GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 7562/2
Permit Holder:	Commonwealth Scientific and Industrial Research Organisation (CSIRO)
Duration of Permit:	From 17 March 2018 to 17 March 2033

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 gravel extraction.

2. Land on which clearing is to be done

Lot 18 on Deposited Plan 220344, South Murchison

3. Clearing authorised

The permit holder must not clear more than 7.43 hectares of *native vegetation* within the combined areas 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 17 March 2028.

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.

6. Type of clearing authorised

The permit holder must not clear *native vegetation* unless actively extracting within one month of the authorised clearing being undertaken.

PART II – MANAGEMENT CONDITIONS

7. 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.

8. Weed management

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

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

(b) ensure that no known *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.

9. Directional clearing

The permit holder must conduct clearing activities in a slow, progressive manner towards adjacent *native vegetation* to allow fauna to move into adjacent *native vegetation* ahead of the clearing activity.

10. Retain vegetative material and topsoil, revegetation and rehabilitation

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) within 3 months following completion of the extractive activity, *revegetate* and *rehabilitate* the area(s) that are no longer required for the purpose for which they were cleared under this permit by:

  (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land;

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

  (iii) laying the vegetative material and topsoil retained under condition 10(a) on the cleared area(s).

(c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 10(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 10(c)(i) of this permit will not, without further *revegetation*, 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 are used.

(d) where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 10(c)(ii) of this permit, the permit holder ~~shall~~ must repeat condition 10(c)(i) and 10(c)(ii) within 24 months of undertaking the additional *planting* or *direct seeding* of *native vegetation*.

(e) where a determination by an *environmental specialist* under condition 10(c)(i) 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 10(c)(i) and (ii) of this permit, that determination shall be submitted to the *CEO* in a report within three months of the determination being made by the *environmental specialist*.

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

(i) stating that the *CEO* disagrees with the determination submitted under condition 10(e); 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 that area, the permit holder must carry out the further *planting* and/or *direct seeding* specified in the notice.

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 1994 (GDA94), 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 7; (f) actions taken to minimise the risk of the introduction and spread of *weeds* in

No.	Relevant matter	Specifications
		accordance with condition 8; and (g) actions taken to undertake directional clearing in accordance with condition 9.
2.	In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 10	(a) 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; (b) a description of the *revegetation* and *rehabilitation* activities undertaken; (c) the size of the area *revegetated* and *rehabilitated* (in hectares); (d) the date(s) on which the *revegetation* and *rehabilitation* activites were undertaken; (e) the species composition, structure and density of *revegetation* and *rehabilitation*, and (f) a copy of the *environmental specialist's* report.

12. 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 11 of this permit; and
(ii) concerning 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 was undertaken between 1 January to 31 December of the preceding calendar 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 17 December 2032, the permit holder must provide to the *CEO* a written report of records required under condition 11 of this permit where these records have not already been provided under condition 12(a) of this permit.

DEFINITIONS

In this permit, the terms in Table 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.
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.
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.
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent, and has a minimum of two (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 sources within 50 kilometres and the same Interim Biogeographic Regionalisation for Australia (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 April to May for undertaking planting and seeding.
planting	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species.
rehabilitate/ed/ion	means actively managing an area containing native vegetation in order to improve the ecological function of that area.
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.
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

Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

27 March 2023

Schedule 1

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

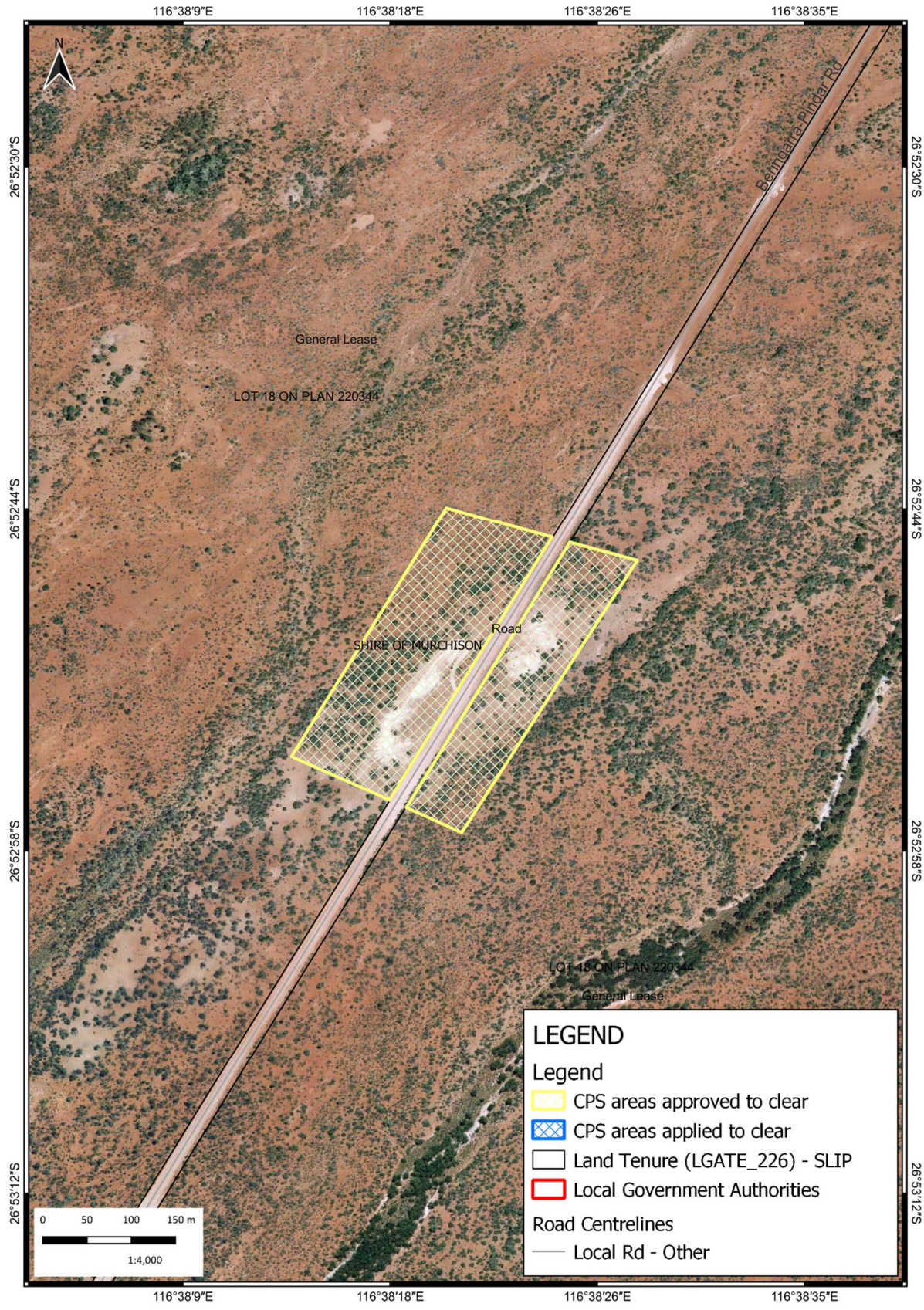

Figure 1: Map of the boundary of the area within which clearing may occur

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.:	7562/2
Permit type:	Purpose Permit
Application received date:	4 October 2022

1.2. Applicant details

Applicant's name:	Commonwealth Scientific and Industrial Research Organisation (CSIRO)

1.3. Property details

Property:	Lot 18 on Deposited Plan 220344, South Murchison
Local Government Authority:	Shire of Murchison
Localities:	South Murchison

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
7.43 (revised)		Mechanical Removal	Gravel extraction

1.5. Decision on application

Decision on Permit Application:	Grant
Decision Date:	27 March 2023

Reason 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). It has been concluded that the proposed clearing is at variance to clearing principle (f), may be at variance to principles (g) and (i), and is not likely to be at variance to the remaining clearing principles.

The Department of Water and Environmental Regulation (DWER) advertised the application for 21 days and one submission was received. Consideration of the matters raised in the public submission is summarised in Appendix A.

In making this decision, the Delegated Officer had regard for the site characteristics (see Section 2), relevant datasets (see Appendix B.1), the clearing principles set out in Schedule 5 of the EP Act, relevant planning instruments and any other matters considered relevant to the assessment. The Delegated Officer also took into consideration that the proposed amendment relates only to extending the permit duration by 5 years to 17 March 2033 and amending permit condition 4 to allow clearing of native vegetation for a further five years to 17 March 2028 for ongoing extraction to provide materials for civil works.

During the assessment of the amendment application, the permit holder undertook a review of the potential material requirements for civil works and determined that the southern permit area of 46.13 hectares could be avoided from clearing. The permit holder subsequently reduced the proposed clearing area under the amendment to only the 7.43-hectare northern permit area.

A review of current environmental information identified that the environmental values present within the permit area remain largely unchanged since the previous assessment of the permit in 2018. Given the disturbance history of the permit area, the extensively vegetated local area, and that the vegetation type within the permit area is well-represented in the region, the Delegated Officer determined that the proposed amendment was unlikely to result in impacts to significant habitat for conservation significant flora, fauna, or communities. The Delegated Officer considered that the proposed amendment may facilitate the introduction and spread of weeds into adjacent vegetation and that the permit area may be susceptible to land degradation through erosion, but determined that the existing permit conditions were sufficient to ensure these impacts were not likely to be significant.

