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 10944/1
Permit type:	Purpose permit
Applicant name:	Regional Power trading as Horizon Power
Application received:	11 February 2025
Application area:	15.25 hectares (ha) of native vegetation
Purpose of clearing:	Construction of renewable energy infrastructure including geotechnical investigation
Method of clearing:	Mechanical
Property:	Lot 22 on Deposited Plan 214651, Lot 300 on Deposited Plan 50582 Public Road Reserves (PINs 1158885, 11713640, 11404675, 11713469)
Location (LGA area/s):	Laverton
Localities (suburb/s):	Laverton

1.2. Description of clearing activities

The proposal is to clear up to 15.25 hectares (ha) of native vegetation within a development corridor of 24.55 ha which includes areas previously cleared. The proposed clearing is required for the development of a renewable energy system in Laverton which will allow for the generation and distribution of 2.54 megawatts (MW) of energy from solar arrays. The project will include geotechnical investigation, the creation of a connection corridor to existing power station, access tracks and fire breaks, and the construction of solar arrays. The geotechnical works will consist of mainly incidental clearing (driving over and parking on native vegetation) for vehicle / machinery access to geotechnical test sites. This will be followed by clearing for and construction of the renewable energy infrastructure. The final design and footprint of clearing required for the project will be determined after the completion of the geotechnical investigation.

The project is a part of a program to transition Midwest and remote towns to renewable energy.

1.3. Decision on application

Decision:	Granted
Decision date:	26 June 2025
Decision area:	15.25 hectares (ha) 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 submission is discussed and summarised in Section 3 and Appendix A.

In making this decision, the Delegated Officer had regard for:

- the site characteristics (see Appendix B),
- relevant datasets (see Appendix F.1),
- the findings of a biological survey (see Appendix E), in particular:
    - *Midwest and Remote Towns Biological Assessment (GHD, 2023),* which comprised of a detailed (single season) flora and vegetation survey and a basic and targeted fauna survey of the proposed development envelope
    - *Midwest Towns Renewable Infrastructure Project – Laverton; Native Vegetation Clearing Permit Supporting Document (Horizon Power, 2025b)*, which provides the applicant's assessment of the potential impacts of the proposed clearing
- avoidance and minimisation actions implemented by the applicant (see Section 3.1), which included a commitment to implement a Construction Environmental Management Plan (Horizon Power, 2025)
- the clearing principles set out in Schedule 5 of the EP Act (see Appendix C),
- relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).

The Delegated Officer also took into consideration that the proposal is for the development of a renewable energy system in the remote places of Western Australia. The proposal will reduce greenhouse gas emissions in the region, representing actions towards the State and Federal Government's targets of achieving net zero emissions by 2050

In particular, the Delegated Officer has considered the following:

- The proposed clearing will remove 15.25 ha of native vegetation, most of which is vegetation assessed to be Completely Degraded to Degraded condition (Trudgen, 1991) in sparsely vegetated area. The loss of native vegetation is unlikely significant within the context of the local and regional extent of remnant native vegetation. Additionally, the clearing is unlikely to sever any ecological linkages within the area. However, noting the presence of weed species within the area, the proposed clearing may spread weeds to the adjacent vegetation which in turn may reduce its habitat and environmental values. Demarcation of clearing area and the application of stringent weed control measures can mitigate this potential impact and are required as condition on the permit. Rehabilitation of cleared areas no longer required for the purpose of geotechnical investigation and development of renewable energy will further mitigate this potential impact and is required as a condition on the permit.
- The proposed clearing will remove vegetation that may provide habitat for fauna, including approximately 0.26 ha of vegetation within a drainage line. The applicant submitted that project siting had avoided the clearing of this vegetation type and that that clearing of this habitat had been minimised to the amount necessary for the project. Given the relatively limited clearing within the context of abundant and well-connected remnant vegetation surrounding the application area, the impact of the proposed clearing is considered unlikely significant to the fauna habitat available in the area. Geotechnical test pits, however, may pose risks to the local fauna. Backfilling of the geotechnical testing sites can prevent fauna access / trapping and is required as a condition on the Permit.
- Clearing, geotechnical investigation and construction may increase the risk of wind erosion and dust deposition which may impact on the surrounding environment and the quality of adjacent vegetation. Dust can also carry and spread weeds to the adjacent vegetation. While acknowledging this potential impact, the Delegated Officer noted that the application area is sparsely vegetated and already subject to prior disturbance. As such, the proposed clearing is unlikely to exacerbate the risk of dust deposition to the surrounding area. Further, the applicant is committed to apply dust control measure to mitigate the potential impact to the surrounding area as well as to ensure the effective operation of the solar array. Adherence to the Construction Environmental Management Plan can further mitigate the potential impacts. Noting the above, the proposed clearing is considered unlikely to result in appreciable and long-term land degradation. A dust control and rehabilitation conditions are placed on the permit to further mitigate and manage this potential impact.

Having considered the above as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined that the proposed clearing is unlikely to lead to appreciable land degradation or have long-term adverse impacts on fauna. Potential impact on the environmental values listed above can be minimised and managed to unlikely lead to an unacceptable risk to environmental values. The applicant has suitably demonstrated avoidance and minimisation measures.

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
- demarcation of clearing area
- backfilling of geotechnical testing pits to avoid impacts on fauna
- staged clearing to minimise wind erosion
- dust management
- rehabilitation of cleared sites no longer required for the proposed project
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity

1.5. Site map

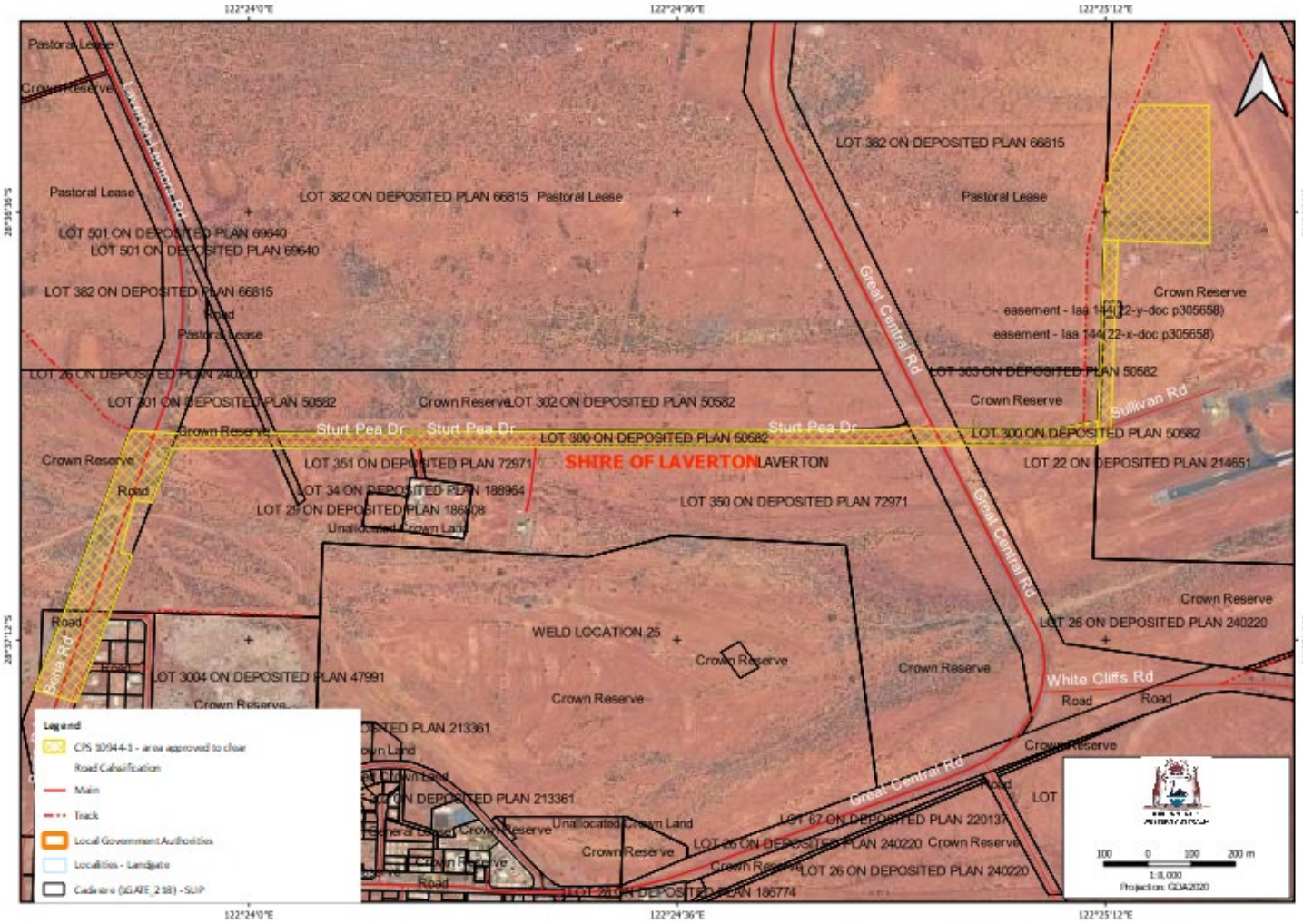

Figure 1 Map of the application area

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 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)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Energy Operators (Powers) Act 1979*
- *Planning and Development Act 2005* (WA) (P&D Act)
- *Soil and Land Conservation Act 1945* (WA)
- *Rights in Water and Irrigation Act 1914* (RIWI Act)

Relevant policies considered during the assessment include:

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant submitted that the following minimisation and mitigation measures had been and will be applied to minimise impacts on the environmental values:

- Project site selection which avoids and minimise the amount of clearing, including placement of infrastructure close to or within the existing assets (corridors)
- Siting of the Development Envelope to avoid the burrows of assumed to Northern Shield-back trapdoor spider
- Siting of geotechnical works within degraded areas as much as possible
- Commitment to restore geotechnical testing sites
- Avoid clearing of riparian vegetation where possible, limiting clearing to a maximum of 0.26 ha.
- Construction of infrastructure within three months of clearing
- Adherence to the Construction Environmental Management Plan (Horizon Power, 2025b)

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.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix B) 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 C) identified that the impacts of the proposed clearing may present a risk to biological values (fauna, adjacent vegetation), and / or land and water resources. 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 – Biodiversity, Fauna and Riparian Vegetation – Principles (a), (b) and (f)

Assessment

Vegetation

The applicant commissioned GHD to perform a biological survey to inform the application for the clearing permit. The survey was undertaken in 24 to 26 May 2023, comprised of a Detailed (single season) flora and vegetation survey and a Basic and Targeted Fauna. Outside of the cleared area which comprised approximately 37% of the survey area, the survey identified two vegetation types occurring in the development envelope, as follows:

- VT14 - *Acacia aneura*, *Acacia ramulosa* and *Acacia ayersiana* open woodland to isolated trees over *Acacia tetragonophylla*, *Acacia craspedocarpa and Senna artemisioides* subsp.×*artemisioides* open shrubland over *Salsola australis*, *Sclerolaena eurotioides* and *Maireana thesioides* open chenopod over mixed annual herbs on shrubland on brown loam clay on plain (14.99 ha ha).
- VT15 - *Eucalyptus camaldulensis* open woodland to isolated trees on drainage line (0.26 ha).

The vegetation types are typical of the vegetation in the East Murchison sub-bioregion. However, being within the existing cable routes and adjacent to the roads, the vegetation is mostly in Degraded condition (approximately 44%) with only 10% is in Good condition (Trudgen, 1991), reflecting the edge effects. The area has been subject to grazing, and potentially either drought and/or inappropriate fire regimes (GHD, 2023). No conservation significant flora species or significant ecological communities were identified in the survey area. Noting the above, and in addition to the large extent of native vegetation remaining in the local area and beyond, the proposed clearing is unlikely to have significant impact on the conservation and environmental values of the flora and vegetation in the local and regional areas. However, despite its large remnant vegetation cover, vegetation in the Arid Region has been identified as being threatened by weed invasion, grazing and fragmentation. Five introduced species, one of which is a Declared Pest under the *Biosecurity and Agriculture Management Act 2007* and Weed of National Significance, were recorded during a survey in the area (GHD, 2023):

• *Cenchrus ciliaris*
• *Opuntia stricta* (Prickly Pear - Declared Pest, Weed of National Significance (WoNS))
• *Sisymbrium orientale*
• *Sonchus oleraceus*
• *Rumex vesicarius*

Opuntia stricta is highly invasive, its vegetative parts can survive in and colonise arid and open area like the application area and surrounds. The weed *Cenchrus ciliaris* (Buffel grass) found over the application area, has been known as the most widespread weed species in the arid and semi-arid zones of Australia, introduced and spread by people movement, feral animals including camels, road and rail corridor development, and the application of dust control measures in the widely scattered Aboriginal communities (Scott et.al. in H. Lambers, 2018). Long-lived seedbanks and vegetative parts of the weed species may be present in the soil and other materials from an area previously infested by the weed species. As the application area contains the weeds, a stringent measure that controls the transport and transfer of such soils or materials from the proposed clearing activities is therefore crucial to minimise and mitigate the risks of weed spread and introduction to nearby vegetation. A weed control condition is imposed on the permit to mitigate this impact. Additionally, the applicant is committed to applying controls such as machinery and vehicles being clean on entry, restricting access to established tracks, and the stockpiling of topsoil salvaged from cleared areas in designated areas (Horizon Power, 2025b), which can minimise the weed transport and transfer. Progressive restoration of temporary cleared sites, including those for the geotechnical works, using the salvaged topsoils is also required as a condition to the permit, which would further mitigate the potential impacts by reducing the exposure time of the cleared areas and stockpiles to weed seeds deposition.

