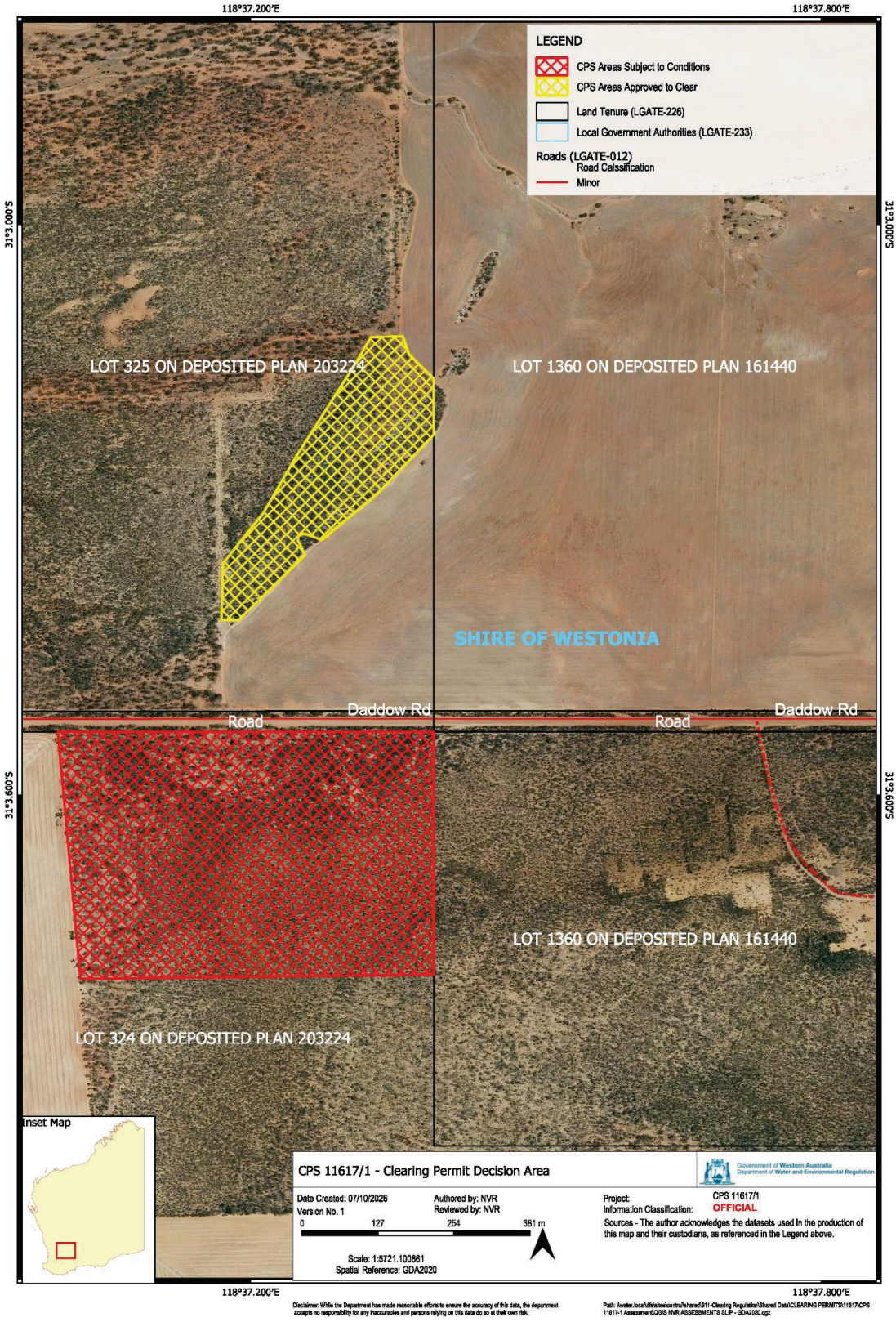


Figure 1: Map of the boundary of the area within which clearing may occur (cross-hatched yellow), and the area subject to conditions (cross-hatched red).

Government of **Western Australia**
Department of **Water and Environmental Regulation**

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 11617/1
Permit type:	Purpose permit
Applicant name:	Q Stone Pty Ltd
Application received:	28 May 2026
Application area:	7.55 hectares of native vegetation
Purpose of clearing:	Extractive Industry
Method of clearing:	Mechanical removal
Property:	Lot 325 on Deposited Plan 203224
Location (LGA area/s):	Shire of Westonia
Localities (suburb/s):	Warralakin

1.2. Description of clearing activities

The vegetation proposed to be cleared is 7.55 hectares of native vegetation for the purpose of an extractive industry (quartz extraction) on Lot 325 on Deposited Plan 203224, Warralakin (see Figure 1, Section 1.5).

The vegetation proposed to be cleared is contained within a single contiguous area located on the edge of an approximately 1,200-hectare remnant native vegetation patch. Clearing will be undertaken by mechanical removal of native vegetation to facilitate extractive industry activities. The application area has been subject to historical disturbance associated primarily with agricultural activities.

During assessment, the applicant revised the clearing footprint to retain a hollow-bearing *Eucalyptus transcontinentalis* and provide a minimum 10 metre no-clearing and no-ground disturbance buffer around the tree, reducing the proposed clearing extent from 7.63 hectares to 7.55 hectares.

1.3. Decision on application

Decision:	Granted
Decision date:	8 October 2026
Decision area:	7.55 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 21 days and one submission was received. Consideration of matters raised in the public submission is summarised in Appendix B.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix C), relevant datasets (see Appendix H.1), the findings of a flora, vegetation and black cockatoo survey (see Appendix G), advice provided by the Department of Biodiversity, Conservation and Attractions (DBCA, 2026), the clearing principles set

out in Schedule 5 of the EP Act (see Appendix D), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration the purpose of the clearing, being to facilitate an extractive industry operation in an area where economically recoverable quartz resource is confined to, and the historical agricultural disturbance with the application area.

The assessment identified that the proposed clearing will result in:

- loss of 7.55 hectares of native vegetation representative of Beard Vegetation Association 1057, which retains approximately 12.09 per cent of its pre-European extent and forms part of a larger remnant vegetation patch within a highly cleared agricultural landscape;
- reduced habitat connectivity within the remnant vegetation patch;
- the loss of potential Carnaby's cockatoo *(Zanda latirostris)* foraging habitat within a landscape where habitat loss is a recognised threatening process;
  the potential introduction and spread of weeds into adjacent native vegetation.

After consideration of the available information, the applicant's avoidance, minimisation and mitigation measures (see Section 3.1) and the proposed offset (Section 4), the Delegated Officer determined that the proposed clearing is unlikely to result in unacceptable environmental outcomes, subject to the permit conditions and implementation of the proposed offset. The applicant demonstrated that extraction within adjacent cleared farmland was not feasible, as the economically recoverable quartz resource is confined to the mapped quartz outcrop within the application area.