In considering the above, the Delegated Officer determined that the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values remains unchanged from the previous assessment of the permit and can be found in the Decision Report prepared for CPS 7562/1. Noting the above and the permit holder's avoidance and mitigation measures, the Delegated Officer considered that the proposed amendment is not likely to lead to an unacceptable risk to environmental values, subject to conditions to:

- clear native vegetation within one month prior to the commencement of active extraction,
- avoid, minimise, and 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, and
- revegetate and rehabilitate cleared areas within three months following the completion of extractive activity.

In addition to extending the permit duration and reducing the extent of the authorised clearing, the Delegated Officer determined that minor amendments to existing permit conditions were also required to bring the permit in line with current departmental policies and procedures.

2. Site Information

Clearing Description

The proposed amendment to CPS 7562/1 is for the purpose of extending the permit duration by five years to 17 March 2033 and amending permit condition 4 to allow clearing of native vegetation for a further five years to 17 March 2028 for ongoing gravel extraction to provide materials for civil works. During the assessment of CPS 7562/2, the Permit Holder also indicated that the southern section of the existing permit area is no longer required for gravel extraction and therefore, the proposed amendment will also reduce the total clearing area under the permit to 7.43 hectares (see Section 3).

CPS 7562/1 allowed for the clearing of 53.556 hectares of native vegetation within Lot 18 on Deposited Plan 220344 and Beringarra-Pindar Road reserve (PIN 11665424), South Murchison, for the purpose of gravel extraction. The department's records indicate that no clearing has been undertaken under CPS 7562/1 to date.

Vegetation Description

The revised permit area is mapped within Beard vegetation association 204, described as succulent steppe with open scrub; scattered mulga (*Acacia aneura*) and *Acacia sclerosperma* over saltbush (*Atriplex* spp.) and bluebush (*Maireana* spp.) (Shepherd et al., 2001). A flora and vegetation assessment undertaken adjacent to the revised permit area within the Beringarra-Pindar Road reserve in 2016 confirms that the vegetation within the permit area comprises *Acacia sclerosperma* subsp. *sclerosperma* and *Acacia synchronicia* tall open shrubland over mixed *Senna* spp. sparse shrubs over *Salsola australis* sparse herbs (360 Environmental, 2016). Aerial imagery indicates that vegetation composition is unlikely to have changed since the previous assessment of the permit in 2018.

Vegetation Condition

Local flora and vegetation assessments indicate that the condition of the vegetation within the permit area ranges from Very Good to Degraded (Keighery, 1994) condition:

- Very Good, described as 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, and
- Degraded, described as 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 (Keighery, 1994).

During previous assessments of the permit, vegetation condition was determined based on an ecological assessment of the Square Kilometre Array within Boolardy Station, which is located near the application area (AECOM, 2014). A 2016 flora and vegetation assessment undertaken adjacent to the revised permit area within the Beringarra-Pindar Road reserve is consistent with these condition ratings (360 Environmental, 2016). Aerial imagery indicates that vegetation condition is unlikely to have changed since the previous assessment of the permit in 2018.

Soil Type

The soil type within the permit area is mapped within the Beringarra System (272Bg), described as riverine plains with floodplains and channels, supporting halophytic shrublands, mixed acacia shrublands and low woodlands with minor perennial grasses (DPIRD, 2023).

Local Area

The local area referred to in the assessment of this application is defined as a 10-kilometre (km) radius measured from the perimeter of the application area.