Fauna

Seven (7) conservation significant fauna species have been recorded from within 20 km radius of the application area (see Appendix A4). No conservation significant fauna species were identified from the survey. In their fauna assessment and survey, GHD (2023) had considered three fauna species to have been likely to occur or utilise the areas, namely:

- *Polytelis alexandrae* – Princess Parrot (P3)
- *Falco peregrinus* – Peregrine Falcon (OS)
- *Idiosoma clypteatum* - Northern Shield-back trapdoor spider (P3)

The survey also identified two fauna habitats occurring within the development envelope, namely:

- Mulga woodland on open clay plain
- Eucalyptus-lined minor drainage line.

Peregrine falcon and Princess parrot individuals were not identified during survey of the area. However, it has been assessed that Princess Parrot is likely to use Mulga woodland on open clay pan habitat for dispersal, but there is a limited foraging opportunity due to the lack of spinifex or grassy understorey. The Peregrine Falcon is likely to use Mulga woodland on open clay pan habitat type on an opportunistic basis as foraging habitat. Given the vast extent of native vegetation locally and regionally that would provide better habitat to the fauna species, the application area is unlikely to comprise significant habitat for the fauna species. Clearing of this type of habitat for the project is therefore considered unlikely to have significant impact on the individuals or conservation value of Peregrine Falcon.

The Eucalyptus-lined minor drainage line is considered suitable for foraging and potentially breeding habitat for the falcon and parrot species. Given the importance of this habitat, the applicant had avoided clearing of this habitat as much as possible by siting the project away from this type of habitat. However, the transmission line will require crossing of the drainage at some points where the riparian vegetation unit occur. While committing to the retention of tall Eucalyptus tree stands, the applicant submitted that removal of a maximum of 0.26 ha of this type of vegetation cannot be avoided. Within the context of the abundant vegetated area of similar types of vegetation in Very Good to Excellent condition surrounding the application area, removal of limited extent of vegetation in this type of habitat is unlikely to impact on the conservation value or viability of Peregrine falcon and Princess parrot. Noting their migratory nature, the bird species may fly over or utilise the area for foraging or dispersal, but the Eucalyptus-lined minor drainage vegetation unit within the application area application area is unlikely to comprise significant habitat for Peregrine falcon and Princess parrot.

A burrow of trapdoor spider species, assumed to be *Idiosoma clypteatum* was identified adjacent to the project area without the presence of any spider individuals at the time of the survey. Consequently, the identity of the spider could not be confirmed. Regardless of the absence of spider specimen and inability to identify it, the applicant had avoided the identified burrow altogether that no impact on any trapdoor individuals, if present, is expected.

Impact of geotechnical investigation

Geotechnical investigation, as a part of the project, involves excavation of the ground for test pits. The pits may pose risks to the fauna species in the local area. Fauna species can fall into the pits and be trapped within. This potential impact can be mitigated by ensuring that that test pits be covered during the process and backfilled after use. This is also required as a condition for the permit.

Conclusion

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

- Demarcation of clearing area
- Weed control and management which ensures protocols are put in place to limit the introduction and transportation weed-affected materials
- Retention of topsoil for future rehabilitation
- Rehabilitation of cleared are no longer required for the purpose of this clearing
- Slow and directional clearing, which allows fauna to move into adjacent vegetation ahead of the clearing activity and minimises impact to individuals
- Geotechnical test pits covering and backfilling to prevent trapping of fauna

3.2.2. Land and water resources - Clearing Principles (g) and (i)

Assessment

The project is situated in the arid region of Australia where rainfall is low, and the area is sparsely vegetated. The soils in the arid and semi-arid regions are often prone to wind erosion. Dust and fine soils materials lifted by strong wind, especially during the dry season, can be deposited in nearby vegetation and surrounding environment, which in turn may reduce the quality of the vegetation as discussed in Section 3.2.1. Transport of dust and soil materials

can also help spread weed seedbanks and removal of groundcover vegetation can exacerbate this risk. The potential impact of dust has also been considered by the applicant particularly due to the potential impact of dust deposition on the future solar arrays which may reduce the effectives of the systems. Therefore, it is in the interest of the applicant to ensure that dust is minimised and mitigated. The applicant submitted that although the risk of dust due to the project is not considered significant, the application of dust suppressant has been considered by the applicant and will be carried out as necessary (Horizon Power, 2025d)

Noting the following:

- that the project site and surround have been sparsely vegetated (see Appendix E) and that most of the vegetation proposed to be cleared are in Degraded condition or has been previously cleared
- more than 90 percent of the pre-colonial native vegetation in much better condition is retained in the local and regional extents
- applicant's commitments to manage the potential impact of dust including potential applications of dust suppressant when required;

It is considered unlikely that the proposed clearing would increase the risk of dust in the local context or result in a long term and appreciable land degradation. Limiting the time of exposure of cleared land, stockpiling topsoils and rehabilitation of cleared areas no longer required for the purpose of the project can further mitigate the potential impacts and are required as condition on the permit.