Impacts can be partially managed through permit conditions requiring weed hygiene, progressive clearing, retention and respreading of vegetation material and topsoil, and rehabilitation and revegetation measures. However, following the application of avoidance and mitigation measures, significant residual impacts remain associated with the loss of 7.55 hectares of native vegetation representative of Beard Vegetation Association 1057 and the loss of potential Carnaby's cockatoo foraging habitat.

The applicant has committed to rehabilitating and revegetating the extraction area and securing approximately 29 hectares of native vegetation within Lot 324 on Deposited Plan 203224 through a conservation covenant. The Delegated Officer determined that these measures adequately counterbalance the identified significant residual impacts (see Section 4 and Appendix F).

The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds;
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- demarcation of application area prior to clearing;
- retain cleared vegetation and topsoil and respread this within disturbed areas associated with extraction activities;
- conduct revegetation measures following completion of extraction activities to re-establish native vegetation cover representative of Beard Vegetation Association 1057 and black cockatoo foraging habitat; and
- the protection of 29 hectares of native vegetation within a conservation covenant.

1.5. Site map

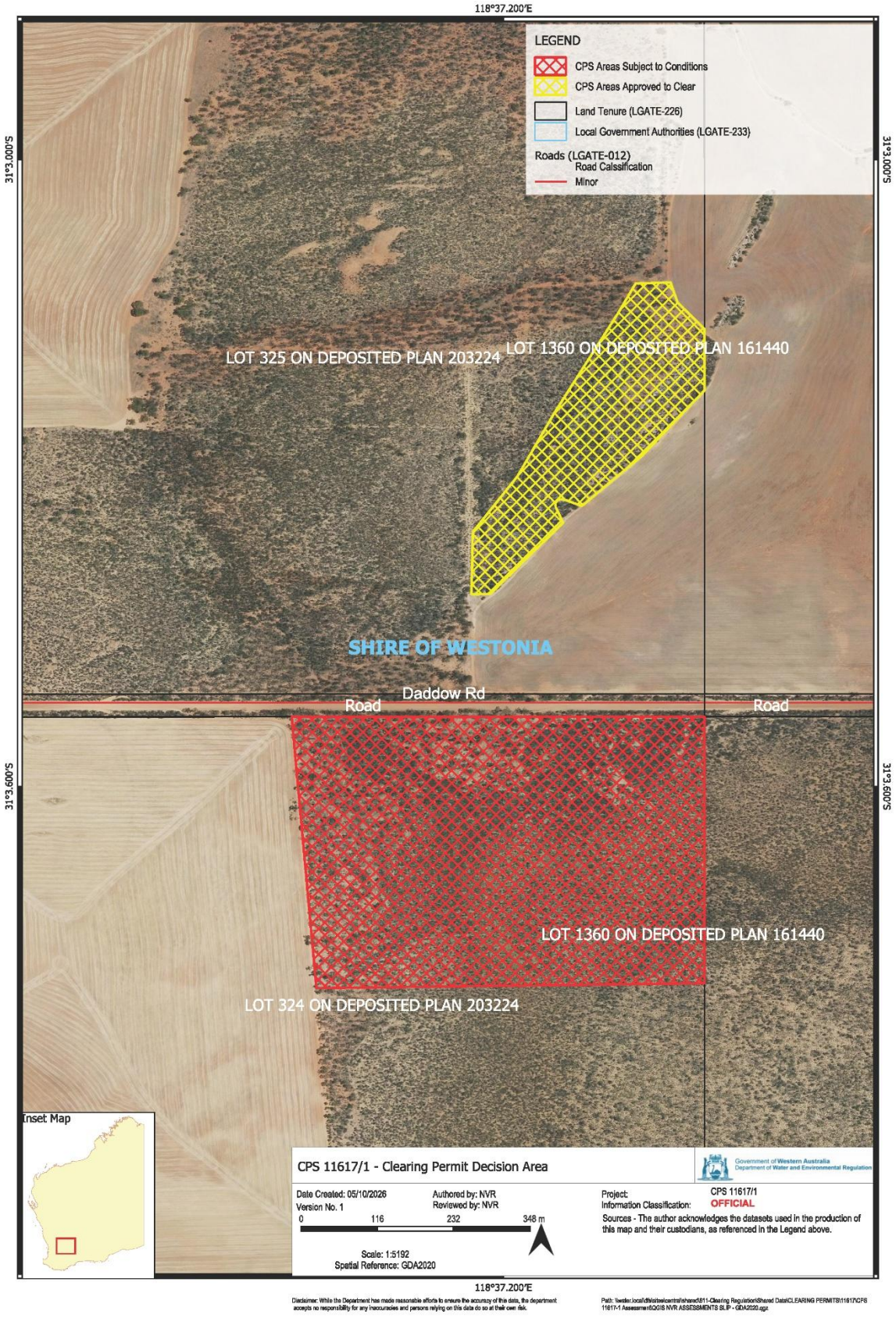


Figure 1 Map of the application area

The area crosshatched yellow indicates the area 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 polluter pays principle
- 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)
- *Soil and Land Conservation Act 1945*

Relevant policies considered during the assessment include:

- *Environmental Offsets Policy (Government of Western Australia 2011)*

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *A guide to preparing revegetation plans for clearing permits (DWER 2018)*
- *Draft procedure for environmental offsets metric inputs (DWER 2022)*
- *Environmental Offsets Metric: Quantifying environmental offsets in Western Australia (DWER 2021)*
- *WA Environmental Offsets Guidelines (Government of Western Australia 2014)*
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

Evidence was submitted by the applicant (Del Botanics Environmental Consulting, 2025; Land Insights, 2026a; Q Stone Pty Ltd, 2026a, b, c), demonstrating that avoidance and mitigation measures have been considered including:

- investigation of extraction within adjacent cleared farmland. Geological mapping, sampling and exploration drilling confirmed that the economically recoverable quartz resource is confined to the mapped quartz outcrop within native vegetation. Three exploration holes within previously cleared farmland did not intersect quartz mineralisation;
- reduction of the conceptual clearing footprint from 12.57 hectares to 7.86 hectares, then to 7.63 hectares, and finally to 7.55 hectares following redesign and to retain a hollow bearing *Eucalyptus transcontinentalis;*
- maintenance of a minimum 10-metre no-clearing and no-ground disturbance buffer around the retained hollow bearing tree;
- demarcation of the approved disturbance footprint and retention of vegetation outside operational areas;
- staged clearing, pre-clearing fauna inspections and fauna management measures;
- use of existing access tracks and previously disturbed areas, where practicable;
- retention of topsoil, seed and vegetation material for reuse in rehabilitation;
- erosion, sediment and dust controls,
- weed hygiene measures, including ensuring vehicles and machinery area free of soil and vegetation material prior to entering the site;
- appropriate management of waste, hydrocarbons and other potential contaminants; and
- stabilisation and rehabilitation of disturbed areas when no longer required for extraction.

The applicant demonstrated that alternative locations within adjacent cleared land were investigated and found not to contain an economically viable quartz resource. The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values and that the proposed clearing footprint represents the minimum practicable area required to access the identified resource.