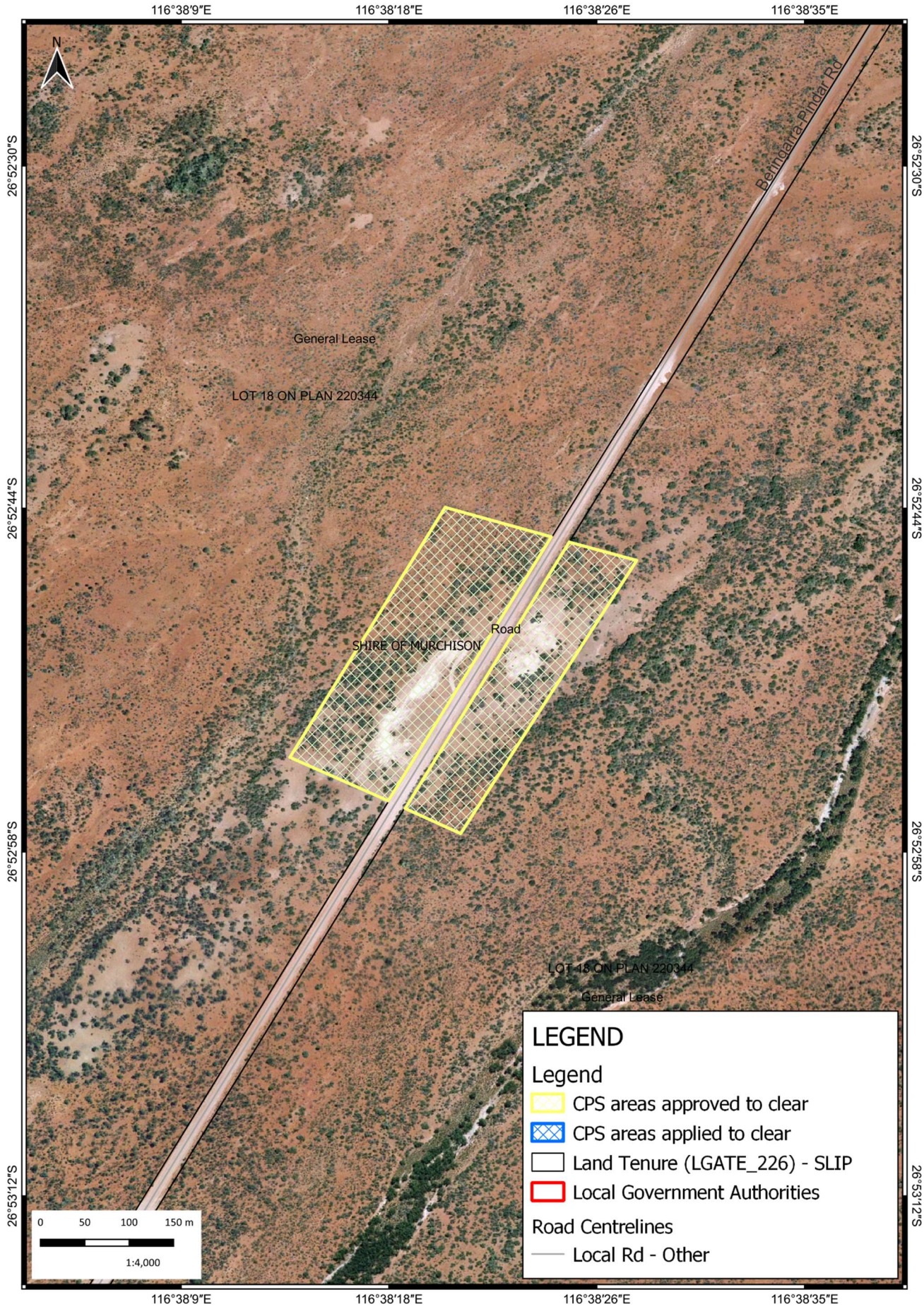

Figure 1. The areas crosshatched yellow indicates the areas authorised to be cleared under the granted amended clearing permit.

3. Avoidance and mitigation measures

The Permit Holder has advised that no clearing has been undertaken under CPS 7562/1 to date, as the material requirements for its civil works over the five-year term of the permit have been satisfied by existing material pits (CSIRO, 2022). However, the Permit Holder has indicated that the existing material pits are likely to be insufficient to satisfy the material requirements for its projected civil works over the next five years to 2028 and therefore, the amendment is required to allow for ongoing gravel extraction within the permit area, as required (CSIRO, 2022). Under the existing permit conditions, the Permit Holder is required to have regard to the mitigation hierarchy, and ensure that the amount of native vegetation to be cleared under the permit is limited to only the extent necessary and is minimised where possible.

During the assessment of the amendment application, the Permit Holder undertook a review of the potential material requirements for civil works and determined that it would not be necessary to clear within the southern permit area of 46.13 hectares (CSIRO, 2023). The Permit Holder considered that the material requirements could be satisfied by existing material pits and the remaining area proposed to be cleared under CPS 7562/1 and subsequently reduced the proposed amended permit area to include only the 7.43-hectare northern area (Figure 2; CSIRO, 2023). Based on aerial imagery, approximately one hectare of the northern area has been subject to historical disturbance from material extraction while the 46.13-hectare southern area has been largely undisturbed. Therefore, the reduction in the authorised clearing area will also ensure intact native vegetation is retained long-term.