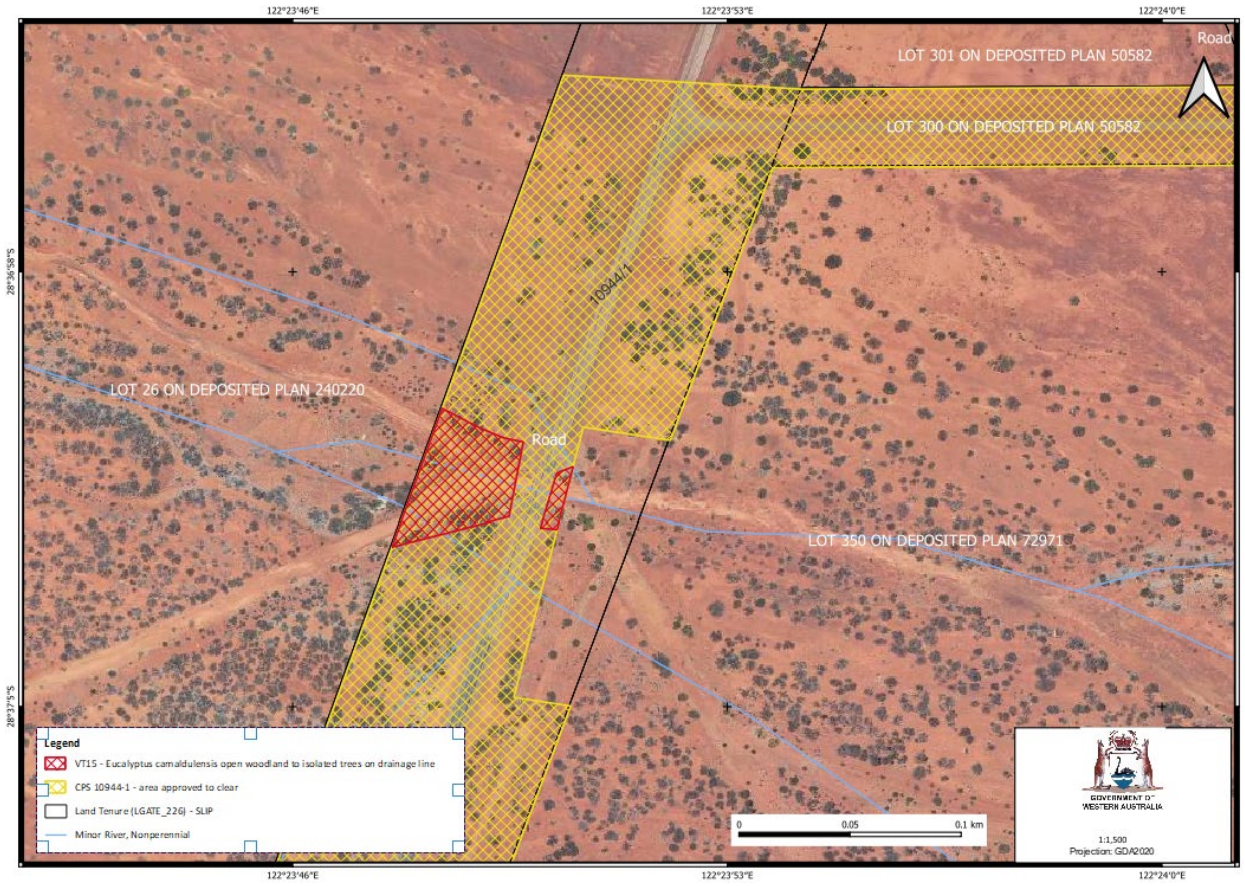

Figure 2. Riparian vegetation identified as VT15 - *Eucalyptus camaldulensis* open woodland to isolated trees on drainage line within the area proposed to be cleared

The proposed clearing will intersect a minor non-perennial (ephemeral) waterway at places where the transmission line crosses the waterway (see Figure 2). The drainage line is sparsely vegetated with eucalypt tree stands. As discussed in Section 3.1 and 3.2.1, the applicant submitted that the project design had avoided disturbance to riparian vegetation as much as possible but the disturbance of a maximum of 0.26 ha of this drainage line could not be avoided. Noting the non-perennial nature of the drainage line and the limited extent of clearing within the context of the abundant cover of similar vegetation in the local area, it has been considered that the disturbance of a maximum 0.26 ha of the riparian vegetation and area is unlikely to result in the deterioration of the surface water,

nor in appreciable land degradation downstream of the area. To manage the potential impact, the applicant is required to limit clearing of this type of vegetation to 0.26 ha and it is placed as a condition on the Permit.

Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing on land and water resources can be managed by the application of management measures and will not lead to appreciable land and water degradation locally and regionally.

Conditions

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

- wind erosion management, requiring the applicant to commence construction within three months of clearing to limit the amount of dust deposition from exposed soils;
- limiting clearing of riparian vegetation to a maximum of 0.26 ha
- revegetation and rehabilitation of areas for temporary works which include the retention of topsoils

3.3. Relevant planning instruments and other matters

The project site is located within Road Reserves and Reserve Lands managed by the Shire of Laverton, including for the purpose of "Aerial landing ground, solar power generation, geoscientific and geophysical research". The applicant will utilise the access conferred by Sections 46 and 49 of the *Energy Operators (Powers) Act 1979* (the Powers Act) for geotechnical investigations and connection infrastructure. The applicant submitted that a lease is being negotiated for the proposed solar farm, and construction activities for the Project will not commence until the appropriate legal arrangements for tenure are executed.

The proposed project is considered Public Works that the applicant expects it to be exempt from development approval under Section 6 of the Planning and Development Act 2005. However, the applicant submitted that they have engaged the Shire of Laverton in the aspects of the project planning.

The Shire of Laverton was informed of the proposed clearing and submitted their comments which included their concerns regarding the potential impact of dust from the solar farm and infrastructure operation to the airport nearby (Shire of Laverton, 2025). The potential impact of dust due to clearing is discussed in Section 3.2.2. Further consideration of the submission is provided in Appendix A.

The application area is mapped within the Goldfield Groundwater Area, proclaimed under the RIWI Act. The proposed clearing and subsequent infrastructure construction will not require the use of groundwater or intercept the groundwater. Consequently, a licence or permit under the RIWI Act is not required.

The application area is mapped within the native titled land held by the Nyalpa Pirniku peoples. The applicant submitted that the traditional landowners have been consulted for the project. The proposed project site transects a registered aboriginal cultural heritage site (ACH-00016081), and several other lodged cultural heritage sites are nearby. 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.

End

Appendix A. Details of submission

Summary of comments	Consideration of comments
There are concerns around the potential issues regarding the clearing, specifically on how the applicant will reduce the impact of dust on the Laverton Airport operations following the clearing.	During assessment GE requested the applicant to provide information to address this concern. The applicant submitted that the dust dispersion and deposition is also of their concern especially due to its potential to impact on the capacity of the solar arrays. However, the applicant assessed that the potential risk due to dust to be low. Noting the vegetation conditions and how sparsely distributed the vegetation in the project area and surrounds, the proposed clearing and project are considered unlikely to increase the risk of dust dispersion in the area, including to the nearby Laverton airport. Despite the initial assessment, the applicant is committed to the application of dust suppressant should dust become an issue. This is consistent with GE assessment as discussed in Section 3.2. Management conditions to further mitigate the potential impacts are placed as conditions on the permit.
All transmission lines that intersect with Sullivan Road, Great Central Road, and Sturt Pea Road must be underground to protect the integrity of the road surfaces. This applies to all private properties.	The applicant submitted to GE that underground transmission network is the preferred method and that it will be applied as much as possible. The final design of the project including the extent of underground and / or above ground infrastructure however will be confirmed after the completion of geotechnical investigation and other factors. The applicant submitted that the final design will not affect or increase the amount of the proposed clearing for this permit.