After consideration of avoidance and mitigation measures, it was determined an offset was necessary to counterbalance the significant residual impacts to remnant native vegetation and black cockatoo foraging habitat. In accordance with the *Environmental Offsets Policy* (2011) and *WA Environmental Offsets Guidelines* (2014), these significant residual impacts have been addressed through the conditioning of environmental offset requirements on the permit. The nature and suitability of the offset provided is summarised in Section 4.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix C) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles (see Appendix D) identified that the impacts of the proposed clearing present a risk to biological values (fauna and flora). The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values (Fauna) - Clearing Principles B

Assessment

Peregrine Falcon (Falco peregrinus)

Peregrine falcon is listed as other specially protected fauna under the BC Act. The nearest known record occurs approximately 9.07 kilometres from the application area. The species typically nests on cliffs, rocky escarpments, quarries and other elevated structures and may forage across a wide variety of habitats, including agricultural land and remnant native vegetation (Australian Museum, 2019). No nesting habitat, breeding activity or evidence of the species was recorded within the application area. While the vegetation may provide some foraging opportunities for prey species, the proposed clearing is unlikely to significantly affect habitat availability for peregrine falcon.

Coolgardie Shield-backed Trapdoor Spider *(Idiosoma intermedium)*

The Coolgardie shield-backed trapdoor spider is listed as Vulnerable under the BC Act, having been uplisted on 31 July 2026. The nearest known record occurs approximately 8.93 kilometres from the application area. DBCA (2026) advised that habitat preferences for the species remain poorly defined; however, similarities exist between the soils associated with known records and those present within the application area. Given the occurrence of mapped loamy sands and clay-associated soils together with quartz outcrop features, suitable habitat may occur within the application area.

No targeted survey for *Idiosoma* species has been undertaken and the occurrence of the species within the application area therefore cannot be excluded. If present, individuals and burrows may be directly impacted by clearing. However, there is currently no evidence that the application area supports a significant population or represents habitat important to the persistence of the species. The biological surveys, although not targeted, did not identify any evidence of the species. The proposed clearing is limited to 7.55 hectares on the edge of an approximately 1,200-hectare remnant vegetation patch, with a substantially greater extent of contiguous native vegetation and potentially suitable habitat remaining immediately adjacent to the application area.

Given the relatively small and peripheral extent of habitat removal, the availability of extensive connected habitat within the surrounding remnant and the absence of evidence indicating that the application area supports an important population or uniquely significant habitat for the species, the proposed clearing is unlikely to significantly affect habitat availability or the conservation status of the Coolgardie shield-backed trapdoor spider at a local or regional scale (DBCA, 2026; DCCEEW, 2026a).

Malleefowl *(Leipoa ocellata)*

Malleefowl is listed as Vulnerable under the BC Act and typically occupies large, relatively undisturbed areas of woodland, shrubland and mallee vegetation with sufficient litter for mound construction (DCCEEW, 2026b). The nearest known record occurs approximately 380 metres from the application area. Given the proximity of records and the connection of the application area to an approximately 1,200-hectare remnant vegetation patch, malleefowl may utilise the application area for foraging, shelter and movement.

Land Insights (2026a) considered the application area unlikely to provide suitable breeding habitat due to the predominantly rocky substrate, limited litter accumulation and absence of mallee vegetation. The habitat

characteristics present are therefore considered more likely to provide supplementary foraging and movement habitat than habitat important for breeding.

The proposed clearing will remove 7.55 hectares of potential habitat from the edge of an approximately 1,200-hectare contiguous remnant. Similar and more extensive habitat will remain immediately adjacent to the application area, maintaining opportunities for foraging, shelter and movement within the broader remnant. Given the relatively small extent and peripheral location of the clearing, the limited suitability of the application area for breeding, and the substantial area of connected vegetation that will remain, the proposed clearing is unlikely to substantially reduce habitat availability, fragment habitat relied upon by the species or affect the viability of a local malleefowl population.

Black Cockatoos

A Black Cockatoo Habitat Assessment undertaken in November 2025 (Del Botanics Environmental Consulting, 2025) found no evidence of recent black cockatoo foraging activity within the application area and assessed the site as low to no quality foraging habitat. However, DBCA (2026) advised that *Grevillea paradoxa*, a known food source for Carnaby's cockatoo, was recorded in all survey quadrats and may be widespread throughout the application area. The vegetation may therefore provide some foraging resources for the species.

One hollow-bearing *Eucalyptus transcontinentalis* containing a suitable breeding hollow was identified within the original application area. Although no evidence of current occupancy or historical breeding activity was recorded, breeding hollows are a limited and important habitat resource within Wheatbelt landscapes and may be utilised intermittently between breeding seasons (Kaarakin, 2025; National Trust, 2018). The absence of evidence of use during a single survey does not confirm that the hollow is not, or will not be, utilised by Carnaby's cockatoo.

Desktop assessment identified 122 records of Carnaby's cockatoo within 50 kilometres of the application area, with the closest approximately 22.59 kilometres away. While the application area occurs outside the currently mapped distribution of the species, DBCA (2026) advised that individuals may utilise the broader locality during seasonal or dispersive movements and that remaining breeding and foraging resources are important given ongoing habitat loss throughout the Wheatbelt.

The applicant amended the clearing footprint to retain the hollow-bearing *Eucalyptus transcontinentalis* and a minimum 10-metre no-clearing and no-ground-disturbance buffer (Q Stone Pty Ltd, 2026c). This substantially reduces potential impacts to Carnaby's cockatoo and other hollow-dependent fauna.

While avoidance of the hollow-bearing tree and associated buffer substantially reduces potential impacts to breeding habitat, the proposed clearing will result in the loss of 7.55 hectares of vegetation containing known Carnaby's cockatoo food species. Given the conservation significance of the species and ongoing loss of foraging habitat within the Wheatbelt, the loss of potential foraging habitat is considered a significant residual impact requiring an environmental offset.

Chuditch *(Dasyurus geoffroii)*

Chuditch is listed as Vulnerable under the BC Act and occurs in woodland, mallee and shrubland habitats where adequate shelter and denning opportunities are available (DBCA, 2012). The nearest record occurs approximately 18.1 kilometres from the application area and no evidence of the species was recorded during field investigations. While occasional movement through the broader remnant vegetation cannot be discounted, the proposed clearing is unlikely to significantly affect habitat availability or connectivity for the species.

Woma *(Aspidites ramsayi* – southwest subpopulation)

Woma is a priority-listed species associated with arid and semi-arid environments that typically occupy sandy substrates suitable for burrowing, the closest record being 40.5 kilometres away (Animalia, 2026). The rocky substrates and exposed bedrock within the application area are not characteristic of preferred habitat and no evidence of the species was recorded. The occurrence of woma within the application area is therefore considered unlikely.

Conclusion

Based on the above assessment, the proposed clearing will result in the loss of 7.55 hectares of fauna habitat. Impacts can be partially managed through weed hygiene, progressive directional clearing, retention of the hollow-bearing tree and rehabilitation and revegetation. However, a significant residual impact remains in relation to the loss of potential Carnaby's cockatoo foraging habitat. This impact will be counterbalanced through the environmental offset discussed in Section 4.

Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- weed hygiene management to minimise the introduction and spread of weeds into adjacent native vegetation;
- progressive one-directional clearing to allow fauna to disperse into adjacent habitat ahead of clearing activities;
- retention and respreading of vegetation material and topsoil within disturbed areas associated with extraction activities;
- revegetation activities following completion of extraction activities to re-establish native vegetation cover and fauna habitat values; and
- the establishment of a conservation covenant of 29 hectares in the local area.

3.2.2. Biological values (Flora) - Clearing Principle C

Assessment

The desktop assessment identified records of five conservation significant flora species within 10 kilometres of the application area, including four threatened species and one Priority 4 species. The application area contains rocky loamy sands (Danberrin Subsystem soils) and quartz outcrop habitat that shares some broad characteristics with habitat utilised by several conservation significant flora species recorded in the local area. However, the flora and vegetation survey undertaken by Del Botanics Environmental Consulting (2025) did not record any threatened or priority flora within the application area. The survey identified the vegetation as *Allocasuarina campetris, Calothamnus gilesii* and *Grevillea paradoxa* shrubland over a sparse herb and grass layer.

Eremophila resinosa (threatened) has been recorded approximately 1.37 kilometres from the application area and occurs within the same mapped soil type. The application area cannot be discounted as representing potential habitat. While the application area contains some habitat attributes associated with the species, no individuals were recorded during field surveys (Del Botanics Environmental Consulting, 2025). The vegetation present (rocky quartz outcrops and *Allocasuraina campestris* shrubland) also differs from the open mallee woodland and mixed *Acacia* scrub typically associated with known populations (Department of Environment and Conservation, 2009).

Eremophila viscida (threatened) has been recorded within the local area and within the same soil type, with the nearest known record approximately 9.07 kilometres from the application area. Although the site shares some broad environmental characteristics with habitat utilised by the species, no individuals were recorded during the survey and the application area is unlikely to comprise habitat critical to its persistence (English, 2003; Del Botanics Environmental Consulting, 2025).

Darwinia sp. Chiddarcooping (S.D. Hopper 6944) (Priority 4) has been recorded approximately 2.91 kilometres from the application area (1988 record) and is associated with a range of soil and landform types, including rock outcrops (Florabase, 2002). Notwithstanding the proximity of the record, no individuals were identified during field investigations and the likelihood of the species occurring within the application area is considered low.

Conclusion

Based on the available information, the proposed clearing is unlikely to significantly impact conservation significant flora. The application area is not considered to contain habitat critical to the persistence of nearby conservation significant flora species. Accordingly, the proposed clearing is unlikely to result in a significant residual impact to flora values.

Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- minimise the introduction and spread of weeds; and
- demarcation of application area prior to clearing.

3.3. Relevant planning instruments and other matters

Other relevant authorisations required for the proposed land use include:

- Development Approval Application for Quartz Extraction Quarry project approved by the Shire of Westonia on 19 December 2025.

Shire Approvals

DWER sought direct interest advice from the Shire of Westonia during the assessment. No response was received from the Shire within the requested timeframe.

The applicant advised that the Shire of Westonia does not have an Extractive Industry Local Law and therefore does not issue Extractive Industry Licences. Accordingly, no Extractive Industry Licence is required for the proposal (Anderson, 2026, pers. comm., 7 July).

Aboriginal Heritage

No Aboriginal sites of significance have been mapped within the application area. 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.

4 Suitability of offsets

Significant residual impact
Through the detailed assessment outlined in Section 3.2 above and Appendix D, the Delegated Officer has determined that the following significant residual impacts remain after the application of the avoidance and mitigation measures summarised in Section 3.1:

- the loss of 7.55 hectares of native vegetation within Beard Vegetation Association 1057, which retains approximately 12.09 per cent of its pre-European extent and contributes to habitat connectivity within a highly cleared agricultural landscape; and
- the loss of 7.55 hectares of potential Carnaby's cockatoo *(Zanda latirostris)* foraging habitat.

The applicant has proposed rehabilitation and revegetation of the 7.55-hectare extraction area, including retention and respreading of vegetation material and topsoil to facilitate re-establishment of native vegetation and fauna habitat values (see Section 3.1).

The applicant has proposed an environmental offset to address the above impacts, as detailed below. The Delegated Officer considered the extent of the impact, the necessity of the proposed clearing, and the applicants demonstrated efforts to avoid, minimise and mitigate the environmental impacts of the proposed clearing, in accordance with the mitigation hierarchy under the *WA Environmental Offsets Guidelines* (2014). The Delegated Officer determined it is appropriate to consider an offset to counterbalance the residual impacts in this instance.

Proposed offset
The applicant proposed to protect 29 hectares of remnant native vegetation within Lot 324 on Deposited Plan 203224 through the establishment of a conservation covenant. The proposed covenant area is illustrated cross-hatched red in Figure 1, Section 1.5.

The proposed covenant area is located south of Daddow Road within the same broader remnant vegetation patch as the application area. The area comprises established remnant native vegetation currently in private ownership. Information provided by the applicant (Q Stone Pty Ltd, 2026d) indicates that the covenant area is not used for agricultural purposes or livestock grazing and is contiguous with surrounding remnant vegetation. The area is currently fenced along Daddow Road and the adjoining cropped land. No internal fencing is proposed where the covenant boundary adjoins existing remnant vegetation.

The applicant has advised that active management is not currently considered necessary given the existing land use and condition of the vegetation. The conservation covenant will provide for the long-term protection of the vegetation from incompatible land uses and maintain its existing environmental values.

Offset adequacy
In determining the appropriateness of the offset, the Delegated Officer considered the environmental values affected by the clearing, the condition and location of the proposed covenant area, its relationship with surrounding remnant vegetation, the security provided by the conservation covenant, the proposed rehabilitation of the extraction area, and the extent to which the offset counterbalances the identified significant residual impacts.

In assessing whether the proposed offset is proportionate to the significance of the environmental values being impacted, the department has undertaken a calculation using the *Environmental Offsets Metric* (2021). The justification for the values used in the offset calculations are provided in Appendix F.

The Delegated Officer considers the onsite revegetation and the proposed offset is consistent with the *Environmental Offsets Policy* (2011) and the *WA Environmental Offsets Guidelines* (2014) and adequately counterbalances the significant residual impacts listed above.

End

Appendix A. Additional information provided by applicant

Summary of comments	Consideration of comment
In response to formal requests for further information issued by DWER, the applicant provided the following additional information:	The additional information was considered as follows:
Avoidance and Mitigation Measures	Consideration of avoidance and mitigation measures are discussed in Section 3.1.
Revised Clearing Footprint and Offset Proposal	The revised clearing footprint and retention of the hollow-bearing tree substantially reduces potential impacts to black cockatoo breeding habitat and other hollow-dependent fauna. The offset was reassessed following receipt of additional information regarding the condition of the proposed covenant area, site photographs and the rehabilitation and revegetation framework. The protection of 29 hectares of native vegetation through a conservation covenant, together with rehabilitation and revegetation of the extraction area, was considered adequate to counterbalance the identified significant residual impacts. See Section 4 and Appendix F.