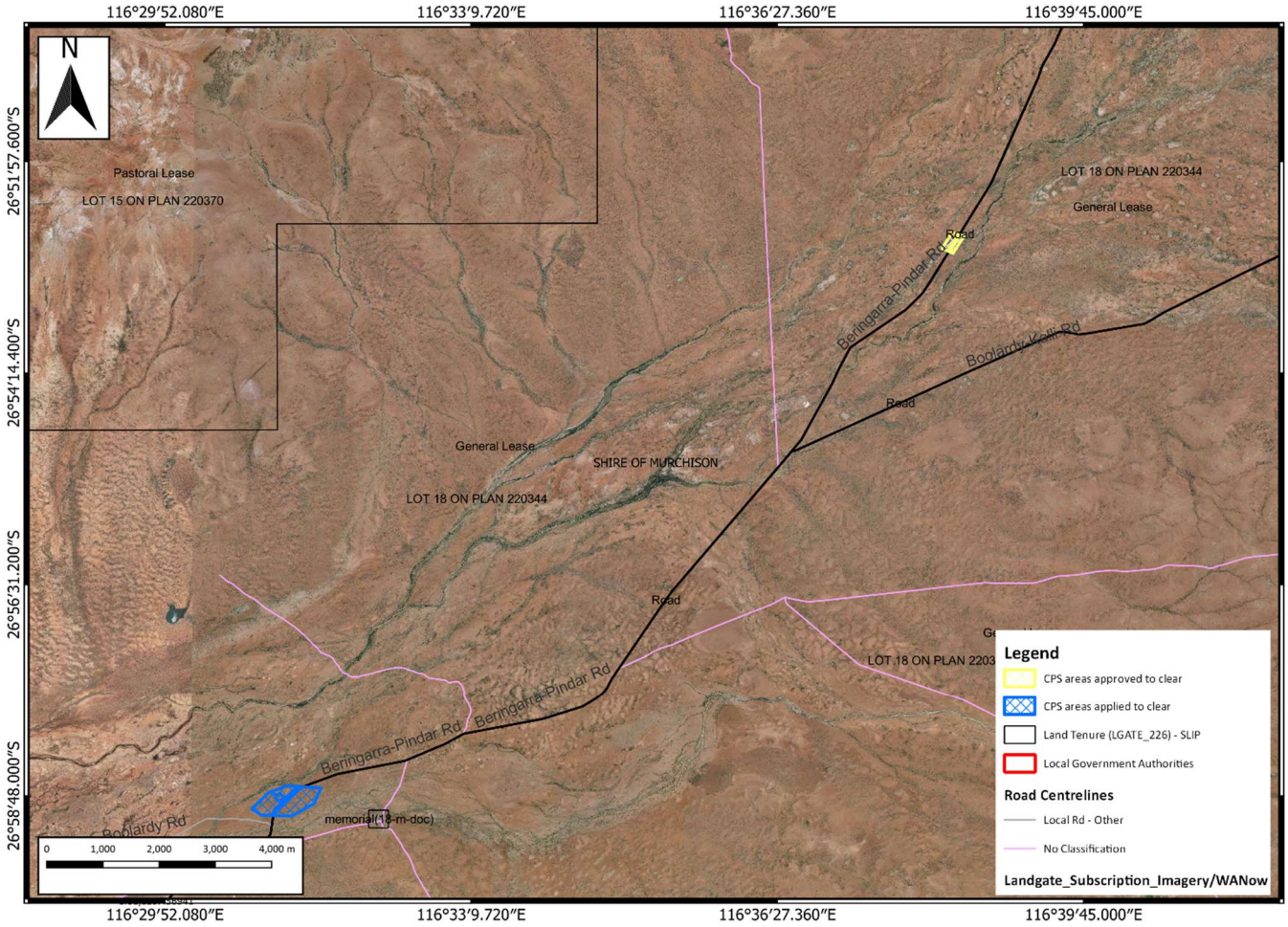

Figure 2. Comparison of previously authorised clearing area of 53.556 hectares under CPS 7562/1 (cross-hatched blue) and reduced clearing area of 7.43 hectares under CPS 7562/2 (cross-hatched yellow).

The remaining avoidance and mitigation measures employed by the Permit Holder are unchanged and can be found in the Decision Report prepared for Clearing Permit CPS 7562/1.

4. Assessment of impacts on environmental values

A review of current environmental information indicates that the environmental values present within the existing permit area remain largely unchanged from the previous assessment of the permit and can be found in the Decision Report prepared for CPS 7562/1.

Conservation significant flora

In regard to conservation significant flora, a desktop assessment of current databases identified that a total of 24 priority flora species have been recorded within the local area, comprising seven Priority 1 (P1) flora, two Priority 2 (P2) flora, 13 Priority 3 (P3) flora, and two Priority 4 (P4) flora (Western Australian Herbarium, 1998-). No threatened flora listed under the state *Biodiversity Conservation Act 2018* (BC Act) or Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) have been recorded within the local area. Of the 24 conservation significant flora species recorded within the local area, 14 species were considered during the previous assessment of the permit, of which 12 were assessed as possibly occurring

within the permit area. According to available databases, there have been no new herbarium records of these species within the local area since the previous assessment of the permit was undertaken in 2018.