Appendix B. Site characteristics

B.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is part of an expansive tract of native vegetation in the 'Extensive Land Use Zone' of Western Australia. It is surrounded by tracts of native vegetation with some historical disturbance for road and infrastructure that support the town of Laverton. The Laverton Airport is within 200 meters of the proposed clearing area. Spatial data indicates the local area (20-kilometre radius from the centre of the area proposed to be cleared) retains approximately 97 per cent of the original native vegetation cover.
Ecological linkage	There are no formal ecological linkages mapped for the area. The vegetation proposed to be cleared does not represent an ecological linkage.
Conservation areas	The application area is not located within or near to any conservation area.
Vegetation description	The application area is located within the Murchison Bioregion. The vegetation within the application area is mapped as Vegetation Association 18, which is described as 'Low woodland; mulga *(Acacia aneura)*'. Survey performed in support of the application identified two types of vegetation occurring within the development envelope: • VT14 - *Acacia aneura*, *Acacia ramulosa* and *Acacia ayersiana* open woodland to isolated trees over *Acacia tetragonophylla*, *Acacia craspedocarpa and Senna artemisioides* subsp.×*artemisioides* open shrubland over *Salsola australis*,

Characteristic	Details
	Sclerolaena eurotioides and *Maireana thesioides* open chenopod over mixed annual herbs on shrubland on brown loam clay on plain (14.99 ha ha). • VT15 - *Eucalyptus camaldulensis* open woodland to isolated trees on drainage line (0.26 ha). Vegetation condition varied from Good to Completely Degraded. The full survey descriptions and maps are available in Appendix E. The finding is consistent the mapped Vegetation Association 18 retains approximately 99 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	Surveys over the application area identified 37 percent of the area to have been cleared, with the remaining being in Completely Degraded to Good condition (Trudgen, 1991). It is noted that the vegetation proposed to be cleared is mostly situated within the cable route which was previously cleared and is affected by edge effects. The full Trudgen (1991) condition rating scale is provided in Appendix D. The full survey descriptions and mapping are available in Appendix E.
Climate and landform	The Murchison Bioregion is characterised by an arid climate, with mainly Winter rainfall (Cowan 2001). The mean maximum temperature ranges from 35.6 °C in January to 18.6 °C in July. The mean minimum temperature ranges from 5.9 °C in July to 21.6 °C in January. Rainfall data shows the mean annual rainfall in the area as 275.9 mm (BoM 2023). The landform of the Eastern Murchison sub-bioregion is characterised by internal drainage, extensive areas of elevated red desert sandplains with minimal dune development, salt lake systems and broad plains of red-brown soils.
Soil description	The soils of the application area are mapped as: • Monitor System, described as *"distributary alluvial fans and wash plains supporting mulga - chenopod shrublands*" • Violet System, described as *"gently undulating gravelly plains on greenstone, laterite and hardpan, with low stony rises and minor saline plains; supporting groved mulga and bowgada shrublands and occasionally chenopod shrublands".*
Land degradation risk	Soils in the arid region is prone to wind erosion during the strong wind and dry season.
Waterbodies	The desktop assessment and aerial imagery indicated that one minor, non-perennial watercourse transects the area proposed to be cleared. There are no wetlands of significance located within or in close vicinity to the DE. The broader Murchison Bioregion is characterised by large fluvial saline drainage and playa salt lakes such as the nearby Lake Carey. The closest significant wetland and Ramsar Wetland is Lake Gore, more than 500 km south towards the coast.
Hydrogeography	The DE is within the Goldfields Groundwater Area, proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act). No groundwater extraction is expected to be required, with nearby bores recording depth to water of 14-17m (Bureau of Meteorology, 2024). The nearest Public Drinking Water Source Area is 2.5 km north.
Flora	The region is poorly surveyed and there have not been many records of conservation significant flora species from the area. Survey performed over the application area did not identify any conservation significant flora species.
Ecological communities	There is no threatened or priority ecological community within the application area or nearby. The nearest mapped priority ecological community is Mount Jumbo Range vegetation complex (banded ironstone formation) (P3) located approximately 6.7 km from the application area.
Fauna	There have been seven records of conservation significant flora from within 20 km radius of the application area. The most recent record was of mallee fowl from approximately 15 km of the application area. Survey over the application area and surrounds identified a trapdoor burrow adjacent to the application area. Two fauna habitats were also identified.

B.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Murchison	28,120,586.77	28,044,823.42	99.73	2,185,987.96	7.77
Vegetation complex					
Beard vegetation association 18	12,403,172.30	12,363,252.47	99.68	614,964.13	4.96
Local area					
20km radius	138,594.6	135,317.5	97.63	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

B.3. Flora 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 flora required further consideration.

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Calytrix praecipua	3	N	Y	Y	15.69	2	Y
Lysiandra baeckeoides	3	N			5.85	6	Y
Vittadinia cervicularis var. oldfieldii	1	N			0.95	1	Y

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

B.4. Fauna analysis table

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)	Are surveys adequate to identify? [Y, N, N/A]
Actitis hypoleucos - common sandpiper	MI	Y	Y	14.37	1	Y
Gelochelidon nilotica - gull-billed tern	MI	Y	Y	19.28	1	Y
Lagostrophus fasciatus fasciatus - banded hare-wallaby, mernine	VU	Y	Y	1.38	1	Y
Leipoa ocellata - malleefowl	VU	Y	Y	14.48	14	Y
Myrmecobius fasciatus - numbat, walpurti	EN	Y	Y	6.75	1	Y
Plegadis falcinellus - glossy ibis	MI	Y	Y	17.67	1	Y
Tringa nebularia – common greenshank	MI	Y	Y	19.28	1	Y
Polytelis alexandrae – Princess Parrot	P4	Y	Y	>20		Y
Falco peregrinus – Peregrine Falcon	OS	Y	Y	>20		Y
Idiosoma clypteatum - Northern Shield-back trapdoor spider	P3	Y	Y	>20		Y

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

B.5. Ecological community analysis table

Community name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Mount Jumbo Range vegetation complex (banded ironstone formation)	Priority 3	N	N	N	6.6	1	Y