Appendix B. Details of public submissions

Summary of comments	Consideration of comment
The submitter raised concerns that no environmental offset or rehabilitation measures had been proposed despite the clearing occurring within a highly cleared agricultural landscape.	The assessment concluded that the application area forms part of a large remnant vegetation patch within a highly cleared agricultural landscape and contributes to local habitat connectivity as well as providing black cockatoo foraging habitat resulting in significant residual impacts that require an offset. These values and the impacts of the proposed clearing are considered in Sections 3.2 and offsets are considered under section 4.
The submitter also questioned the justification for clearing native vegetation for extractive industry purposes.	The applicant demonstrated that extraction within adjacent cleared farmland was not feasible due to the absence of an economically recoverable quartz resource (see section 3.1).
The submitter considered the retained vegetation may contribute to habitat connectivity and ecological linkages between nearby remnant vegetation patches and suggested rehabilitation could be undertaking using retained topsoil to improve these linkages.	The applicant revised the clearing footprint to minimise impacts to native vegetation (see section 3.1). The applicant also committed to rehabilitation and revegetation of the extraction area and have advised a detailed revegetation plan will be prepared. Revegetation commitments were provided to DWER which were conditioned on the clearing permit. The applicant also committed to an offset by way of placing a conservation covenant over an adjacent patch of remnant vegetation to conserve it in perpetuity. During the assessment, the proposed conservation covenant was increased from 15.42 hectares to approximately 29 hectares to counterbalance identified significant residual impacts appropriately (see Sections 3.1 and 4 and Appendix F).
The submitter questioned regulatory pathway for the application, why it was not submitted to Department of Mines,	DMPE only handles clearing permit applications for mineral and petroleum activities that are regulated under the *Mining Act 1978*, the various petroleum Acts and State Agreement Acts. The proposed

Summary of comments	Consideration of comment
Petroleum, and Exploration (DMPE), was it because DWER does not undertake compliance inspections.	clearing is within a freehold land parcel and therefore the delegations does not apply. It is noted that DWER undertakes compliance inspections in accordance with DWER's Compliance and Enforcement Policy.

Appendix C. Site characteristics

C.1. Site characteristics

Characteristic	Details
Local context	The application area forms part of an approximately 1,200-hectare patch of native vegetation within the intensive land use zone of Western Australia, approximately 340 kilometres northeast of Perth. The surrounding landscape is predominantly agricultural, interspersed with patches of remnant native vegetation. The proposed clearing area does not contribute to a formal ecological linkage however may contribute to an informal ecological linkage with surrounding remnant vegetation, within the highly cleared agricultural landscape. Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 44.83 per cent of the original native vegetation cover.
Ecological linkage	No formal ecological linkages are mapped within the application area. The application area on the edge of a large patch of remnant vegetation amongst agricultural areas is likely to aid in the functioning of an informal ecological linkage for fauna moving between patches of remnant vegetation.
Conservation areas	There are no conservation areas intersecting with the application area. The closest conservation area is located 8 kilometres northeast from the application area and is an unnamed nature reserve for the purpose of conservation of flora and fauna.
Vegetation description	A detailed flora and vegetation survey conducted by Del Botanics Environmental Consulting (2025) indicate the vegetation within the proposed clearing area consists of *Allocasuraina campetris, Calothamnus gilesii* and *Grevillea paradoxa* shrubland over very open herbland of *Stypandra glauca* and *Waitzia acuminata* over very open grassland of *Monochather paradoxus* and *Enneapogon nigricans*, with observances of: • *Eucalyptus loxophleba* • *Dodonaea inaequifolia* • *Stypandra glauca* • *Eremophila scoparia* • *Sida calyxhymenia* • *Senecio spp. (possibly multicaulis)* • *Melaleuca radula* • *Spartochloa scirpoidea* • *Stypandra glauca* • *Acacia coolgardiensis* • *Cheilanthes austrotenuifolia.* The full field surveys with photos are available in Appendix G. This is broadly consistent with the Avon Wheatbelt mapped vegetation type: • Beard Vegetation Associations: Moorine Rock (MOORINE ROCK_1057) mosaic, shrublands, medium woodland; salmon and gimlet or York gum and *Eucalyptus sheathiana* mallee scrub. The mapped vegetation type retains approximately 12.09 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	A detailed flora and vegetation survey conducted by Del Botanics Environmental Consulting (2025) indicate the vegetation within the proposed clearing area is in very good (Keighery, 1994) condition, described as:

Characteristic	Details
	• vegetation structure altered, with obvious signs of disturbance. Disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing. The full Keighery (1994) condition rating scale is provided in Appendix E. The full field surveys with photos are available in Appendix G.
Climate and landform	The mean average annual rainfall in the region is recorded as 331.90 millimetres (Weatherzone, 2026). The application area is relatively flat with the elevation above sea level ranging from approximately 338 metres above sea level to 350 metres.
Soil description	The soil is mapped as: • *Danberrin Subsystem (258Bc) areas of rocky, red and greyish brown loamy sands and sandy loams formed from freshly exposed bedrock. Rock outcrop is common.* • *Danberrin r Phase (258Bc) areas of rock outcrop.*
Land degradation risk	Based on available data, the application area is at risk of wind erosion and subsurface acidification.
Waterbodies	The desktop assessment and aerial imagery indicated that no waterbodies intersect the application area. A minor non-perennial river runs from west to east to the north of the application area, coming as close as 130 metres from the application area. There are many scattered man-made dams in the local area, the closest natural waterbody (Yilgarn River) being mapped 8.7 kilometres northeast from the application area.
Hydrogeography	The application area is located within the Avon River System and Westonia Groundwater Area proclaimed under the RIWI Act. The application area occurs within the northern zone of ancient drainage, characterised by an ancient plain of low relief, lateritic uplands on weathered granite, and ranges and stony plains in the north-east. Drainage systems within this zone are generally poorly connected, with remnant salt lake chains that function primarily during very wet years. According to available databases, the groundwater salinity is 14000 – 35000 milligrams to litres total dissolved solids within the application area. There are no RIWI waterlines which intersect the application area.
Flora	The desktop assessment identified five conservation significant flora species to have been recorded within the local area (10-kilometre radius), comprising of four threatened species and one priority 4 species. The closest to the application area at 1.37 kilometres away is a record of *Eremophila resionsa* (threatened), this record is mapped within the same soil type as the application area. Other species recorded within the same soil type as the application area include, *Darwinia sp. Chiddarcooping* (S.D. Hopper 6944) and *Eremophila viscida.*
Ecological communities	The application area is located within a mapped Priority Ecological Community (PEC), *Eucalypt Woodlands of the Western Australian Wheatbelt* (Priority 3), which is the only threatened or priority ecological community type identified within the local area. The survey identified the vegetation within the application area to not represent this PEC (Del Botanics Environmental Consulting, 2025).
Fauna	There are records of three fauna of conservation significance within the local area (10-kilometre radius), two species of bird and one invertebrate. The closest record to the application area is of a malleefowl *(Leipoa ocellata)* located 378 metres away (2016 record). The application area is not within the known distribution of black cockatoo species. Carnaby's cockatoo known distribution is mapped as close as 25 kilometres south from the application area, with 122 records of Carnaby's within a 50-kilometre radius, the closest record being 22.59 kilometres away. The flora, vegetation and black cockatoo assessment conducted by Del Botanics Environmental Consulting (2025) recorded no evidence of black cockatoo foraging (chewed nuts) in the survey area.