Of the 10 conservation significant flora species that were not considered during the previous assessment of the permit in 2018, the permit area is considered to contain suitable habitat for two species, based on the habitat preferences of these species and available soil and vegetation mapping. *Eremophila simulans* subsp. *megacalyx* (Priority 3) is a shrub with violet flowers occurring between August and September and is associated with Acacia shrubland over annual herbs (Western Australian Herbarium, 1998-). *Goodenia neogoodenia* (Priority 4) is a prostrate annual herb with minute brown and yellow flowers occurring between August and September and is associated with woodland or shrubland near water or along drainage lines (Western Australian Herbarium, 1998-). *Eremophila simulans* subsp. *megacalyx* is known from 11 Western Australian Herbarium records from Murchison to Leonora and *Goodenia neogoodenia* is known from 29 records from Carnarvon to Sandstone.

Previous flora and vegetation surveys have not identified any threatened or priority flora species within the permit area (DPAW, 2017a) and other regional surveys have not identified conservation significant flora in the vicinity of the permit area (AECOM, 2022; 360 Environmental, 2016). Given the conservation statuses of the 14 species assessed as possibly occurring within the permit area, their distribution and extent, and the extent of suitable habitat in the local area, it is considered unlikely that the permit area represents significant habitat for these species or would be vital for their continued persistence, if present. It is also acknowledged that the authorised clearing area has been reduced to 7.43 hectares, of which approximately one hectare has been historically disturbed and may not provide suitable habitat for occurrence at present. The permit conditions also require the Permit Holder to revegetate and rehabilitate cleared areas following material extraction through re-spreading of vegetative material and topsoil and direct seeding as required, which is expected to provide opportunities for conservation significant flora present in the seed bank to regenerate, if present.

Given the above, the Delegated Officer determined that the assessment of impacts to conservation significant flora species remains unchanged and that the proposed amendment is unlikely to result in significant impacts to conservation significant flora or to result in long-term impacts to habitat that is critical for the continuation for any threatened or priority flora species.

Conservation significant fauna

Regarding fauna, a desktop assessment of current databases identified that a total of 12 conservation significant fauna species have been recorded within the local area, including three threatened fauna species, two priority fauna species, six fauna species protected under international agreement, and one other specially protected fauna species (DBCA, 2007-). Of these species, 10 were considered during the previous assessment of the permit. According to available databases, no new records of these species have been recorded in the local area since the previous assessment of the permit in 2018. It is understood that the previous assessment considered local occurrences of trapdoor spiders to be *Idiosoma nigrum*, listed as Endangered under the BC Act and Vulnerable under the EPBC Act, but that these records have now been reclassified as *Idiosoma clypeatum*, which is considered Priority 3 by the Department of Biodiversity, Conservation and Attractions (DBCA).

The permit area is not considered likely to provide suitable habitat for the two conservation significant fauna species that were not considered during the previous assessment of the permit; *Calidris ferruginea* (Curlew sandpiper) and *Oxyura australis* (blue-billed duck), as these species are associated with wetland habitats that are not present within the permit area.

The previous assessment identified that the permit area may provide suitable habitat for *Leipoa ocellata* (malleefowl), *Egernia stokesii badia* (western spiny-tailed skink), *Idiosoma clypeatum* (northern shield-backed trapdoor spider), and *Merops ornatus* (rainbow bee-eater), based on the findings of a fauna survey (GHD, 2018) and advice received from the then Department of Parks and Wildlife (2017). It is considered that the permit area may also provide suitable habitat for *Falco peregrinus* (peregrine falcon), given the highly mobile nature of this species and wide range of associated habitat types. However, given the historic disturbance of the permit area, that the Acacia shrubland over herbland within the permit area is well-represented in the region, and the extent of potential habitat in the local area, it is not considered likely that the proposed clearing of 7.43 hectares will have a significant impact on the long-term persistence of these species. Further, fauna surveys undertaken at the time of the original assessment and subsequent surveys in the local area have not identified any evidence of conservation significant fauna in the vicinity of the permit area (AECOM, 2022; GHD, 2018; Bamford Consulting Ecologists, 2016; AECOM, 2014).

Given the above, the Delegated Officer determined that the assessment of impacts to fauna species remains unchanged from the previous assessments of the permit and that the proposed amendment is unlikely to result in the loss of significant fauna habitat. However, the Delegated Officer considered that an additional permit condition requiring slow, progressive, directional clearing is undertaken to allow fauna to move into adjacent vegetation ahead of the clearing activity should be added to the permit to minimise impacts to any individuals present at the time of clearing.