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

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: Parts of the area proposed to be cleared contain habitats that may support conservation significant fauna, but it is not considered to comprise a high level of biodiversity.	Not likely to be at variance	Yes *Refer to Section 3.2.1, above.*
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 area proposed to be cleared may comprise foraging habitat for conservation significant fauna but it is not considered significant habitat.	Not likely to be 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 individuals of / habitat for flora species listed under the BC Act.	Not at variance	No
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 contains species that can indicate a threatened ecological community. A threatened ecological community as defined in the *Biodiversity Conservation Act 2016* (BC Act) section 5(1); or (b) any other ecological community listed, designated or declared as threatened, endangered or vulnerable under or for the purposes of a written law; or (c) a listed threatened ecological community as defined in the Commonwealth *Environment Protection Biodiversity Conservation Act 1999* section 528**;** This community is listed as 'Endangered' (etc) under the BC Act;	Not 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. The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.	Not 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:	Not at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of conservation areas.		
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: Parts of the proposed clearing area comprised of vegetation identified as riparian vegetation. The clearing of this type of vegetation has been avoided as much as possible and limited to a maximum of 0.26 ha.	At variance	Yes *Refer to Section 3.2.2, above.*
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The soils in the application area maybe susceptible to wind erosion. Clearing, within the context of the arid environment, expose the soils to wind. Noting the extent and the condition of the native vegetation surrounding the application area, the proposed clearing is not considered likely to have an appreciable impact on land degradation.	Not likely to be at variance	Yes *Refer to Section 3.2.2, above.*
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: One water course identified as a minor non-perennial creek crosses the development envelope. The nearest Public Drinking Water Sources Area is located 2.5 km north of the project area. Given the above the proposed clearing is not considered likely to impact surface or ground water quality.	Not likely to be at variance	Yes *Refer to Section 3.2.2, above.*
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.	Not at variance	No

Appendix D. Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from several 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 Trudgen, M.E. (1991) *Vegetation condition scale* in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.

Measuring vegetation condition for the Eremaean and Northern Botanical Provinces (Trudgen, 1991)

Condition	Description
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Very poor	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely degraded	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

Appendix E. Biological survey information excerpts (GHD, 2023)

Horizon Power has commissioned GHD Pty Ltd (GHD) to undertake Detailed (single season) flora and vegetation survey and a Basic and Targeted Fauna survey for eight sites in the Murchison, Pilbara and Gascoyne Regions of Western Australia (GHD, 2023). The survey has been provided with an IBSA reference of IBSA-2023-0426. The survey of the Laverton area in support of the application for clearing permit was a part of the survey. The excerpt focuses on the report from the Laverton survey. It has been assessed that the survey effort has not been subject to any constraints, which affect the thoroughness of the assessment or conclusions formed.

The Laverton survey was conducted 24 to 26 May 2023 by GHD senior botanist/ecologist covering a total of 25.08 ha area, inclusive of the proposed Development Envelope, as depicted in the map below.