C.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*					
Avon Wheatbelt	9,517,109.95	1,761,187.42	18.51	174,980.68	9.94
Vegetation complex					
Beard vegetation association: 1057	145,310.83	17,564.46	12.09	2,843.25	16.19
Local area					
10km radius	32,816.00	14,713.24	44.83	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

C.3. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix H.1), and biological survey information, impacts to the following conservation significant fauna required further consideration.

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)
Peregrine Falcon *(Falco peregrinus)*	SP	N	Y	9.07	0
Coolgardie Shield-backed Trapdoor Spider *(Idiosoma intermedium)*	VU	Y	Y	8.93	2
Malleefowl *(Leipoa ocellata)*	T - VU	Y	Y	0.38	2
Carnaby's Cockatoo *(Zanda latirostris)*	T - EN	Y	Y	22.59	122
Woma *(Aspidites ramsayi* – southwest subpopulation)	P	N	N	40.51	1
Chuditch *(Dasyurus geoffroii)*	T - VU	Y	Y	18.10	3
Bilby *(Macrotis lagotis)*	T - VU	N	N	18.37	1
Red-tailed Phascogale *(Phascogale calura)*	SP	N	N	48.17	1

P: Priority; T: Threatened; VU: Vulnerable; SP: Specially Protected; EN: Endangered

Appendix D. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The application area comprises native vegetation in very good condition and occurs within a large remnant vegetation patch. It is mapped within the Priority Ecological Community (PEC) *Eucalypt Woodlands of the Western Australian Wheatbelt* (Priority 3). However, the flora and vegetation survey described the vegetation within the application area as *Allocasurina campetris* shrubland, which is not considered representative of the PEC.	May be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
While no threatened flora or other regionally significant biodiversity values were identified within the application area, records of conservation significant fauna occur in the local area, and some species may utilise the site. Therefore, the proposed clearing may comprise a high level of biodiversity.		
Principle (b): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."* Assessment: The application area provides fauna habitat within a large remnant vegetation patch and provides foraging habitat for Carnaby's cockatoo.	At variance	Yes *Refer to Section 3.2.1, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The area proposed to be cleared is unlikely to contain flora species listed under the BC Act. Records of threatened flora occur in the local area; however, no threatened or priority flora were recorded during the flora and vegetation survey.	Not likely to be at variance	Yes *Refer to Section 3.2.2, above.*
Principle (d): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."* Assessment: The area proposed to be cleared does not contain species that can indicate a threatened ecological community (TEC). No TEC's listed under the BC Act or EPBC Act were identified within the application area. The application area is mapped within a priority ecological community (PEC) *Eucalypt Woodlands of the Western Australian Wheatbelt* (Priority 3), the flora and vegetation survey described the vegetation as *Allocasuraina campestris* shrubland that is not considered representative of the PEC. Therefore, the proposed clearing is unlikely to impact a TEC or PEC.	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The extent of native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. However, the mapped vegetation complex retains approximately 12.09 per cent of its pre-European extent, below the 30 per cent threshold and requires and offset (see section 4). The vegetation proposed to be cleared is not considered to be part of a formal significant ecological linkage in the local area, however, may contribute to habitat connectivity.	At variance	No
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment: Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.	Not at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: Given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact riparian native vegetation.	Not at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are susceptible to wind erosion and subsurface acidification. The removal of native vegetation may increase the localised risk of soil exposure and erosion. However, noting the relatively small extent of clearing, the surrounding vegetation cover and the proposed progressive rehabilitation of disturbed areas, the clearing is unlikely to result in appreciable land degradation.	Not likely to be at variance	No
Principle (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."* Assessment: Given no watercourses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality. The application area is located within the Avon River System and Westonia Groundwater area where groundwater is mapped as highly saline. The proposed clearing may marginally increase the risk of groundwater recharge and salinity processes though the clearing. However, given the small extent of the clearing relative to the surrounding remnant vegetation, the proposed clearing is unlikely to cause a measurable deterioration in the quality of surface water or groundwater.	Not likely to be at variance	No
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: 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.	Not at variance	No

Appendix E. 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 Southwest 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.

Appendix F. WA Offset Metric

WA Environmental Offsets Calculator – Remnant Vegetation

Rationale for scores used in the offset calculator

Calculation	Score	Rationale
Conservation Significance		
Description	Less than 30% remnant vegetation within the mapped vegetation complex	The vegetation proposed to be cleared forms part of Beard Vegetation Association 1057, which retains approximately 12.09% of its pre-European extent. As the vegetation complex is below the 30% retention threshold recognised in the National Objectives and Targets for Biodiversity Conservation, it is considered to have conservation significance as a remnant vegetation type within the Avon Wheatbelt.
Type of Environmental Value	Vegetation/Habitat	Impacts to vegetation within the Beard Vegetation Association 1057.
Conservation Significance of Environmental Value	Terrestrial native vegetation complex - <30% extent remaining in the bioregion	The vegetation occurs within a mapped terrestrial vegetation complex that retains less than 30% of its original extent in the bioregion.
Landscape-level Value Impacted	Yes/No	Yes - Although the application area does not form part of a mapped formal ecological linkage, it is located on the edge of a large remnant vegetation patch and contributes to habitat connectivity within the local landscape.
Significant Impact		

Description	7.55 hectares of native vegetation to be cleared for quartz extraction	
Significant Impact (hectares)	7.55	The impact area reflects the total authorised clearing extent under CPS 11617/1. This value was used to quantify the extent of environmental value proposed to be removed.
Quality (scale)	7.00	The vegetation retains a largely intact structure and ecological function despite some evidence of past disturbance; it is surrounded by extensive agricultural landscape and similar remnant vegetation.
Rehabilitation Credit		
Description	Revegetation	Revegetation and rehabilitation of clearing area following quartz extraction.
Proposed Rehabilitation (area in hectares)	7.55	The full extent of the clearing area is to be rehabilitated and revegetated following quartz extraction.
Current quality of rehabilitation site	0.00	The clearing area is assumed to have no remaining native vegetation values following quarry operations at the commencement of rehabilitation activities.
Future quality WITHOUT Rehabilitation	0.00	Without active rehabilitation measures, disturbed extraction areas are unlikely to naturally recover to a condition that provides meaningful vegetation or habitat values within the assessment timeframe.
Future quality WITH Rehabilitation	6.00	A future quality of good assumes rehabilitation successfully establishes native vegetation to a similar condition to pre-clearing. This recognises that rehabilitated areas are unlikely to fully replicate the structure and ecological values of the existing very good vegetation.
Time until Ecological Benefit (Years)	20.00	A period of 10 years was adopted as a reasonable timeframe for revegetation works to establish and provide measurable habitat and vegetation values. Revegetation is to take place within the next 10 years during which extraction will occur.
Confidence in Rehabilitation result (%)	0.8	A confidence factor of 80% reflects a moderate-to-high likelihood of rehabilitation success given the proposed retention and respreading of topsoil and vegetation material, while acknowledging uncertainties associated with long-term vegetation establishment in a semi-arid environment.
Offset		
Description	Conservation Covenant	Proposed conservation covenant area by applicant south of Daddow Road.
Proposed offset (area in hectares)	24.81	Represents the area of remnant native vegetation representative of Beard vegetation association