Threatened and priority ecological communities

A desktop assessment of current databases identified no new records of threatened or priority ecological communities (TECs and PECs) in the local area since the previous assessment of the permit. The Acacia shrubland vegetation within the permit area is considered to be well-represented in the region and is not likely to be representative of any TEC or PEC, as determined in previous flora and vegetation surveys (AECOM, 2014). The closest conservation significant ecological community is an occurrence of the Meka calcrete groundwater assemblage type on Murchison palaeodrainage on Meka Station PEC approximately 26 kilometres south of the permit area. The closest TEC is an occurrence of the Eucalypt woodlands of the Western Australian Wheatbelt, listed as Critically Endangered under the Commonwealth EPBC Act, approximately 184 kilometres south-west of the permit area. There are no TECs listed under the state BC Act within 200 kilometres of the permit area. Given the distance and separation from the nearest mapped communities, the Delegated Officer determined that the assessment of impacts to TECs and PECs remains unchanged from the previous assessments of the permit and that the proposed clearing is unlikely to significantly impact state or federally listed TEC or PEC.

Conservation areas and significant remnant vegetation

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). The current vegetation extent for the Murchison IBRA Bioregion, Beard vegetation association 204, and local area are all above 99 per cent and are not considered extensively cleared (see Table 1 below). Therefore, the Delegated Officer determined that the proposed amendment is unlikely to significantly impact remnant vegetation extent in an extensively cleared area and that impacts to significant remnant vegetation remain unchanged from the previous assessments of the permit.

Table 1: Vegetation representation statistics (Government of Western Australia, 2019).

	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					
Murchison	28,120,586.77	28,044,823.42	99.73	2185987.96	7.77
Vegetation Complex					
Beard association 204	199,475.40	198,735.10	99.63	13465.89	6.75
Vegetation Complex within IBRA Bioregion					
Beard association 204 (Murchison)	185,601.68	184,861.37	99.60	13465.89	7.26
Local Area					
50-kilometre radius	791,217.71	791,211.07	99.99	-	-

As identified in the previous assessment of the permit, there are no conservation areas within the local area. The closest mapped conservation areas are Lakeside National Park approximately 120 kilometres south-east and Toolonga Nature Reserve approximately 120 kilometres west of the permit area. Given the distance and separation from the nearest conservation area, the Delegated Officer determined that the assessment of impacts to conservation areas is unchanged from the previous assessments of the permit and the proposed clearing is unlikely to impact the environmental values of any conservation area.

Land and water resources

The 7.43-hectare northern permit area is situated between two minor, non-perennial tributaries of the Roderick River, with a distance of approximately 65 metres to the western tributary and 330 metres to the eastern tributary. As identified in the previous assessment of the permit, aerial imagery indicates that riparian vegetation associated with these tributaries may intersect the permit area and therefore, the vegetation is considered to be growing in association with an environment associated with a watercourse. However, given the extensively vegetated surrounding area, the linear nature of the tributaries and the distance from the watercourse itself, it is not considered likely that the proposed clearing will significantly impact the long-term persistence of the riparian communities growing in association with the tributaries. As the permit area is upstream, the proposed clearing has the potential to increase sedimentation and turbidity within the nearby tributaries, particularly if soils are moved following heavy rainfall. However, it is not expected that the proposed clearing of 7.43 hectares at a distance greater than 50 metres from the nearest tributary will significantly increase sedimentation or impact surface or groundwater quality. Given the extensively vegetated local area, it is also not expected that the clearing of 7.43 hectares will not significantly increase the incidence or intensity of flooding within the permit area. Therefore, the Delegated Officer determined that the assessment of impacts to riparian vegetation, water quality, and incidence and intensity of flooding is unchanged from the previous assessment of the permit.

According to available databases, no changes in soil mapping have occurred since the previous assessment of the permit in 2018. The permit area is mapped within the Beringarra System which is acknowledged to be susceptible to erosion, particularly in areas of pastoral overuse. The previous assessment identified that soil erosion is prevalent within the permit area due to historical grazing by cattle and feral goats, and a decline in average rainfall (AECOM, 2014). Given its proximity to watercourses, the permit area may also be susceptible to water erosion in periods of heavy rainfall. However, given the historic disturbance of the permit area, the extensively vegetated local area, and the existing permit conditions requiring clearing to occur one month prior to the commencement of extraction and post-extraction revegetation and rehabilitation, it is not expected that the proposed clearing of 7.43 hectares will cause appreciable land degradation. The Delegated Officer determined that the assessment of land degradation risk is unchanged from the previous assessment of the permit.