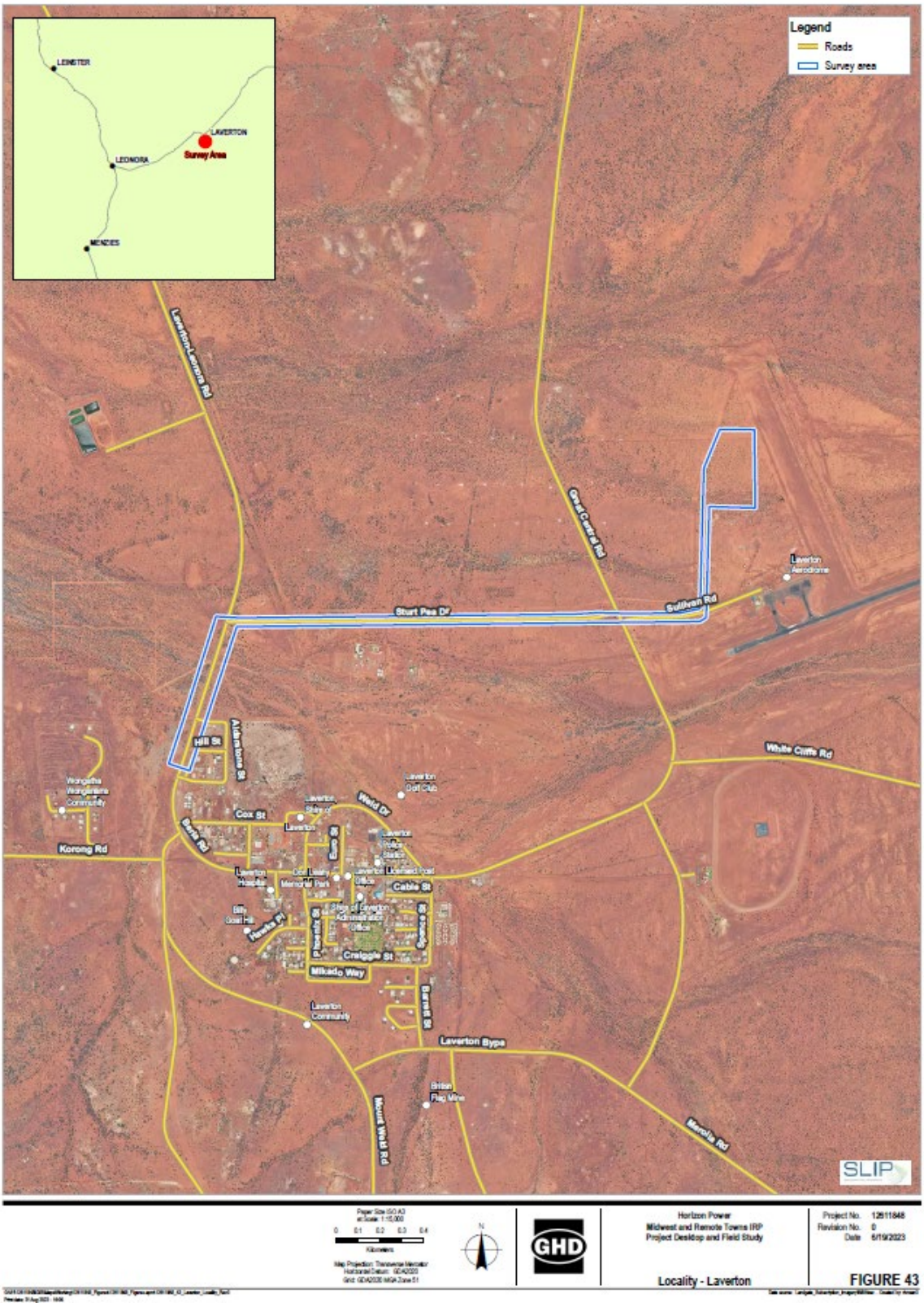

Figure 3. Map of the survey area

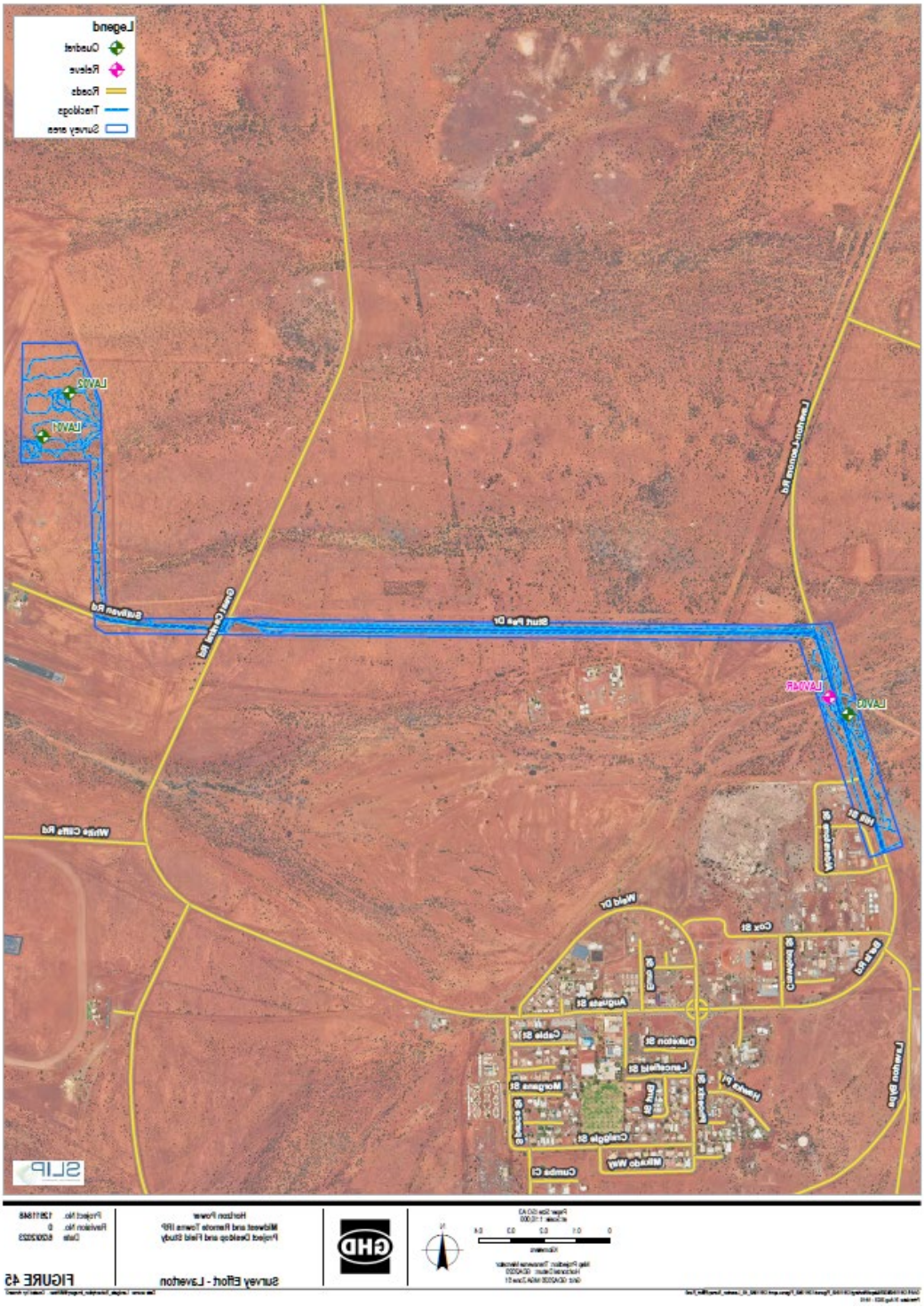

Figure 4. Location of the survey's quadrats and releves

Results

Flora and Vegetation

No PEC/TEC were identified over the survey area. The following vegetation types were identified over the survey area:

Vegetation Type	Description	Extent (ha) and proportion of individual survey area (%)	Sampling sites	Photograph
VT14	*Acacia aneura, Acacia ramulosa* and *Acacia ayersiana* open woodland to isolated trees over *Acacia tetragonophylla, Acacia craspedocarpa* and *Senna artemisioides* subsp. *×artemisioides* open shrubland over *Salsola australis, Sclerolaena eurotioides* and *Maireana thesioides* open chenopod over mixed annual herbs on shrubland on brown loam clay on plain.	15.39 ha (61.36 %) (Lavert on)	LAV01, LAV02, LAV03	
VT15	*Eucalyptus camaldulensis* open woodland to isolated trees over *Acacia wanyu* and *Acacia aneura* open shrubland over *Salsola australis* and *Sclerolaena eurotioides* open chenopod shrubland over **Cenchrus ciliaris* open tussock grassland over *Brachyscome ciliaris* isolated herbs on drainage line.	0.38 ha (1.50%) (Lavert on)	LAV04 R	

Cleared	Areas devoid of native vegetation, such as tracks and historically cleared areas.	Laverton 9.31 ha (37.14 %)		