		1057 proposed by the applicant to be secured through a conservation covenant.
Current quality of offset site / Start number (of type of feature)	7.00	The offset site is assumed to have good quality established remnant native vegetation in comparable condition to the vegetation proposed to be cleared.
Future quality WITHOUT offset (scale) / Future number WITHOUT Offset	7.00	Without formal protection, it is unlikely the remnant patch of vegetation will see a measurable increase or decline in quality due to influencing factors such as revegetation or grazing, and as such is expected to maintain current quality.
Future quality WITH offset (scale) / Future number WITH offset	7.00	Long-term protection through a conservation covenant is expected to maintain the site's existing condition and ecological values.
Time until ecological benefit (years)	2.00	The properties are known for the securement of the conservation covenant and are currently in progress.
Confidence in offset result (%)	0.8	Reflects a high probability that the covenant will provide enduring protection and maintain site condition.
Duration of offset implementation (maximum 20 years)	20.00	Represents the long-term management and protection.
Time until offset site secured (years)	2.00	The properties are known for the securement of the conservation covenant and are currently in progress.
Risk of future loss WITHOUT offset (%)	15.0%	Recognises the potential for future loss in the absence of formal protection measures.
Risk of future loss WITH offset (%)	5.0%	Formal covenant protection substantially reduces the likelihood of future loss.

WA Environmental Offsets Calculator – Black Cockatoo Foraging

Rationale for scores used in the offset calculator

Calculation	**Score**	**Rationale**
Conservation Significance		
Description	Black Cockatoo Foraging	
Type of Environmental Value	Species (flora/fauna)	Carnabys cockatoo *(Zanda latirostris)*
Conservation Significance of Environmental Value	Rare/threatened species – endangered	Endangered fauna species protected under the BC and EPBC Act.
Landscape-level Value Impacted	No	The application area does not contain significant regional foraging habitat and occurs outside the current mapped distribution of Carnaby's cockatoo,

		although seasonal use cannot be discounted (DBCA, 2026).
Significant Impact		
Description	7.55 hectares of native vegetation to be cleared for quartz extraction	
Significant Impact (hectares)	7.55	The impact area reflects the total authorised clearing extent under CPS 11617/1. This value was used to quantify the extent of environmental value proposed to be removed.
Quality (scale)	5.00	The vegetation contains known Carnaby's cockatoo food species, including *Grevillea paradoxa*, and may provide foraging resources. However, no evidence of recent foraging activity was recorded during surveys, and the site was assessed as low quality foraging habitat.
Rehabilitation Credit		
Description	Revegetation	Revegetation and rehabilitation of clearing area following quartz extraction.
Proposed Rehabilitation (area in hectares)	7.55	The full extent of the clearing area is to be rehabilitated and revegetated following quartz extraction.
Current quality of rehabilitation site	0.00	The clearing area is assumed to have no remaining native vegetation values following quarry operations at the commencement of rehabilitation activities.
Future quality WITHOUT Rehabilitation	0.00	Without active rehabilitation measures, disturbed extraction areas are unlikely to naturally recover to a condition that provides meaningful vegetation or habitat values within the assessment timeframe.
Future quality WITH Rehabilitation	4.00	Rehabilitation is expected to restore some native vegetation and foraging resources over time. However, rehabilitated vegetation is unlikely to fully replicate the structure, floristic diversity and habitat values of existing remnant vegetation within the assessment timeframe.
Time until Ecological Benefit (Years)	25.00	10 years for extraction and revegetation activities to commence and conclude, followed by a minimum of 15 year for vegetation growth sufficient to provide measurable foraging habitat values.
Confidence in Rehabilitation result (%)	0.8	A confidence factor of 80% reflects a moderate-to-high likelihood of rehabilitation success given the proposed retention and respreading of topsoil and vegetation material, while acknowledging uncertainties associated with long-term vegetation establishment in a semi-arid environment.
Offset		

Description	Conservation Covenant	Proposed conservation covenant area by applicant south of Daddow Road.
Proposed offset (area in hectares)	29	Represents the area of native vegetation proposed by the applicant to be secured through a conservation covenant, providing similar black cockatoo foraging value.
Current quality of offset site / Start number (of type of feature)	7.00	The offset site is assumed to have good quality established remnant native vegetation with better quality foraging habitat than the vegetation proposed to be cleared.
Future quality WITHOUT offset (scale) / Future number WITHOUT Offset	7.00	Without formal protection, it is unlikely the remnant patch of vegetation will see an increase in quality or decline due to no influencing factors (such as grazing, revegetation) to improve or adversely impact the covenant area.
Future quality WITH offset (scale) / Future number WITH offset	7.00	Conservation covenant protection is expected to maintain the existing vegetation condition and associated fauna habitat values over the long term.
Time until ecological benefit (years)	2.00	The properties are known for the securement of the conservation covenant and are currently in progress.
Confidence in offset result (%)	0.8	Reflects a high probability that the covenant will provide enduring protection and maintain site condition.
Duration of offset implementation (maximum 20 years)	20.00	Represents the long-term management and protection.
Time until offset site secured (years)	2.00	The properties are known for the securement of the conservation covenant and are currently in progress.
Risk of future loss WITHOUT offset (%)	15.0%	Recognises the potential for future loss in the absence of formal protection measures.
Risk of future loss WITH offset (%)	5.0%	Formal covenant protection substantially reduces the risk of habitat loss.

Appendix G. Field surveys and photographs of vegetation

Del Botanics Environmental Consulting

FIELD SHEET – FLORA AND VEGETATION SURVEY

Job Code: Daddow Rd, Warralakin	**Date:** 25/11/2025	**Site:** Q1
GPS Datum: (50) 654725.24 m E 6563269.30 m S	**Topography:** Upper slope	**Litter cover:** 20 % twigs, 10 % leaves 30% logs
Age since fire: >10 yrs	**Disturbance:** Hi Med **Lo**	**Soils:** Clay (orange/brown) Quartz outcropping
Vegetation Description: *Allocasuarina campestris* shrubland		
Vegetation Condition: Very Good		
Observations:		



Coll No.		Taxon	Ht (cm)	% Alive	% Dead	% Cover
	Middle	*Eucalyptus loxophleba*	300	100		10
	Middle	*Allocasuarina campestris*	250	80	20	12
Sp1	Middle	*Grevillea paradoxa*	200	100		6
Sp2	Bottom	*Dodonaea inaequifolia*	200	100		4
	Bottom	*Stypandra glauca*	50	90	10	5
Sp3	Bottom	*Enneapogon nigricans*	40	100		3
	Bottom	*Waitzia acuminata*	15	100		3
	Bottom	*Cheilanthes austrotenuifolia*	15	50	70	4
		**Avena barbata*				
		**Ursinia anthemoides*				
		Dichopogon capillipes				
		Dianella revoluta				
		Austrostipa sp.				
		Austrostipa elegantissima				

Figure 2: Excerpt from Flora and Vegetation Survey conducted by Del Botanics Environmental Consulting (2025).