Conclusion

The proposed amendment to CPS 7562/1 is for the purpose of extending the permit duration by five years to 17 March 2033 and amending permit condition 4 to allow clearing of native vegetation for a further five years to 17 March 2028 for ongoing gravel extraction to provide materials for civil works. The proposed amendment will also reduce the authorised clearing area to 7.43 hectares by removing the southern section of the existing permit area that is no longer required for gravel extraction. A review of current environmental databases indicates that the environmental values within the permit area remain largely unchanged since the previous assessment of the permit in 2018 and it is not considered likely that future clearing within the permit area will significantly alter the impacts of the clearing approved under CPS 7562/1. Given the above and the nature of the proposed amendment, the Delegated Officer determined that the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values remains unchanged from the previous assessments of the permit and can be found in the Decision Report prepared for CPS 7562/1.

Planning instruments and other relevant matters.

The clearing permit amendment application was advertised on DWER's website on 21 November 2022, inviting submissions from the public within a 21 day period. One submission was received in relation to this application and consideration of the matters raised in the public submission is summarised in Appendix A.

The Shire of Murchison and Department of Planning, Lands and Heritage were invited to provide comment on the proposed amendment to CPS 7562/1 on 21 November 2022. No comments have been received to date.

The permit area is subject to an Indigenous Land Use Agreement (ILUA) between the Wajarri Yamatji People and the Permit Holder for the construction and operation of the Square Kilometre Array (SKA) Low telescope. The Wajarri Yamatji People native title claimants were notified of the proposed amendment under section 24MD of the *Native Title Act 1993* and invited to provide comment on 21 November 2022. No comments have been received to date.

DWER's Mid West Gascoyne Region advised that, should the Permit Holder require the taking of a groundwater for the purpose of dust suppression during the proposed clearing, material extraction, or civil works, a groundwater license under section 5C and/or a license to construct or alter wells under section 26D of the RIWI Act would be required (DWER, 2022). The Permit Holder has been advised of this requirement but has not indicated that licenses under the RIWI Act will be required at this stage.

The remaining assessment against planning instruments and other matters is unchanged and can be found in the Decision Report prepared for Clearing Permit CPS 7562/1.

Appendix A. Details of public submissions

Summary of comments	Consideration of comment
From aerial imagery, it appears that some permit areas are more vegetated than others. Given no works have been undertaken under the permit to date, an additional permit condition should be included requiring areas of lower vegetation cover to be cleared in the first instance, to ensure higher quality vegetation is retained (Submission, 2022).	As outlined in Section 3, during the assessment of the amendment application the Permit Holder undertook a review of their potential material requirements and subsequently reduced the proposed clearing area to include only the 7.43-hectare northern permit area. Based on aerial imagery, the northern area appears to have been subject to more historic disturbance than the southern area and therefore, it is likely that the proposed amendment will ensure more intact vegetation is retained. The existing permit conditions also require the Permit Holder to have regard to the mitigation hierarchy and ensure that the amount of native vegetation to be cleared under the permit is limited to only the extent necessary and is minimised where possible. The Permit Holder is required to reduce the impact of clearing on any environmental value, which may include preferentially clearing lower-quality vegetation in the first instance. Given the above, the Delegated Officer considers that a standalone condition is not required.
Given the conservation status of the shield-backed trapdoor spider, more effort should be made to ensure the species does not occur within the permit area. An additional permit condition should be included requiring an independent specialist to undertake a pre-clearing survey for individuals and their burrows.	The assessment of impacts to fauna species are outlined in Section 4. While it is acknowledged that the permit area may provide suitable habitat for the northern shield-backed trapdoor spider, it is considered unlikely that the permit area is significant for the long-term persistence of the species given the disturbance history of the permit area and the extent of suitable habitat in the local area. It is also acknowledged that local fauna surveys have not identified any evidence of the northern shield-backed trapdoor spider in the vicinity of the permit area (AECOM, 2022; GHD, 2018; Bamford Consulting Ecologists, 2016; AECOM, 2014). In considering the above and the reduction in the authorised clearing area to 7.43 hectares, the Delegated Officer considers that pre-clearing surveys are not required.

Appendix B. Sources of information

B.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)
- Bush Forever Areas 2000 (DPLH-019)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- CAWSA Part 2A Clearing Control Catchments (DWER-004)
- Consanguineous Wetlands Suites (DBCA-020)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- DBCA Statewide Vegetation Statistics
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments - Catchments (DWER-028)
- Hydrographic Catchments - Divisions (DWER-029)
- Hydrography, Linear (Hierarchy) (DWER-031)
- 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 (DPIRD-006)
- 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 Mapping – Best Available (DPIRD-027)
- Soil Landscape Mapping – Systems (DPIRD-064)

Restricted GIS Databases used:

- Conservation Covenants Western Australia (DPIRD-023)
- Contaminated Sites Database - Restricted (DWER-073)
- 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)

B.2. References

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