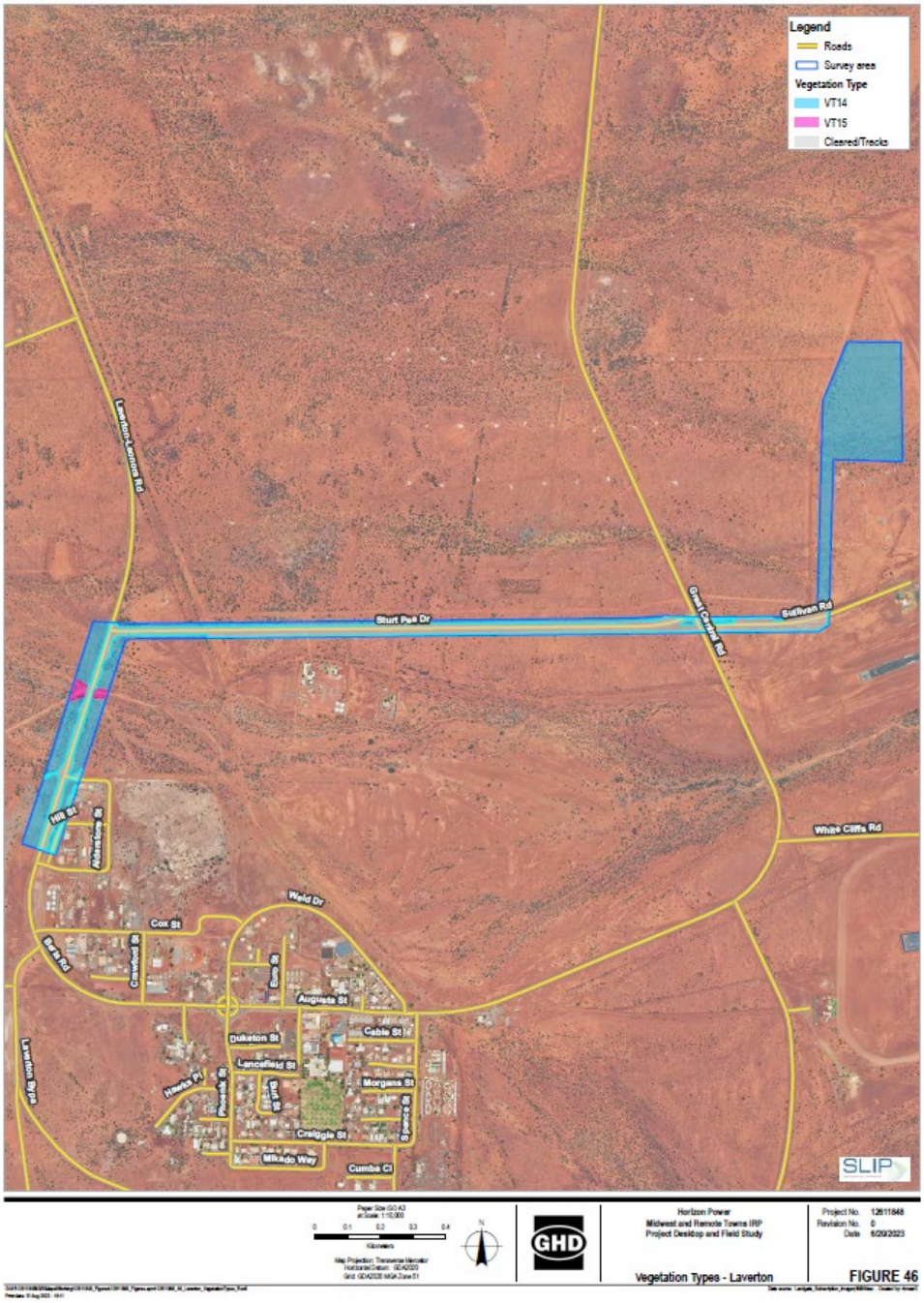

Figure 5. Map of the vegetation types identified in the survey area

Fauna

A fauna habitat assessment was undertaken to:

- document the type, value and extent of habitats within the survey area
- opportunistic search
- targeted SRE invertebrate search

The survey has identified two types of fauna habitats occurring within the survey area. The habitats are mapped as depicted in the below figure:

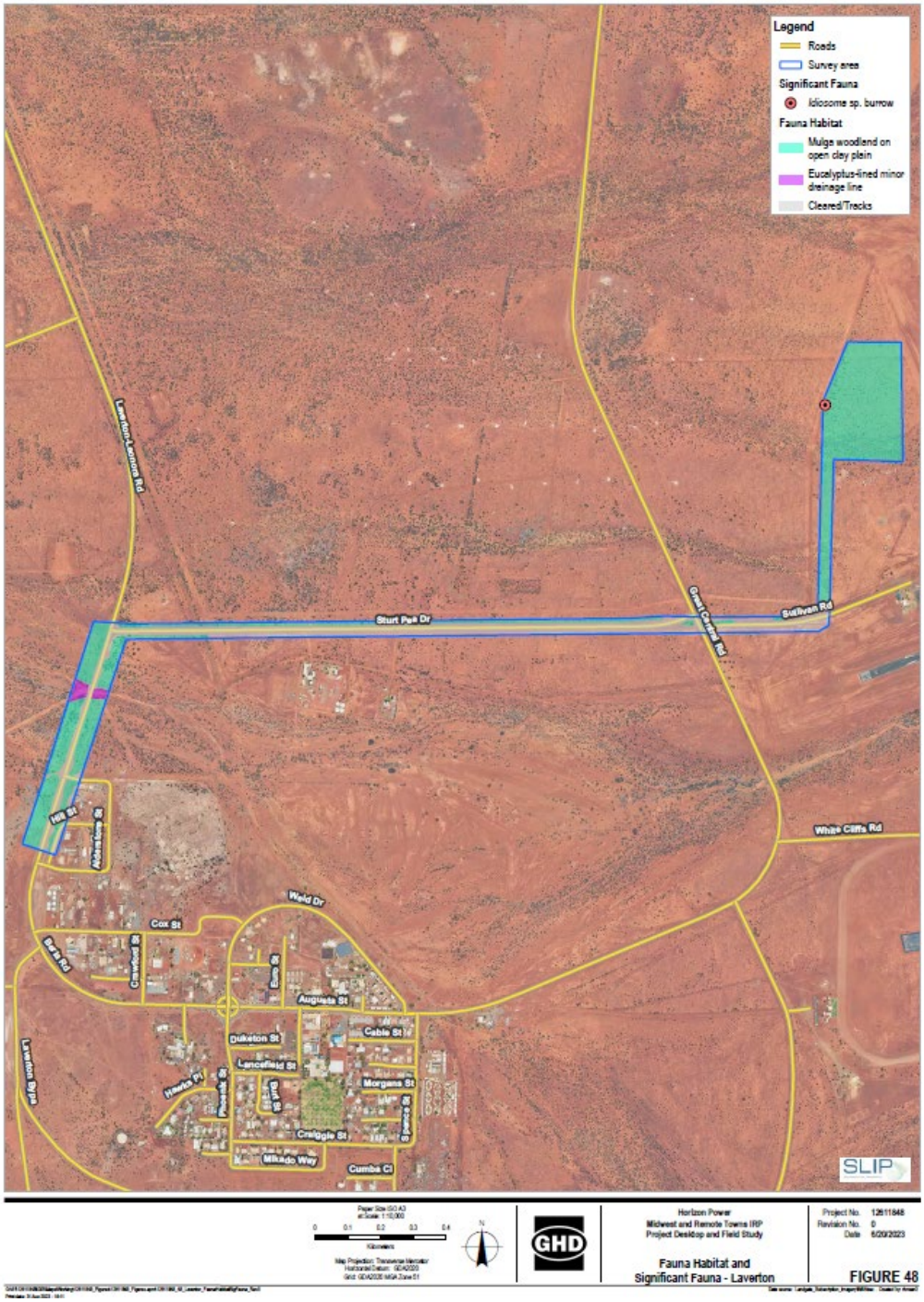

Figure 6. Map of fauna habitats identified in the survey area

Appendix F. Sources of information

F.1. GIS databases

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

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

Restricted GIS Databases used:

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

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