Del Botanics Environmental Consulting

FIELD SHEET – FLORA AND VEGETATION SURVEY

Job Code: Daddow Rd, Warralakin	**Date**: 25/11/2025	**Site**: Q2
GPS Datum: (50) 654829.58 m E 6563342.35 m S	**Topography**: Upper slope	**Litter cover**: 30 % twigs, 10 % leaves 30% logs
Age since fire: >10 yrs	**Disturbance**: Hi **Med** Lo	**Soils**: Clay (orange/brown) Quartz outcropping
Vegetation Description: *Allocasuarina campestris* shrubland		
Vegetation Condition: Very Good		
Observations: High bare ground		



Coll No.		Taxon	Ht (cm)	% Alive	% Dead	% Cover
	Middle	*Allocasuarina campestris*	150	30	70	5
Sp2	Middle	*Dodonaea inaequifolia*	250	90	10	7
Sp7	Middle	*Eremophila scoparia*	200	100	0	4.5
Sp3	Bottom	*Enneapogon nigricans*	40	100	0	6
	Bottom	*Senecio ?multicaulis*	15	0	100	3
Sp8	Bottom	*Sida calyxhymenia*	15	50	50	5
Sp1		*Grevillea paradoxa*				
Sp9		*Acacia acuminata*				
Sp10		*Melaleuca radula*				
		Austrostipa sp.				
Sp5		*Spartochloa scirpoidea*				
		Dichopogon capillipes				
		Cheilanthes austrotenuifolia				
		**Aira caryophyllea*				

Figure 3: Excerpt from Flora and Vegetation Survey conducted by Del Botanics Environmental Consulting (2025).

Del Botanics Environmental Consulting

FIELD SHEET – FLORA AND VEGETATION SURVEY

Job Code: Daddow Rd, Warralakin	**Date:** 25/11/2025	**Site:** Q3
GPS Datum: (50) 654580.38 m E 6563046.53 m S	**Topography:** Mid slope	**Litter cover:** 20 % twigs, 30 % leaves 30% logs
Age since fire: >10 yrs	**Disturbance:** Hi Med **Lo**	**Soils:** Clay (orange/brown) Quartz outcropping
Vegetation Description: *Allocasuarina campestris* shrubland		
Vegetation Condition: Very Good		
Observations:		



Coll No.		Taxon	Ht (cm)	% Alive	% Dead	% Cover
	Middle	*Calothamnus gilesii*	200	100		4
	Middle	*Allocasuarina campestris*	150	80	20	12
Sp10	Middle	*Melaleuca radula*	150	100		3
Sp5	Bottom	*Spartochloa scirpoidea*	60	100		6.6
	Bottom	*Stypandra glauca*	100	100		3
Sp3	Bottom	*Enneapogon nigricans*	100	100		1
		Dichopogon capillipes				
		Austrostipa sp.				
		Borya sphaerocephala				
Sp1		*Grevillea paradoxa*				
Sp11		*Monachather paradoxus*				
Sp6		*Eremophila scoparia*				
		Waitzia acuminata				
Sp15		*Goodenia berardiana*				

Figure 4: Excerpt from Flora and Vegetation Survey conducted by Del Botanics Environmental Consulting (2025).

Del Botanics Environmental Consulting

FIELD SHEET – FLORA AND VEGETATION SURVEY

Job Code: Daddow Rd, Warralakin	**Date:** 25/11/2025	**Site:** Q4
GPS Datum: (50) 654610.45 m E 6563205.95 m S	**Topography:** Mid slope	**Litter cover:** 20 % twigs, 30 % leaves 30% logs
Age since fire: >10 yrs	**Disturbance:** Hi Med **Lo**	**Soils:** Clay (orange/brown) Quartz outcropping
Vegetation Description: *Allocasuarina campestris* shrubland		
Vegetation Condition: Very Good		
Observations: Low disturbances, low weeds		



Coll No.		Taxon	Ht (cm)	% Alive	% Dead	% Cover
	Middle	*Allocasuarina campestris*	150	50	50	2
Sp21	Middle	*Acacia coolgardiensis*	200	60	40	30
Sp1	Middle	*Grevillea paradoxa*	100	100		1
Sp3	Bottom	*Enneapogon nigricans*	60	100		12
	Bottom	*Waitzia acuminata*	40	50	50	10
	Bottom	*Stypandra glauca*	60	100		1
Opp		*Eucalyptus loxophleba*				
Sp16		*Calothamnus gilesii*				
		Dichopogon capillipes				
		Triodia sp.				
		**Aira caryophyllea*				
Sp22		*Pterochaeta paniculata*				
Sp2		*Dodonaea inaequifolia*				
Sp15		*Goodenia berardiana*				

Figure 5: Excerpt from Flora and Vegetation Survey conducted by Del Botanics Environmental Consulting (2025).

Del Botanics Environmental Consulting

FIELD SHEET – FLORA AND VEGETATION SURVEY

Job Code: Daddow Rd, Warralakin	**Date:** 25/11/2025	**Site:** Q5
GPS Datum: (50) 654657.90 m E 6563132.52 m S	**Topography:** Mid slope	**Litter cover:** 20 % twigs, 30 % leaves 30% logs
Age since fire: >10 yrs	**Disturbance:** Hi Med **Lo**	**Soils:** Clay (orange/brown) Quartz outcropping
Vegetation Description: *Allocasuarina campestris* shrubland		
Vegetation Condition: Very Good		
Observations: Low disturbances, low weeds		



Coll No.		Taxon	Ht (cm)	% Alive	% Dead	% Cover
	Middle	*Allocasuarina campestris*	200	95	15	50
Sp1	Middle	*Grevillea paradoxa*	150	100		6
Sp16	Middle	*Calothamnus gilesii*	200	100		1
	Bottom	*Waitzia acuminata*	15	50	50	3
	Bottom	*Stypandra glauca*	60	100		2
Sp5	Bottom	*Spartochloa scirpoidea*	60	100		4
		Dichopogon capillipes				
		Cheilanthes austrotenuifolia				
		Senecio ?multicaulis				
Sp15		*Goodenia berardiana*				
		Austrostipa sp.				
Sp3		*Enneapogon nigricans*				
Sp23		*Podolepis* sp.				
Sp11		*Monachather paradoxus*				

Figure 6: Excerpt from Flora and Vegetation Survey conducted by Del Botanics Environmental Consulting (2025).



Figure 7: Representative photographs of offset location (conservation covenant) as supplied by applicant (Land Insights, 2026b).

Appendix H. Sources of information

H.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)
- 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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